Autism spectrum disorder (ASD) is the fastest growing neurodevelopmental disability in the United States, with an estimated incidence of 1 in 59 individuals diagnosed with autism (Centers for Disease Control and Prevention [CDC], 2014, 2018). Over the last 2 decades, the prevalence of ASD has increased by 435%, resulting in increased calls for researchers to study autism symptoms, etiology, and treatments (Ameis et al., 2018; Snyder, de Brey, & Dillow, 2016; Tonge, Bull, Brereton, & Wilson, 2014). Generally, children diagnosed with ASD exhibit a range of core autism symptoms, including communication and language deficits, social impairment, and restricted and repetitive behaviors (American Psychiatric Association [APA], 2013). Consequently, children with ASD have difficulty engaging in social relationships, understanding complex communicative cues and gestures, and using self-regulatory skills (APA, 2013).

Co-occurring psychiatric disorders are common for children on the autism spectrum. Researchers have found that 30%–75% of children diagnosed with ASD exhibit symptoms of ADHD (Grzadzinski, Dick, Lord, & Bishop, 2016; Johnston et al., 2013). Likewise, researchers have discovered that aggression is a common behavioral manifestation for children on the autism spectrum (Farmer et al., 2015; Kanne & Mazurek, 2011; Tsiouris, Kim, Brown, & Cohen, 2011). In a clinical population study, Kanne and Mazurek (2011) interviewed caregivers of individuals with ASD and found that 56% of 1,380 children and adolescents displayed aggressive behaviors to their primary caregiver. The combination of ASD, ADHD, and externalizing behaviors such as aggression appears to create myriad complicated outcomes, including decreased quality of life, adaptive functioning, and educational achievement (Farmer et al., 2015; Grzadzinski et al., 2016; Salazar et al., 2015).

For many children on the autism spectrum, core autism symptoms remain stable and the severity of functioning in adulthood is related to severity of autism symptoms as well as comorbid diagnoses (Matson & Horovitz, 2010; Szatmari et al., 2009). Specifically, individuals with ASD face enduring difficulties, including restrained educational opportunities and employment, hindered social networks, and restricted access to leisure activities (Howlin, Goode, Hutton, & Rutter, 2004; Liptak, Kennedy, & Dosa, 2011; Shattuck et al., 2012). Because of this, researchers across disciplines have reached consensus that early intervention is critical, and treatments
that target both core ASD symptoms and comorbid behaviors are needed.

**Interventions for Childhood ASD**

Across the literature, psychosocial treatments for improving emotional and behavioral outcomes for children with ASD are classified into two categories: focused or comprehensive. In focused approaches, children with ASD are taught to discriminate between appropriate and inappropriate behaviors, to monitor and record their behaviors, and to use reinforcement strategies for maintaining appropriate behavioral responses (Lopata et al., 2012; National Autism Center [NAC], 2015). Focused approaches may include applied behavior analysis, pivotal response training, discrete trial training, functional communication training, and antecedent-based intervention (Odom, Collet-Klingenberg, Rogers, & Hatton, 2010; Staunton, Ingersoll, & Carter, 2003). Whereas focused approaches demonstrate decreases in core ASD symptoms following intervention, evidence shows that children with ASD do not always generalize or maintain treatment effects (Lopata et al., 2012; Strain & Schwartz, 2001). Additionally, evidence shows that focused approaches are more appropriate for older children and adolescents with relatively high-functioning ASD than for younger children or adolescents with more severe forms of ASD (NAC, 2015).

Conversely, comprehensive treatments are typically manualized, provided over a span of months or years, and designed to impact developmental growth and broad strands of prosocial behaviors and social-emotional assets (Odom, Boyd, Hall, & Hume, 2010; Odom, Collet-Klingenberg, et al., 2010). Comprehensive interventions include the Denver model, the Lovaas model, the Princeton Child Development Institute program, and the Treatment and Evaluation of Autistic and Communication Handicapped program (Odom, Collet-Klingenberg, et al., 2010). Although there are relatively few comprehensive interventions for improving core features of ASD, there is a growing body of evidence demonstrating that comprehensive, developmentally oriented interventions increase IQ test scores, joint attention, and reciprocal communication for children with ASD (Maggiati, Moss, Charman, & Howlin, 2011). Although these results are promising, there remains a need to explore treatments that will reduce ASD symptoms and comorbid behavioral problems.

