Sixty elementary school age children qualified as symptomatic of attention deficit/hyperactivity disorder (ADHD) were randomly assigned to 1 of 2 treatment conditions: child-centered play therapy (CCPT) or reading mentoring (RM). All children participated in 16 individual 30-min sessions in the schools. Results indicated that children who participated in 16 sessions of CCPT and RM demonstrated statistically significant improvement on the ADHD and student characteristics domains, as well as the Anxiety/Withdrawal and Learning Disability subscales of the Index of Teaching Stress and the ADHD Index of the Conners Teacher Rating Scale—Revised: Short Form. Children who participated in CCPT demonstrated statistically significant improvement over RM children on the student characteristics domain and on the Emotional Lability and Anxiety/Withdrawal subscales of the Index of Teaching Stress.

**Keywords:** play therapy, ADHD, attention, children

Teachers most commonly refer students for assistance in the schools because of student behavioral problems (Abidin & Robinson, 2002). Specifically, DuPaul and Stoner (2003) reported that problems with student attention and behavioral control are two of the leading reasons for referral to school and clinical psychologists. Students exhibiting difficulties with attention and behavior may qualify for a diagnosis of attention deficit/hyperactivity disorder (ADHD), which is one of the most frequent diagnoses of childhood, with approximately 3% to 7% of children affected (American Psychiatric Association, 2000; Woodard, 2006). The behaviors

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associated with ADHD—inattention, hyperactivity, and impulsivity—have been found to cause significantly more stress for teachers as compared with those of students without ADHD (Greene, Beszterczezy, Katzenstein, Park, & Goring, 2002). Not only are the behaviors of students with ADHD more stressful for teachers, but the long-term ramifications for the students themselves are troubling. In a longitudinal examination of young adults diagnosed with ADHD in childhood, approximately 50% continued to exhibit behavioral symptoms of ADHD (Barkley, Fischer, Smallish, & Fletcher, 2002). When comparing these young adults diagnosed with ADHD with a control group, the adults with ADHD were found to have significant differences in education, high school GPA, symptoms of ADHD at the workplace, job performance ratings, and arrests. These research findings indicate the importance and necessity of intervening early in the lives of children with ADHD.

Research has established that the behaviors associated with ADHD affect the lives of children. Cornett-Ruiz and Hendricks (1993) examined the impact of the behaviors and the diagnostic label of ADHD on teachers and peers. They reported that videotaped observations portraying stereotypical ADHD behavior negatively influenced the perceptions of peers and teachers, but the diagnostic label itself did not. Whereas the peers rated the students’ ADHD behavior negatively in all behavioral and academic areas, the teachers’ first impressions and prediction of long-term success were rated negatively and their ratings of student academic abilities were not affected (Cornett-Ruiz & Hendricks, 1993). Thus, students’ behavioral symptoms of ADHD may negatively influence the perceptions of their teachers and peers, which could affect these students’ relationships and well-being at school.

Greene et al. (2002) examined the level of stress for teachers of students with and without ADHD. This study reported that teachers experienced more stress with students with ADHD as compared with students without ADHD. In addition, students with ADHD who had coexisting difficulties with social impairments and oppositional/aggressive behaviors were significantly more stressful to teach than were students with ADHD only. The student–teacher interactions for students with ADHD were significantly more negative than those for students without ADHD. It appears that students with ADHD, particularly students who have additional difficulties with social and oppositional/aggressive behaviors, may experience more negative student–teacher interactions.

Many interventions have been used with children identified as having ADHD, such as the use of psychotropic medication, behavioral interventions in the schools, and parent education (DuPaul & Stoner, 2003). The Society of Clinical Child and Adolescent Psychology, Division 53 of the American Psychological Association, has determined that five evidence-
based treatments exist for children with ADHD: (a) stimulant medication, (b) behavioral parent training, (c) behavioral classroom interventions, (d) social skills training, and (e) summer treatment programs (Society of Clinical Child & Adolescent Psychology, Committee on Evidence-Based Practice, & Network on Youth Mental Health, 2007).

