

Child-Centered Play Therapy: Aggression, Empathy, and Self-Regulation

Brittany J. Wilson and Dee Ray

The authors conducted a randomized controlled trial to investigate differences among 36 elementary school age children who received 16 sessions of child-centered play therapy and 35 children who were assigned to a waitlist control group. Pre- and postassessments were used to measure children's levels of aggression, self-regulation, and empathy per parent and teacher report. Results revealed statistically significant positive results for parents and nonstatistically significant results for teachers. Implications and future research are examined.

Keywords: child-centered play therapy, aggression, empathy, self-regulation, descriptive discriminant analysis

Aggressive behaviors in young children currently serve as the leading cause of counselor referrals in the United States (Bratton et al., 2013). Without early intervention, children exhibiting aggressive behaviors are at an increased risk for highly externalized and problematic behaviors across the life span (Foulkrod & Davenport, 2010; Frick & White, 2008; Gathright & Tyler, 2014). In addition, such problematic behaviors have been shown to contribute to ongoing social, emotional, and academic concerns that affect children's academic and personal success (Bratton et al., 2013; Cochran, Cochran, Fuss, & Nordling, 2010; Ray, Blanco, Sullivan, & Holliman, 2009). In the face of such behavioral and emotional challenges, caregivers may quickly begin to feel hopeless regarding effective treatment options for the children. Although some turn to pharmacotherapy to treat challenging symptomatology in children, including aggression, no Food and Drug Administration–approved pharmacotherapy currently exists for the treatment of aggressive behaviors in childhood (Gathright & Tyler, 2014; Hudak, 2005). However, early assessment and effective therapeutic intervention have been proven efficacious for minimizing children's maladaptive aggressive behaviors (Boxer & Frick, 2008; Davenport & Bourgeois, 2008; Gathright & Tyler, 2014). Child-centered play therapy (CCPT) is an empirically supported early intervention for young children that has been suggested as beneficial in working with aggressive children (Ray, 2011).

Developmental Patterns of Childhood Aggression

Aggression is understood as a typical and natural human response to various emotional states experienced throughout the life span and beginning in early infancy (Centers for Disease Control and Prevention [CDC], 2017; Connor, 2002; Dodge, Coie, & Lynam, 2006; Foulkrod & Davenport, 2010). Research has shown that infants as early as 3 months old can recognize facial responses of anger or aggression in their caregivers (Connor, 2002; Dodge et al., 2006). Healthy levels of aggression are highly adaptive and may facilitate one's competence in assertiveness, competition, and success in meeting routine challenges beginning at a very young age (Connor, 2002). By the time children reach toddlerhood, acts of aggression become far less ambiguous and increasingly explicit compared with when they were infants. When children are between 12 and 18 months old, aggressive acts tend to center around social interactions and peer exchanges (Dodge et al., 2006; Hay, 2005). Children in this developmental stage are increasingly aware of themselves and others. However, they generally lack the ability to verbally express feelings such as anger and frustration and instead act out both physically and impulsively as a means of self-expression (CDC, 2017). Thus, toddlers in this age range represent the peak of physical aggressiveness (Connor, 2002). Coinciding with language acquisition and increased expressive vocabularies,

Brittany J. Wilson and **Dee Ray**, Department of Counseling and Higher Education, University of North Texas. Correspondence concerning this article should be addressed to Brittany J. Wilson, Department of Counseling and Higher Education, University of North Texas, 1155 Union Circle #310829, Denton, TX 76203-5017 (email: Brittany.Wilson@unt.edu).

children between the ages of 2 and 5 years tend to rely less on physical forms of aggression and more on verbal abilities for emotional expression (CDC, 2017).

The elementary school years tend to bring relief to parents and caregivers as acts of physical and verbal aggression in children decrease significantly between the ages of 6 and 10 (Dodge et al., 2006; Foulkrod & Davenport, 2010; Hay, Payne, & Chadwick, 2004). Children's increasing abilities to self-regulate their feelings and emotions appear to precede the notable decline in their aggressive behaviors (Dodge et al., 2006; Keenan & Shaw, 2003). In addition, increasing abilities for delayed gratification allow children to substitute aggressive inclinations such as pushing and hitting, as seen in earlier years, with more socially appropriate behaviors. Although most children's acts of aggression decline during the elementary school years, some children's do not. Olson, Lopez-Duran, Lunkenheimer, Chang, and Sameroff (2011) noted the relevancy of high levels of aggressive behaviors in kindergarten as "warning signs" (p. 253) of increasingly severe problems across a child's development. Longitudinal studies indicate that children demonstrating early-onset and persistent aggression are at an increased risk for negative outcomes, including behavioral problems, academic underachievement, poor interpersonal functioning, trouble forming and maintaining relationships, and negative mental health (Connor, 2002). Thus, researchers emphasize the importance of early intervention for children demonstrating nonnormative patterns of aggressive behaviors to alleviate prolonged negative consequences (Coie & Dodge, 1998; Comer, Chow, Chan, Cooper-Vince, & Wilson, 2013; Davenport & Bourgeois, 2008; Foulkrod & Davenport, 2010; Frick & White, 2008).