In recent years, some researchers have cast doubt on the use of current treatments for treating ASD symptoms, highlighting that said approaches treat a person with ASD as “a problem to be solved rather than an individual to be understood” (Prizant, 2015, p. 17). Additionally, qualitative interviews of individuals with autism have revealed a need for approaches that affect self-esteem, well-being, and quality-of-life indicators (Crane, Adams, Harper, Welch, & Pellicano, 2019). In one study, Crane et al. (2019) discovered through in-depth interviews that young adults with autism face immense pressure to act normal in a neurotypical world (Prizant, 2015). Similar results from a grounded theory study indicated that parents desire collaborative approaches that foster their children’s independence, self-regulation, and sense of happiness (Pfeiffer, Pillen, Giazzoni-Fialko, & Chainani, 2017). Because ASD core symptoms may serve as strategies for coping with dysregulation, there is a need to explore comprehensive interventions that promote attachment; self-regulation; choice; and natural, unsolicited play (Morgan et al., 2018). One approach that is important to consider is child-centered play therapy (CCPT).

**CCPT**

CCPT is a comprehensive, relational counseling approach based on Virginia Axline’s (1947) developmental construction of person-centered therapy. According to Landreth (2012), play therapy is “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. 11). CCPT is grounded in the belief that an attuned and therapeutic relationship, expressed in terms of unqualified acceptance of the child and empathic resonance, is curative (Axline, 1947; Landreth, 2012; Ray, 2011). Through the CCPT process, children engage in self-directed play, exploring their experiences and emotions and, as a result, gaining a sense of mastery and control over their world and, ultimately, becoming more integrated human beings (Landreth, 2012; Ray, 2011).

For children on the autism spectrum, some researchers maintain that the play experience and core relational tenets lead to increased joint attention, environmental exploration, and self-regulation (Kasari, Freeman, & Paparella, 2006; Kasari, Paparella, Freeman, & Jahromi, 2008; Prizant, 2015). Ray, Sullivan, and Carlson (2012) reasoned that the experiencing of an accepting, genuine, and empathic relationship in a non-directive play environment may contribute to improved relational engagement and communication. Similarly, Porges (2011) argued that in relational experiences such as CCPT, which create a soothed autonomic nervous system and secure attachment, children may experience what neuroscientists refer to as neuroception of safety. Thus, the process of CCPT allows children with ASD to experience safety in a relationship, express affective arousal and dysregulation, and practice self-regulatory skills and varying forms of self-expression (Porges, 2011; Schore, 2001).

As an intervention, CCPT has been used for more than 60 years in the successful treatment of a variety of present-
Child-Centered Play Therapy for Children on the Autism Spectrum

Method

Participants

Research participants were recruited from five elementary schools in the northwestern United States. The first author contacted the school counselor from each school to explain the study parameters. The school's counselor then identified and contacted all parents of children in their respective schools with diagnoses of ASD to determine their interest in participating in this study. Next, the first author met with all interested parents from each school in individual meetings to review informed consent and participation requirements. If parents provided consent for participation, the first author continued with intake and initial assessment to determine whether all qualifications for participation were met.

Children were included in the study if they met the following criteria: (a) had a diagnosis of ASD either by a medical professional or school psychologist, (b) were between 3 and 12 years of age, (c) scored on the Social Responsiveness Scale–2nd Edition (SRS-2; Constantino, 2012) in the moderate to severe impairment of functioning for ASD, and (d) were not participating in counseling services. Twenty-five children's parents agreed to participate and completed pretest assessments; however, two participants did not qualify with clinical levels of ASD on the SRS-2 and thus were not included in the study.

Participants included 23 children (ages 4–10) diagnosed with ASD and having moderate or severe levels of symptoms as reported on the SRS-2. As CCPT is typically used for children ages 3 to 10 (Ray, 2011), our participants' age range of 4 to 10 was appropriate. Of the 23 children enrolled in the study, 19 (83%) were male and four (17%) were female; 22 children were White, and one child was Black. Five (22%) children attended half-day, public developmental preschools, and 18 (78%) attended full-day public elementary schools. In the initial meeting, we asked parents about their children's diagnoses and services received. Of the children included in the study, many had co-occurring diagnoses of ADHD ($n = 13$), OCD ($n = 3$), GAD ($n = 2$), pica ($n = 1$), or ODD ($n = 1$) as reported by parents.