Although only five interventions have received recognition by the American Psychological Association, Division 53, many practitioners use different interventions in school and clinic settings that they claim are effective in improving the behavioral symptoms of children with ADHD. One such intervention, play therapy, has not been established as an efficacious treatment for children with ADHD (DuPaul & Stoner, 2003) but has been used with children and found to be effective in improving children’s externalizing and internalizing behavioral problems (Bratton, Ray, Rhine, & Jones, 2005). Play therapy is an intervention designed to meet children’s developmental needs. It is through play that children most naturally express their inner selves; thus, therapy for children that uses play can provide children the most developmentally appropriate means for communication and growth (Landreth, 2002). Meta-analytic research has examined the various theoretical approaches to play therapy and has found that humanistic and nonhumanistic approaches are effective (Bratton et al., 2005). Humanistic play therapy approaches, such as child-centered play therapy (CCPT), have been found to be particularly effective with children and appear to be the most common approach to play therapy (Bratton et al., 2005).

**PURPOSE OF THE STUDY**

Current trends in therapeutic intervention signify the need for evidence-based practice to gain financial and legal support. Evidence-based practice requires identification of specific populations, use of systematic treatment protocols, and quantitative/experimental research methods. The purpose of the present study was to support the use of evidence-based research in the play therapy field. Specifically, we explored the impact of CCPT on teacher–child relationship stress and ADHD symptom exhibition when facilitated with children exhibiting attention deficits. Because play therapy has been demonstrated to show large significant positive effect when compared with a control group receiving no treatment (Bratton et al., 2005) and because of the ethical dilemma of not serving referred children who need intervention, we did not use a control group condition. Two main questions were of concern in this study. They were (a) whether there was an overall change from mean pretest score to mean
posttest score on student characteristics of teacher–child relationship stress after application of the interventions and (b) whether there was change across time depending on which intervention the child received.

METHOD

Participants

Participants were 60 students from three elementary schools in the southwestern United States. We requested that teachers at each of the elementary schools identify students who exhibited attention problems and hyperactivity in the classroom. Teachers notified the school counselors of identified students. The school counselors obtained informed consent for participation in the study from parents and presented the informed consents to us. All three schools served students from prekindergarten to 5th grade. All three are considered Title 1 schools targeted by the state for schoolwide assistance because of high percentages of children qualifying for free or reduced lunch. School 1 listed 68.7% of its population as economically disadvantaged; School 2 listed 58.3% as disadvantaged; and School 3 listed 73.5% as disadvantaged. Ethnicity breakdowns for each of the schools are listed as follows: School 1—African American (11.4%), Hispanic (60%), Caucasian (27.6%), Native American (0%), and Asian (1%); School 2—African American (8.7%), Hispanic (41.3%), Caucasian (49.5%), Native American (0.2%), and Asian (0.3%); and School 3—African American (12.3%), Hispanic (59.5%), Caucasian (25.7%), Native American (2.2%), and Asian (0.3%). Because of playroom space and availability, 16 children were selected for the study from School 1, 26 children from School 2, and 18 children from School 3. Overall, 48 boys and 12 girls participated in the study.

Children at each school were randomly assigned to one of two treatment groups. Initially, 34 children were assigned to the play therapy (PT) intervention and 33 children were assigned to the reading mentoring (RM) intervention. Over the course of the study, 7 children moved out of the schools, 3 in the PT group and 4 in the RM group. The final participant number of 60 represented 31 in the PT group and 29 in the RM group. Of the boys, 26 were assigned to the PT group and 22 were assigned to the RM group. Of the girls, 5 were assigned to the PT group and 7 were assigned to the RM group. Age distribution was as follows: 5-year-olds, n = 1; 6-year-olds, n = 16; 7-year-olds, n = 15; 8-year-olds, n = 17; 9-year-olds, n = 4; 10-year-olds, n = 6; and 11-year-olds, n = 1. Grade-level distribution for the whole study and treatment group was as follows: 3, kindergarten (2 PT,
1 RM); 20, first grade (11 PT, 9 RM); 14, second grade (7 PT, 7 RM); 15, third grade (7 PT, 8 RM); 1, fourth grade (PT); and 7, fifth grade (3 PT, 4 RM). Ethnicity breakdowns were as follows: 10 African American (5 PT, 5 RM); 21 Hispanic (10 PT, 11 RM); 28 Caucasian (15 PT, 13 RM), and 1 biracial (PT). According to parent report, 15 participants (9 PT, 6 RM) received medication for ADHD symptoms during the duration of the study.