Empathy and Self-Regulation as Components of Aggression

Empathy and self-regulation are identified components of aggression that theoretically contribute to a child's inhibition and expression of aggressive acts. A child's ability to experience and demonstrate empathy is directly related to his or her ability to take on the emotional experiences of another and thus is largely connected to acts of aggression. *Empathy*, defined as an affective response that is more appropriate to or congruent with someone else's situation than to one's own situation (Dadds et al., 2008), is theorized to play a "profound, complex, and fundamental role" (Gordon, 2012, p. 30) in the healthy functioning of human relationships. Even so, empathy remains a relatively understudied construct in counseling literature, particularly in relation to aggression. However, empirical support for a negative relationship between empathy and aggressiveness does exist (Bjorkqvist, 2007). Absent of early intervention, a lack of empathy toward others has been found to remain relatively stable from late childhood into

early adolescence and beyond (Blair, 2010; Frick & White, 2008; Risser, 2013). In instances when individuals are able to experience empathy through both cognitive and interpersonal processes, aggressive behaviors tend to subside (Bjorkqvist, 2007). Empathy researchers (Bjorkqvist, 2007; Peterson & Flanders, 2005) suggest that empathy may be an innate inhibitor to aggressive behaviors.

Children struggling with their self-regulatory processes often lack the ability to control their feelings and emotions and therefore may display aggressive behaviors out of impulse. High impulsiveness most commonly characterize conflicts related to self-regulation and aggression. Very young children often express aggression through impulsive acts related to feelings of anger, frustration, and the like. However, for children on typical developmental trajectories, aggressive behaviors tend to subside with the development of more advanced abilities toward self-regulation (Olson et al., 2011). Keenan and Shaw (2003) suggested that children's increased abilities toward self-control over their emotions, or self-regulation, were directly responsible for the decline in aggression during the elementary school years. However, a sizable subgroup of children continue to struggle with self-regulation and aggressive acting-out behaviors from preschool into elementary school (Olson et al., 2011). Specifically, children demonstrating high levels of anger and low abilities for self-regulation tend to demonstrate increased aggressive behaviors (Eisenberg et al., 2001). Thus, it is important to note that children with overly aggressive symptomatology tend to display deficits in both their empathic and self-regulatory processes to varying degrees (CDC, 2017; McAuliffe, Hubbard, Rubin, Morrow, & Dearing, 2007).

Current Interventions for Childhood Aggression

Several identified therapeutic interventions aimed at reducing children's aggressive behaviors currently exist. Among the most highly used methods are various modalities stemming from cognitive behavior therapy (CBT; Glickens, 2009; Weisz & Kazdin, 2010). Counselors frequently use CBT interventions to modify behaviors and reduce symptomatology in children with highly aggressive behaviors. One primary concern regarding the use of CBT interventions with young children is the developmental appropriateness of such interventions (Grave & Blissett, 2004; Holmbeck, Devine, & Bruno, 2010). Despite the well-documented effectiveness of CBT with older populations, meta-analyses have shown "the main components of CBT and other cognitive therapies require more complex, symbolic, abstract, metacognitive, consequential, and hypothetical thinking consistent with the greater cognitive sophistication of adolescents" (Holmbeck et al., 2010, p. 30). Thus, some researchers assert that the effectiveness of



child and adolescent psychotherapeutic interventions could be enhanced if treatments were tailored to the developmental needs of the child (Holmbeck et al., 2010).

CCPT is a developmentally responsive therapeutic intervention for working with children based on the understanding that play serves as children's natural medium of self-expression and the therapeutic relationship is the primary healing factor (Axline, 1974; Landreth, 2012; Ray, 2011). The basic tenet of CCPT can be conceptualized as a steadfast belief in a child's innate tendency for positive growth and healing given the safety of an unconditional, empathic, and congruent relationship. Through the theoretical lens of CCPT, children's externalized behaviors serve as a manifestation of their internal experiences and subsequent emotions. Thus, the CCPT therapist does not seek to focus on or modify behaviors but rather to fully and as completely as possible empathically understand the child's internal frame of reference (Landreth, 2012; Ray, 2011; Ray et al., 2009). It is only through understanding the underlying emotional experiences of the child that play therapists may begin to recognize the purpose the child's aggressive acts may be serving. Although counterintuitive, CCPT therapists understand even aggressive behaviors as self-enhancing (Dorfman, 1951; Ray, 2011). Through the self-actualizing tendency, children are constantly striving to "preserve and enhance" (Rogers, 1989, p. 404) themselves. As such, their behaviors serve as a means of satiating perceived needs from the environment.