No children were participating in counseling services at the time of the study. Depending on their individualized education plans, the children received varying supports at school, with speech and occupational therapy (OT) services most typically provided. More narrowly, as per their parents' report at pretest assessment, children participated in supports such as speech services inside and/or outside school ($n = 16$), OT services inside and/or outside school ($n = 11$), medication management for their symptoms ($n = 7$), one-on-one assistance in the regular classroom setting from a paraprofessional ($n = 3$), and/or feeding therapy outside school ($n = 3$); three students received no services. The first author asked all parents at

Purpose of the Current Study

Our preliminary search of the literature revealed that comprehensive psychotherapy-based approaches for treating core autism symptoms and comorbid behaviors are scarce. A need thus exists to explore the efficacy of CCPT in improving both core ASD symptoms and externalizing behaviors, such as attention and aggression problems. In this study, we examined the behavioral effects of CCPT for children with ASD. We primarily aimed to (a) test the efficacy of CCPT using validated rating scales to measure core autism symptoms, attention problems, aggression problems, and externalizing problems; (b) examine the feasibility of implementing CCPT in school settings for children with ASD; and (c) implement an intense CCPT intervention with sessions occurring four times per week over a period of 6 weeks.

We designed a randomized controlled trial to include two conditions: (a) CCPT intervention and (b) wait-list control. At the outset, we hypothesized that children with ASD in the CCPT condition would show improved core ASD symptoms and decreased behavioral problems when compared with the control group.
posttest assessment about any changes in services received during the 6-week experimental period of the study, and all parents denied any changes in interventions provided to or medications used by the participants.

Counselors and Treatment Integrity
The CCPT intervention was provided by three graduate-level counseling students and two licensed counselors who held professional credentials in the northwestern United States. All of the therapists were trained in using CCPT and in implementing procedures outlined in the CCPT treatment manual (Ray, 2011). To ensure treatment fidelity, counselors received weekly supervision from the first author and at the conclusion of the study, the research team (the authors) examined treatment adherence. One member of the research team observed one full session from each therapist and used the Child Centered Play Therapy—Research Integrity Checklist (CCPT-RIC) to conduct fidelity, as recommended by Ray, Purswell, Haas, and Aldrete (2017). In their examination, Ray et al. (2017) found that the CCPT-RIC had a high level of interrater reliability (.95) in defining verbal CCPT responses among a panel of CCPT experts. Ray (2011) reported that over 90% adherence to CCPT indicates good treatment fidelity. In this study, we found that the therapists used verbal CCPT responses in their sessions 96% of the time, demonstrating good adherence to CCPT.

Treatment
CCPT was provided initially to the 12 children in the intervention group across 6 weeks, with each child attending four (30-minute) individual sessions weekly for a total of 24 sessions at their school. Play therapy rooms were established at each participant’s school, and the rooms were furnished in accordance with materials recommended by Landreth (2012). Additionally, all playrooms were equipped with cameras so that therapists could record all play sessions to assist with supervision of skills and treatment integrity. Therapists in the study were asked to complete a play therapy session summary after each session, documenting each child’s significant verbalizations, play behaviors, play themes, and changes across sessions. Additionally, therapists conducted in-person parent-consultation sessions weekly for a total of six sessions. Because parent consultation is typically considered part of CCPT treatment, as recommended in the CCPT treatment manual (Ray, 2011), we desired to include that component in this investigation. For this study, therapists followed a specific parent-consultation protocol established by the first author, which required that each therapist share play therapy themes and behaviors noted in session to parents, and that therapists solicit any behavioral changes noticed by parents at home. Although other parent-consultation models affiliated with CCPT have been described in the literature (e.g., Schottelkorb, Swan, & Ogawa, 2015), our study did not use any of those specific models, as many would have required parent education and training components. For this investigation, we wished to determine the effectiveness of CCPT without the interference of parent training and education and, thus, simply reported play themes and solicited parent feedback about changes noted at home. All parent information was documented in parent-consultation session notes, which were later used in social validity reported in the Results section.