**Instruments**

*Index of Teaching Stress (ITS; Abidin, Greene, & Konold, 2004)*

The ITS measures the stress a teacher experiences in the relationship with a specific student. It is based on the belief that the relationship between a teacher and student is primary to the student’s academic and personal success. The ITS assesses the independent factors that correlate highly with the quality of the teacher–child relationship, including the student’s behavioral characteristics, the teacher’s perception of the teaching process, and the teacher’s perception of support from others who interact with the child. The ITS includes 90 Likert-scale items and is standardized for use with teachers of students in preschool through 12th grade.

The ITS produces a Total Stress score and three domain scores, consisting of attention deficit/hyperactivity disorder, student characteristics, and teacher characteristics. The attention deficit/hyperactivity disorder domain measures the teacher’s stress level associated with the child’s behaviors that are commonly associated with ADHD. The student characteristics domain measures the teacher’s stress related to the student’s temperament and behaviors. The teacher characteristics domain measures the teacher’s stress as related to self-perception and expectation regarding teaching the particular student. The Total Stress score is a sum of the three domain scores (Abidin et al., 2004).

The ADHD domain consists of 16 items that factored together to form a unique source of relationship stress. The student characteristics domain is furthered divided into four areas specific to the teacher’s response to student behavior, including the student’s level of emotional lability/low adaptability (ELLA), anxiety/withdrawal (ANXW), low ability/learning disability (LALD), and aggressive/conduct disorder (AGCD). The ELLA subscale measures the extent to which the student’s moodiness and emotional reactions create stress for the teacher. The ANXW subscale examines the amount of student anxiety and teacher dependence. The LALD
subscale provides a score representing the impact on the teacher of the student’s special learning needs and disabilities. The AGCD subscale measures the amount of stress the teacher experiences because of the student’s antisocial behavior.

The teacher characteristics domain also consists of four scales, including the teacher’s Sense of Competence/Need for Support, Loss of Satisfaction From Teaching, Disruption of the Teaching Process, and Frustration Working With Parents. For the purposes of this study, we chose to specifically analyze the ADHD domain, student characteristics domain, and the subscales of the student characteristics domain, which included the ELLA, ANXW, LALD, and AGCD subscales of the ITS. Because the PT and RM interventions were specifically targeted to the students and because previous research (Muro, Ray, Schottelkorb, Smith, & Blanco, 2006; Ray, 2007) has demonstrated a negligible effect of intervention on teachers, we chose not to analyze the teacher characteristics domain and Total Score on the ITS.

Abidin et al. (2004) established concurrent and discriminant validity for ITS scores through multiple research studies using the ITS in the areas of teacher stress, ADHD, teacher judgment, teacher health, teacher gender, teacher behavior, and correlational studies with social skills and behavioral checklists. All alpha coefficients for the ITS domain scores and Total Stress scores exceeded .90 for the normative group of the ITS. Because ITS is a relatively new instrument, test–retest reliability is still in question. Abidin et al. (2004) reported on one test–retest reliability study in which 42 teachers rated children identified with behavioral problems. Test–retest reliability coefficients for the ITS domains and Total Stress score were reported as .58 for the ADHD domain, .57 for the student characteristics domain, .70 for the teacher characteristics domain, and .65 for the Total Stress score.

**Conners Teacher Rating Scale—Revised: Short Form**

*(CTRS-R:S; Conners, 2001)*

The CTRS-R:S is an assessment completed by teachers to assess problematic behaviors of children and adolescents most commonly associated with ADHD. The assessment is normed to be used with children between the ages of 3 and 17. The CTRS-R:S consists of 28 questions that are rated on a 4-point frequency scale. The shortened version of the form is recommended for use when administration time is limited and when multiple administrations are planned to be used (Conners, 2001). Angello et al. (2003) recommended the short versions of the Conners assessments
for screening and treatment monitoring for children with ADHD. The teacher version of this form provides four subscales: Oppositional, Cognitive Problems/Inattention, Hyperactivity, and an ADHD Index score. The ADHD Index score is considered the best indicator of attention difficulties associated with a diagnosis of ADHD (Conners, 2001).

From 1992 to 1996, the Conners scales were renormed with 8,000 children and adolescents age 3 to 17 who represented 95% of the states and provinces in the United States and Canada (Conners, 2001). Because developmental and gender differences in expression of ADHD, the Conners scales obtained norms specific to these areas. The normative sample for the CTRS-R:S is 1,897 children and adolescents rated by a teacher. Eighty-one percent were identified as Caucasian/White, 7.2% as African American/Black, 5.7% as Hispanic, 1.4% as Asian, 1.4 as Native American, and 2.9% as other. Tests of internal consistency and test–retest reliability for the teacher short-form versions of the Conners scales were high. The internal consistency coefficients for the CTRS-R:S ranged from the mid-.80s to the mid-.90s. Test–retest reliability coefficients for teacher versions ranged from the .60s to the .90s.