Instruments
SRS-2. To assess the effectiveness of CCPT for children with ASD, we had parents complete the SRS-2 (Constantino, 2012) at preintervention and postintervention periods. The SRS-2 is a 65-item rating scale that measures and quantifies the severity of symptoms of social impairment relating to ASD. In our study, parents rated the items on the SRS-2 on a 4-point Likert-type scale ranging from 1 (not true) to 4 (almost always true). The SRS-2 is well regarded for helping identify ASD core symptoms in school-age children and is also recommended for use in assessing intervention impact on social behavior, communication, and stereotypic behaviors of children with ASD (Bruni, 2014). The SRS-2 provides a total score as well as scores for subscales of Social Awareness, Social Cognition, Social Communication, Social Motivation, and Restricted Interests and Repetitive Behavior. The total SRS-2 score is the most reliable score (Bruni, 2014) and thus was used for determining overall change in core ASD symptoms in this study. More specifically, an SRS-2 total score of 76 or higher indicates severe impairment of social functioning, scores from 75 to 66 indicate moderate impairment, scores from 65 to 60 indicate mild impairment, and scores under 60 indicate a lack of social difficulties associated with an ASD diagnosis (Bruni, 2014). The SRS-2 is a strongly reliable instrument (with a total reliability coefficient of .95) and valid for identifying individuals with ASD, particularly with the school-age form (Bruni, 2014).

Child Behavior Checklist (CBCL). In addition to the SRS-2, parents also completed the CBCL (Achenbach & Rescorla, 2001). The CBCLs for children ages 1½ to 5 and 6 to 18 are instruments of the Achenbach System of Empirically Based Assessment. Both measures are used for examining emotional and behavioral problems as well as adaptive functioning of children as rated by parents/guardians. In our study, parents rated the items on the CBCL on a 3-point Likert-type scale ranging from 0 (not true) to 2 (very true or often true). The instruments are designed to evaluate child behaviors across three domains—externalizing, internalizing, and total behavior problems—using various subscales. Due to the varied ages of participants in this study, the two different CBCL versions were used. Because the two versions offer differing subscales, we focused on comparing pre-post data from those subscales that were consistent across the two types: Attention Problems, Aggressive Behavior, and...
Externalizing Problems. Scoring procedures for the CBCL involve calculating $T$ scores and percentiles for each subscale. $T$ scores between 60 and 63 are considered borderline, suggesting an area of concern, and $T$ scores higher than 63 are considered clinical. Both versions of the CBCL (1½–5 and 6–18) are reliable (test-retest coefficients between .68 and .92) and valid for identifying individuals with internalizing and externalizing behaviors (Achenbach & Rescorla, 2001).

Procedure

This study was approved by a university institutional review board. Informed written consent was obtained from parents prior to inclusion in the study. Following consent, parents of child participants were asked to complete the SRS-2 and the CBCL, and then children were randomized into two groups: (a) CCPT treatment or (b) wait-list control. The first author used a random number generator with all participants to randomly assign all children to their group. The randomization resulted in 12 children receiving CCPT and 11 children receiving no treatment. After children were assigned to groups, the experimental intervention began and lasted for 6 weeks. At the conclusion of the intervention, parents in both the experimental and wait-list control groups were asked to complete the SRS-2 and CBCL. After posttesting was completed, children in the wait-list control group received 6 weeks of CCPT.

Data Analysis

Preliminary data analysis included independent-samples $t$ tests to identify statistically significant differences between the treatment group and control group. To determine the effect of CCPT on social skills and problem behaviors, we conducted a mixed-model repeated analysis of variance (ANOVA). Within-subject levels included time from pretest to posttest ($k = 2$). Levels of the between-subjects variables included child treatment (CCPT) and a wait-list control group ($k = 2$). Through this approach, we examined statistical significance and effect size outcomes between groups and across time. We conducted post hoc, paired-samples $t$ tests following discovery of statistically significant differences ($\alpha = .05$) and a meaningful effect size. Practical significance was calculated using partial eta squared as the measure of effect size, and we interpreted meaning using Cohen’s (1988) guidelines of .01 as a small effect, .06 as a moderate effect, and .14 as a large effect. Using G*Power (Version 3.1; Faul, Erdfelder, Lang, & Buchner, 2007), an a priori power analysis for a repeated measures, within-between ANOVA with a medium to large effect size of .30, a probability of .05, a power of .80, two groups, and two measures indicated a total sample size of 24 participants was needed. Because the current study was intended as a small, pilot randomized controlled trial, effect size for power analysis was adjusted accordingly (Purswell & Ray, 2014).