Demographic Data

The teachers completed demographic data on each student. Teachers indicated the student’s age, grade, ethnicity, and school. Furthermore, we requested medication data from the parents of each participant to indicate whether the child was receiving medication for ADHD and for what time period.

Procedure

On receiving the informed consent from each student’s parent, teachers completed an ITS, CTRS-R:S, and demographic form on each student. Instruments were scored, and those participants who were scored in the clinical range (61 or above) on the ADHD Index of the CTRS-R:S were qualified for the study. Qualifying participants were randomly assigned to either the PT or the RM treatment groups. All participants were matched according to school and grade level; then by using a table of random numbers, children were assigned to a treatment group (Shadish, Cook, & Campbell, 2002). Teachers provided informed consent through their completion of the ITS. Teachers were unaware of the students’ treatment assignment. Students were scheduled to participate in 16 weeks of treat-
ment. Because of typical school scheduling difficulties such as field trips, standardized testing, winter break, and occasional absences, the study was completed in 22 weeks. At the end of 22 weeks, each teacher completed an ITS and CTRS-R:S on each participating student as a posttest measure. Also at posttest administration, parents were administered a questionnaire regarding medication usage during the time of the study. The following paragraphs describe each treatment condition.

**Play Therapy (PT)**

Thirty-one students were assigned to the PT group, which consisted of 16 sessions of play therapy scheduled over 16 weeks. Each student received 1 30-min individual CCPT session per week. All play therapists had successfully completed at least two courses in play therapy and participated in direct individual or triadic supervision with a counseling faculty member certified in play therapy. Play therapists included seven doctoral-level counseling students and three advanced master's-level students. Play therapists were required to review their videotaped play therapy sessions with their supervisors on a weekly basis. Supervisors ensured that the CCPT protocol was being followed and enacted in the play sessions through the use of the Play Therapy Skills Checklist (Ray, 2004). Supervisors rated responses on the Play Therapy Skills Checklist, confirming that each response fell into a CCPT category. Play therapists were not allowed to discuss the student with the teacher during the study.

Play therapy sessions were conducted in specially equipped playrooms in each of the school settings. Playrooms were equipped with a variety of specific toys to facilitate a broad range of expression, following Landreth’s (2002) general guidelines. CCPT is designed to provide specific therapist responses to the child during play therapy. These response sets are clarified in detail in Landreth (2002) and Ray (2004), and both include nonverbal skills and verbal skills. CCPT nonverbal skills include the counselor leaning forward toward the child and being physically directed toward the child at all times. When responding to a child, the counselor’s tone is congruent with the child’s by matching the level of affect displayed by child. The skill of matching verbal response with nonverbal response is representative of the counselor’s level of genuineness with the child. CCPT verbal responses are structured to help facilitate growth in the child. They include the following response categories: (a) tracking behavior, (b) reflecting content, (c) reflecting feeling, (d) facilitating decision making/returning responsibility, (e) facilitating creativity/spontaneity, (f) esteem building/encouraging, (g) facilitating relationships, and (h) limit setting.
Reading Mentoring (RM)

Twenty-nine students were assigned to the RM group, which consisted of 16 sessions of reading scheduled over 16 weeks. Each student received one 30-min session of individual reading mentoring per week. Reading mentors were trained by one of us to establish continuity of the mentoring procedures. Mentors were instructed to choose age-appropriate books for the assigned child from the university reading program library. In each session, the mentor provided a choice to the child regarding the child reading to the mentor or the mentor reading to the child. Mentors helped children with word pronunciation when the child was challenged by the reading selection. Mentors were encouraged to focus on reading and not to initiate discussions with the child. Mentors were also trained in limit-setting procedures in preparation for possible discipline issues. Four undergraduate students served as reading mentors.

Data Analysis

Data analysis intended to answer research questions by means of a combined between-/within-subjects analysis of variance (ANOVA)—that is, split-plot analysis (Tabachnick & Fidell, 2001). This repeated measures approach was used to demonstrate significant change over time and between groups. In the analysis, student treatment group \((k = 2)\) served as the between-subjects variable and time from pretest to posttest \((k = 2)\) served as the within-subjects variable. Analyses were run separately with the ITS ADHD domain, student characteristics domain, ELLA subscale, ANXW subscale, LALD subscale, and AGCD subscale as dependent variables. A separate split-plot analysis was run with the ADHD Index of the CTRS-R:S. In each combined between-/within-subjects ANOVA, the required assumption of sphericity was assumed given that there were only two points of measurement. It was decided that if statistically significant differences were found with a meaningful effect size between groups, simple main effects post hoc analyses would be conducted as needed. Effect size was reported according to partial eta-squared and was interpreted according to Cohen’s (1988) guidelines of .01 as a small effect, .06 as a moderate effect, and .14 as a large effect. When post hoc analysis was conducted, a modified alpha level of .025 was used to control for Type I error (Armstrong & Henson, 2005).
RESULTS

ITS ADHD Domain

Table 1 presents the ITS and CTRS-R:S ADHD Index means, standard deviations, and sample sizes on the pretest and posttest for both treatment groups. Results of the ANOVA on ADHD domain revealed a statistically significant main effect for time, $F(1, 58) = 12.89, p < .01$, partial $\eta^2 = .18$; no statistically significant main effect for group, $F(1, 58) = .77, p = .38$, partial $\eta^2 = .01$; and no statistically significant interaction effect, $F(1, 58) = .69, p = .41$, partial $\eta^2 = .01$. Because the change was fairly consistent across both groups, the interaction effect was negligible. The effect size of .18 for change over time indicates a large effect size according to Cohen’s (1988) guidelines. There was no statistically significant difference between groups; hence, no further simple effects analysis was necessary.

ITS Student Characteristics

Results of the ANOVA on the student characteristics domain revealed a statistically significant main effect for time, $F(1, 58) = 6.07, p = .02$,

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Play therapy ($n = 31$)</th>
<th>Reading mentoring ($n = 29$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre $M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>ADHD domain</td>
<td>51.39</td>
<td>13.52</td>
</tr>
<tr>
<td>Student characteristics domain</td>
<td>70.58</td>
<td>21.49</td>
</tr>
<tr>
<td>Emotional lability/low adaptability</td>
<td>26.39</td>
<td>11.12</td>
</tr>
<tr>
<td>Anxiety/withdrawal</td>
<td>19.23</td>
<td>7.03</td>
</tr>
<tr>
<td>Low ability/learning disability</td>
<td>12.65</td>
<td>6.08</td>
</tr>
<tr>
<td>Aggressive/conduct disorder</td>
<td>13.29</td>
<td>5.38</td>
</tr>
<tr>
<td>CTRS-R:S ADHD Index</td>
<td>67.65</td>
<td>7.15</td>
</tr>
</tbody>
</table>

Note. ADHD = attention/difficulty hyperactivity disorder; ELLA = emotional lability/low adaptability; ANXW = anxiety/withdrawal; LALD = low ability/learning disability; AGCD = aggressive/conduct disorder.
partial $\eta^2 = .10$; no statistically significant main effect for group, $F(1, 58) = 2.21, p = .14$, partial $\eta^2 = .04$; but a statistically significant interaction effect, $F(1, 58) = 5.26, p = .03$, partial $\eta^2 = .08$. The effect sizes for time (.10) and for interaction (.08) were in the moderate category.

Because a statistically significant interaction effect was found, further post hoc analyses were conducted through paired-sample $t$ tests to explore differences. Between pre- and posttesting, paired-samples $t$ tests revealed a statistically significant difference for student characteristics for the PT group, $t(30) = 3.56, p < .01$. The effect size was large ($\eta^2 = .30$). Between pre- and posttesting for the RM group, paired-samples $t$ tests revealed no statistically significant difference for student characteristics, $t(28) = .12, p = .91$. The effect size was negligible ($\eta^2 < .01$).

**ITS ELLA Subscale**

Results of the ANOVA on the ELLA subscale revealed no statistically significant main effect for time, $F(1, 58) = 2.42, p = .13$, partial $\eta^2 = .04$; no statistically significant main effect for group, $F(1, 58) = 3.81, p = .06$, partial $\eta^2 = .06$; but a statistically significant difference for interaction effect, $F(1, 58) = 6.70, p = .01$, partial $\eta^2 = .10$. The effect size for interaction (.10) was in the moderate category.