Results

Data Preparation

Participants in both the play therapy group and wait-list control group completed all pre-post measures; hence, there were no missing data. We examined the effect of CCPT on child outcomes by conducting a series of factorial ANOVAs with time (preintervention vs. postintervention) as the within-group variable and group (CCPT vs. wait-list control) as the between-group variable (see Table 1). We inspected data for assumptions regarding normal distribution, homogeneity of intercorrelations, and homogeneity of variance. Normal distribution was slightly skewed, as would be expected for the small sample size. However, ANOVA techniques are typically robust to slight abnormalities in distribution (Pallant, 2016). All other assumptions were met. Although random assignment was used in procedures, we visually noted differences in pretest scores between groups. Independent-samples $t$ tests were run on predata for each factorial ANOVA prior to analysis. In all cases, there were no statistically significant differences between groups at pretest.

Social Responsiveness

A 2 (CCPT vs. control) × 2 (time; preintervention vs. postintervention) factorial ANOVA was conducted to

<table>
<thead>
<tr>
<th>Outcome Variable</th>
<th>CCPT Group</th>
<th>Control Group</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
<td>Pretest</td>
</tr>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>$M$</td>
</tr>
<tr>
<td>SRS-2 Total Score</td>
<td>78.83</td>
<td>7.7</td>
<td>70.58</td>
</tr>
<tr>
<td>CBCL</td>
<td>72.33</td>
<td>11.73</td>
<td>64.50</td>
</tr>
<tr>
<td>Attention Problems</td>
<td>68.42</td>
<td>11.97</td>
<td>62.83</td>
</tr>
<tr>
<td>Aggressive Behavior</td>
<td>68.67</td>
<td>9.35</td>
<td>63.08</td>
</tr>
</tbody>
</table>

Note. CCPT = child-centered play therapy; SRS-2 = Social Responsiveness Scale–2nd Edition; CBCL = Child Behavior Checklist.
examine the effect of the intervention on SRS-2 scores. Results of the factorial ANOVA on the SRS-2 total score indicated a statistically significant interaction effect between group and time, Wilk’s $\Lambda = .53$, $F(1, 21) = 18.60$, $p < .01$, $\eta^2_p = .47$, with a large effect size. This result indicated that participants in the play therapy group experienced a drop in SRS-2 scores from preintervention ($M = 78.83$, $SD = 7.71$) to postintervention ($M = 70.58$, $SD = 9.29$), whereas the control group participants were reported to increase in symptomatology from pre- ($M = 73.64$, $SD = 7.84$) to posttesting ($M = 77.91$, $SD = 7.99$).

**Attention Problems**

A 2 (CCPT vs. control) × 2 (Time; preintervention vs. postintervention) factorial ANOVA was conducted to examine the effect of the intervention on the Attention Problems subscale scores of the CBCL. Results of the factorial ANOVA on the Attention Problems score indicated a statistically significant interaction effect between group and time, Wilk’s $\Lambda = .60$, $F(1, 21) = 14.20$, $p < .01$, $\eta^2_p = .40$, with a large effect size. This result indicated that participants in the play therapy group experienced a decrease in attention problems from preintervention ($M = 72.33$, $SD = 11.73$) to postintervention ($M = 64.50$, $SD = 9.25$), whereas the control group participants were reported to increase in symptomatology from pre- ($M = 66.00$, $SD = 8.76$) to posttesting ($M = 67.55$, $SD = 7.95$).

**Aggressive Behavior**

A 2 (CCPT vs. control) × 2 (time; preintervention vs. postintervention) factorial ANOVA was conducted to examine the effect of the intervention on the Aggressive Behavior subscale scores of the CBCL. Results of the factorial ANOVA on the Aggressive Behavior score indicated a statistically significant interaction effect between group and time, Wilk’s $\Lambda = .80$, $F(1, 21) = 5.19$, $p = .03$, $\eta^2_p = .20$, with a large effect size. This result indicated that participants in the play therapy group experienced a decrease in aggression problems from pre- ($M = 68.42$, $SD = 11.97$) to postintervention ($M = 62.83$, $SD = 9.27$), whereas the control group participants were reported to increase in symptomatology from pre- ($M = 69.55$, $SD = 13.10$) to posttesting ($M = 70.36$, $SD = 11.25$).

**Externalizing Problems**

Results of the factorial ANOVA on the Externalizing Problems subscale scores revealed a statistically significant interaction effect between group and time, Wilk’s $\Lambda = .66$, $F(1, 21) = 10.81$, $p < .01$, $\eta^2_p = .34$, with a large effect size. Following the same trend as previous analyses, participants in the play therapy treatment group were reported to have decreased externalizing symptoms from pre- to post-testing ($M = 68.67$, $SD = 9.35$; $M = 63.08$, $SD = 7.90$), whereas control group scores increased ($M = 65.36$, $SD = 9.54$; $M = 67.27$, $SD = 8.72$).

### Social Validity/Clinical Significance

At the end of the study, we completed interviews with participants’ parents in the CCPT group for the purpose of obtaining social validity. Parents reported improved eye contact, decreased tantrums, increased appropriate play behaviors, and increased relational play with parents. Analysis of pre-post data also revealed that half of the children in the CCPT group ($n = 6$) changed in symptom severity by an entire category (e.g., from severe to moderate ASD symptoms or from moderate to mild ASD symptoms) on the SRS-2. Of the 12 treatment group participants, 11 were reported to have improved ASD symptoms. By contrast, of the 11 control group participants, six were reported to have worsening symptoms, and the remaining five were reported to score the same as or within 1 point of pretest.

### Discussion

The goal of this study was to examine the effectiveness of CCPT on the social functioning and externalizing problems of children with ASD. We speculated that CCPT would be effective in improving social responsiveness associated with ASD and decreasing attention, aggression, and externalizing problems of children with ASD, and these hypotheses were supported in this study: Children in the CCPT treatment group demonstrated significant improvements in social behavior as measured by the SRS-2 and demonstrated significant reductions in externalizing, attention problems, and aggression as measured by the CBCL. These research findings support the previous findings of Balch and Ray (2015) and Salter et al. (2016), who found improvements in social behaviors in single-case research for children with ASD. These results, along with results of the present study, indicate that CCPT may be an effective intervention to help improve the social behaviors of children with ASD. Whereas applied behavior analysis may be effective in eliminating or reducing specific behaviors and reinforcing preferred behaviors and is considered an “established” treatment intervention, it is very time intensive, requiring 30–40 hours per week for 2 or more years (Granpeesheh, Tarbox, & Dixon, 2009). In contrast, in our investigation, we found that just 12 hours of CCPT with six parent-consultation sessions improved social behaviors for children with ASD. Thus, these preliminary results indicate that CCPT may be a cost-effective intervention to help improve the social functioning of children with ASD.

Children with ASD typically struggle with emotional and behavioral self-regulation (Jahromi, Bryce, & Swanson, 2013; Laurent & Gorman, 2018). Poor self-regulation is related to increased difficulties with social functioning and adaptive behaviors (Uljarevic et al., 2018) and increased aggressive and externalizing behaviors (White, Jarrett, & Ollendick, 2012). In this study, we found that externalizing...
behaviors, attention problems, and aggression as rated by parents on the CBCL decreased significantly through participation in CCPT, which supports previous research (Bratton et al., 2013; Ray et al., 2007, 2009; Ritzi, Ray, & Schumann, 2017; Schottelkorb & Ray, 2009). Thirteen children with ASD in our study also had a comorbid diagnosis of ADHD, similar to previous research wherein 30%–75% of children with ASD had a comorbid ADHD diagnosis (Grzadzinski et al., 2016; Johnston et al., 2013). Leitner (2014) reported that there are no interventions that have been found effective to treat deficits associated with both ASD and ADHD. In addition, aggressive behaviors are a common co-occurring behavior associated with autism (Kanne & Mazurek, 2011). In this investigation, we found that CCPT improved social functioning associated with ASD and decreased ADHD and aggressive behaviors.