Because an interaction effect was found, further post hoc analyses were conducted through paired-sample $t$ tests to explore differences. Between pre- and posttesting, a paired-samples $t$ test revealed a statistically significant difference for the ELLA subscale for the PT group, $t(30) = 2.89, p = .01$. The effect size was large ($\eta^2 = .21$). Between pre- and posttesting for the RM group, a paired-samples $t$ test revealed no significant difference for the ELLA subscale, $t(28) = -0.75, p = .46$. The effect size was small ($\eta^2 = .02$).

**ITS ANXW Subscale**

Results of the ANOVA for the ANXW subscale revealed a statistically significant main effect for time, $F(1, 58) = 7.71, p < .01$, partial $\eta^2 = .12$; no statistically significant main effect for group, $F(1, 58) = .88, p = .35$, partial $\eta^2 = .02$; but a statistically significant interaction effect, $F(1, 58) = 5.78, p = .02$, partial $\eta^2 = .09$. The effect sizes for time (.12) and interaction effect (.09) were in the moderate category.

Because a statistically significant interaction effect was found, further post hoc analyses were conducted through paired-sample $t$ tests to explore
differences. Between pre- and posttesting, a paired-samples $t$ test revealed a statistically significant difference for the ANXW subscale for the PT group, $t(30) = 4.32, p < .01$. The effect size was large ($\eta^2 = .38$). Between pre- and posttesting for the RM group, a paired-samples $t$ test revealed no significant difference for the ANXW subscale, $t(28) = -.23, p = .82$. The effect size was negligible ($\eta^2 < .01$).

### ITS LALD Subscale

Results of the ANOVA on the LALD subscale revealed a statistically significant main effect for time, $F(1, 58) = 9.90, p < .01$, partial $\eta^2 = .15$; no statistically significant main effect for group, $F(1, 58) = .19, p = .67$, partial $\eta^2 < .01$; and no statistically significant interaction effect, $F(1, 58) = 1.46, p = .23$, partial $\eta^2 = .03$. Because the change was fairly consistent across both groups, the interaction effect was negligible. The effect size of .15 for change over time indicates a large effect size. Because of a lack of statistically significant difference between groups, no further simple effects analysis was necessary.

### ITS AGCD Subscale

ANOVA on the AGCD subscale revealed no statistically significant main effect for time, $F(1, 58) = 2.01, p = .16$, partial $\eta^2 = .03$; no statistically significant main effect for group, $F(1, 58) = 3.58, p = .06$, partial $\eta^2 = .06$; and no statistically significant interaction effect, $F(1, 58) = 1.68, p = .20$, partial $\eta^2 = .03$. There was no statistically significant difference between groups; hence, no further simple effects analysis was necessary.

### Conners ADHD Index

Split-plot ANOVA revealed a statistically significant main effect for time between pre- and posttest on the Conners ADHD Index, $F(1, 58) = 12.54, p < .01$, partial $\eta^2 = .18$; no statistically significant main effect for group, $F(1, 58) = .34, p = .56$, partial $\eta^2 < .01$; and no statistically significant interaction effect, $F(1, 58) = 2.13, p = .15$, partial $\eta^2 = .04$. The effect size of .18 for change over time is interpreted as a large effect. There was no statistically significant difference between groups; hence, no further simple effects analysis was necessary.
DISCUSSION

In summary, results revealed that on the ADHD domain; student characteristics domain; and ELLA, ANXW, LALD, and AGCD subscales of the ITS, mean difference scores were larger for children participating in the PT intervention than for children participating in the RM intervention. Statistically significant differences were found between the two groups on the student characteristics domain and the ELLA and ANXW subscales, indicating that children participating in PT were significantly less stressful to their teachers in personal characteristics, specifically emotional distress, anxiety, and withdrawal difficulties. Regarding symptoms associated with ADHD, a statistically significant effect for time coupled with a large effect size on both the ADHD domain of the ITS and the ADHD Index of the CTRS-R:S indicates children who participated in either PT or RM exhibited a significantly positive change in symptoms over the time of the study with no difference between the groups. The absence of a statistically significant difference between groups signifies that the treatments had an equal effect on ADHD symptoms. However, statistical differences were noted across time that could indicate that the passage of time alone was a possible variable in determining significant change. An alternate likely explanation for the change over time is the effectiveness of the interventions, a supposition that is based on previous literature that a play therapy intervention yields a large positive effect compared with no intervention (Bratton et al., 2005).