Ray et al. (2012) postulated that CCPT is an intervention inherently designed to be effective for children with ASD because it is relationship and communication focused—areas that are core deficits for children with ASD. In CCPT, children with ASD are accepted just as they are, which differs significantly from typical behavioral interventions used for children with ASD that are designed to target and change specific behaviors. In our study, parents reported that social behaviors and relational interactions with parents were improved after participation in CCPT. We speculate that when children with ASD experience full acceptance of themselves through the CCPT relationship, they may feel safe in their attempts to engage in a relationship with the play therapist. Once acceptance is discovered in one relationship (the play therapy relationship), we posit that children with ASD are more likely to interact with others outside of the therapy room, as confirmed by parents in this study, with parents reporting improved social interactions with them through SRS-2 results and parent feedback in parent-consultation sessions.

Results from this investigation indicate good clinical significance for CCPT as parents reported positive changes detected at home, including fewer tantrums, improved eye contact, and improved relational play with parents. These findings support other researchers’ findings that for interventions to be implemented, good social validity from parents and teachers is required (Callahan et al., 2017; Carter, 2010). Thus, our findings indicate that parents perceived CCPT as a helpful intervention.

Implications for Counseling

The findings of this investigation indicate that children who have ASD along with co-occurring attention and aggression problems may benefit from participation in intensive CCPT. Thus, clinical counselors in private practice or in mental health settings may consider using CCPT for children with ASD and, more narrowly, may consider using a more intensive model with multiple sessions in a week, rather than the traditional once-per-week model. Because our study took place in the school setting, we encourage school counselors and school-based mental health practitioners to use CCPT in their work with children with ASD. In such settings, it is easier to access the children more frequently throughout the week and thus implement an intensive CCPT model. In addition, counselor educators who train school-based and clinical counselors who plan to work with children ages 4 to 10 may encourage training and use of CCPT for their students, particularly as CCPT has been found effective for a multitude of presenting problems of childhood (Ray, 2011). Because ASD is the fastest growing neurodevelopmental disability in the United States (CDC, 2014, 2018), it is imperative that child counselors know of evidence-based interventions for children with ASD. Preliminary results of our investigation, as well as previous research (Balch & Ray, 2015; Salter et al., 2016), indicate that CCPT may be effective for children with ASD.

Limitations

The present study was the first of its kind to use a randomized controlled trial in exploring the effectiveness of CCPT for children with ASD. However, several limitations exist, including that our study used a small sample size, no follow-up was performed to ensure changes persisted postintervention, and there was limited diversity in the sample due to the study taking place within one area of the northwestern United States. Another limitation of this investigation is that all evaluation of change was done through parents’ reports of symptoms on the SRS-2 and CBCL. Thus, it is possible that parents’ positive experiences participating in this intervention impacted their reporting at the postassessment period.

Future Research

Although we found significant improvement in social behaviors and decreased attention and externalizing behavioral problems and aggressive behaviors for children with ASD after participating in CCPT, no follow-up was performed to determine sustained improved functioning postintervention. Future researchers could consider a 1-year follow-up to ensure improvements were sustained. As this study was a pilot study, future researchers could use larger, more diverse samples and consider comparing CCPT with evidence-based interventions for children with ASD, such as applied behavior analysis. An additional consideration is exploration of CCPT with and without parent involvement to see if parent consultation impacts treatment outcome. Future researchers could include a direct observation assessment for examining change in symptoms outside of parent report. Direct observation methods in the classroom would provide information regarding change occurring in other settings, such as the classroom (Kasari & Smith, 2013). Because participants
in this study had moderate or severe levels of ASD as per the SRS-2, researchers could explore the effectiveness of CCPT for children with varying levels of ASD severity. Finally, in this investigation, we explored an intensive model of CCPT, rather than the more traditional once- or twice-per-week model that is described in the CCPT literature (Ray, Henson, Schottelkorb, Brown, & Muro, 2008). Thus, researchers could explore the effectiveness of intensive models of CCPT compared with the traditional once-weekly sessions that are commonplace in clinical counseling settings.

**Conclusion**

ASD is a common neurodevelopmental disability for children, and mental health and school counselors should be informed of a variety of interventions that are effective with this population. Although there is evidence to support behavioral interventions, our study shows that relational-based counseling interventions may be effective alternatives for meeting the varied needs of children with ASD. In this investigation, we found that an intensive CCPT intervention was effective in improving social responsiveness and decreasing externalizing problem behaviors of children diagnosed with ASD. Thus, this pilot study provides preliminary evidence that intensive CCPT may be a cost-effective intervention for children with ASD.

**References**


Child-Centered Play Therapy for Children on the Autism Spectrum