Historically, play therapy research has supported the use of play therapy to reduce problem behaviors demonstrated by children. Over the last decade and a half, since 1990, 36 research studies (27 published) on the impact of play therapy have been conducted. These most recent studies have demonstrated the positive impact of play therapy on general behavioral problems (Raman & Kapur, 1999; Shashi, Kapur, & Subbakrishna, 1999); externalizing behavioral problems (Flahive, 2005; Garza & Bratton, 2005; Karcher & Lewis, 2002; Kot, Landreth, & Giordano, 1998; Schumann, 2005); internalizing problems (Packman & Bratton, 2003); self-efficacy (Fall, Balvanz, Johnson, & Nelson, 1999); self-concept (Kot et al., 1998; Post, 1999); anxiety (Baggerly, 2004; Shen, 2002); depression (Baggerly, 2004); speech problems (Danger & Landreth, 2005); and diabetes treatment compliance (Jones & Landreth, 2002). This is the first research project to investigate the effect of CCPT on children exhibiting specific symptoms assessed as ADHD. Results of this study are promising in light of positive time effects for CCPT with symptoms related to ADHD, but even more promising is the effect of CCPT on challenges that are comorbid with the symptoms of ADHD. Statistically significant differences were
found between children participating in play therapy and those who participated in reading mentoring on emotional issues such as frequent crying, explosive anger, difficulty in calming, perseveration, resistance to change, apprehension, fear, extreme tension, and emotional withdrawal (Abidin et al., 2004). Teachers reported statistically significantly less stress related to these issues for children who received play therapy over children who received reading mentoring.

Behavioral problems associated with ADHD, such as inattention and oppositional behavior, can be suggestive of other internal problems that coexist with ADHD. Some of these conditions are conduct disorder, oppositional-defiant disorder, learning disabilities, mood disorders, anxiety disorders, and sleep disorders (Kronenberger & Meyer, 2001). Baxter and Rattan (2004) examined the anxious and depressed behaviors of 86 male students between the ages of 9 and 11 who were diagnosed with ADHD. In their examination of parent-, teacher-, and self-report measures, Baxter and Rattan found that the students with ADHD were significantly more likely to have anxiety and depression when compared with the normative population. They recommended that professionals working with children with ADHD consider comorbid conditions when designing treatment interventions.

**Limitations**

Several limitations were noted in this study. The most obvious limitation is the lack of a no-treatment control group. Although this was a limitation of the design, findings further exacerbate this limitation by demonstrating no significant differences between groups on the specific symptoms of ADHD. The possibility exists that children demonstrated positive significant change on the basis of time alone. However, other studies have indicated that with no intervention, problem relationships with teachers actually increase over time (Hamre & Pianta, 2001; Pianta, Steinberg, & Rollins, 1995; Pianta & Stuhlman, 2004). The likelihood that a control group with no intervention would have improved ADHD symptoms over time is weak, but possible.

Another limitation of this study was the use of self-report measures that were completed only by teachers. Diagnostic criteria for ADHD clearly require the exhibiting of symptoms in two or more settings (American Psychiatric Association, 2000). By limiting assessment to teachers, only one setting was represented in this study. Self-report measures used in this study might have been influenced by the perceptions of teachers and, perhaps, not indicative of behavior that can be measured through objective
observers or raters. However, Abidin (1992) argued that behavioral observations are not adequate in measuring belief systems of caretakers on children and that self-report measures are more practical to this end.

CONCLUSION

ADHD is the most common diagnosis of childhood, with well-documented evidence that problematic long-term effects may result. Thus, interventions that occur in the early school years may reduce the impact of ADHD for children in the short and long term. Although some parent and teacher interventions have proven to be effective with this population, counseling interventions for these children are lacking. CCPT is one intervention that has a minimal amount of research with this specific population, none of which have rigorous research designs.

The results of the present study indicated that among 60 elementary school age students qualifying with reported symptoms of ADHD who were placed in a PT or RM condition, both groups exhibited statistically significantly fewer ADHD behaviors following 16 sessions of treatment. Between groups, those children who participated in PT exhibited statistically significantly fewer problems in the areas of emotional instability, anxiety, and withdrawal as well as overall problem student characteristics. Children who participated in a RM intervention did not statistically significantly improve in any area over the children who participated in a PT intervention. Results offer CCPT as a promising intervention for children exhibiting ADHD behaviors, especially with comorbid difficulties such as emotional outbursts and anxiety.

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