To date, limited research exists exploring the impact of CCPT on childhood aggression. Bratton et al. (2013) and Ray et al. (2009) conducted initial studies exploring the effects of CCPT on children's aggressive and disruptive behaviors. Bratton et al. found a statistically significant reduction with large effect size in disruptive behaviors among preschoolers who participated in 168 CCPT sessions. Ray et al. found a statistically significant reduction with moderate effect in aggressive behaviors among children in kindergarten to fifth grade as reported by teachers. Ray et al.'s study was quasi-experimental in design, whereas Bratton et al.'s study focused specifically on disruptive behaviors among preschoolers. Neither study directly explored the theoretical constructs or considerations of empathy and self-regulation. Although hypothesized as mediators to change in CCPT (Ray, Stulmaker, & Lee, 2013), empathy and self-regulation have yet to be directly explored in relation to childhood aggression.

■ Purpose of the Current Study

Because of the prevalence rates of young children's aggressive behaviors and concerns related to the developmental appropriateness of current evidence-based practices, a need exists for ongoing exploration in this area. Despite the

demonstrated effectiveness of CCPT with children exhibiting a range of behavioral and emotional concerns, CCPT is not currently considered an evidence-based practice for working with aggressive children (Bratton et al., 2013; Bratton, Ray, Rhine, & Jones, 2005). Researchers have identified a need for increased empirical support within the field of play therapy specific to children exhibiting aggressive behaviors (Foulkrod & Davenport, 2010).

The purpose of the current study was to test the effectiveness of CCPT on children exhibiting maladaptive and non-normative levels of aggressive behaviors in an elementary school setting, specifically by exploring the components of empathy and self-regulation as they relate to aggression. The following was the primary research question for this study: Based on group membership to either a treatment or a control group, how may aggressive children's scores on aggression, self-regulation, and empathy be predicted by both parent and teacher report? Specifically, we sought to explore the relationships between aggression, self-regulation, and empathy with regard to a child's participation in CCPT using a multivariate approach to analysis.

■ Method

Because the purpose of this study was to explore the effectiveness of CCPT with regard to decreasing aggressive symptomatology and increasing empathy and self-regulatory processes in young children, we selected a randomized controlled trial as the most appropriate research design. This particular type of experimental design allowed for the direct comparison of a group of children receiving CCPT with a waitlist control group in relation to outcome. The current study was part of a larger randomized controlled trial exploring the effects of CCPT across four elementary schools.

Participants

Participants were recruited across four Title I elementary schools in the southwestern region of the United States. The original sample for this study included a total of 76 children, whereas the final sample consisted of 71 children (59 boys and 12 girls) between 5 and 10 years old ($M = 6.87$, $SD = 1.62$) and in kindergarten to fourth grade. The majority of participants (52.1%, $n = 37$) identified as African American, 21.1% ($n = 15$) as Latina/o, 19.7% ($n = 14$) as Caucasian, and 7% as multiracial ($n = 5$). (Percentages do not total 100 because of rounding.) Following random assignment of participants, 36 children participated in the treatment group and 35 children participated in a waitlist control group. The treatment group consisted of 28 boys and eight girls between 5 and 10 years old ($M = 7.11$, $SD = 1.55$), and the waitlist control group consisted of 31 boys and four girls between 5 and 10 years old ($M = 6.63$, $SD = 1.68$). Postassessment data were not collected for five children (three from the treatment

group and two from the waitlist control group) who moved away during the course of this study.

To qualify for the present study, children had to (a) be between 5 and 10 years of age, (b) be identified by teachers or school personnel as demonstrating problematic aggressive behaviors, (c) be able to understand and speak English, (d) be living with one parent who was willing to give consent for participation, and (e) have teachers and parents who were willing to complete both pre- and postassessments.

Measures

Two instruments were used in the present study to assess parent and teacher perceptions of children's aggression, self-regulation, and empathy.

Children's Aggression Scale (CAS). The CAS (Halperin & McKay, 2012) is an instrument developed for the purpose of evaluating the nature, severity, and frequency of children's aggressive behaviors. This scale aims to differentiate specific aggressive behaviors from the broader category of disruptive behaviors, such as oppositional/defiant behaviors, hostility, and anger. The CAS includes two points of measurement: a parent form (CAS-P) and a teacher form (CAS-T). Using both the CAS-P and CAS-T allows counselors to obtain a holistic and accurate portrayal of a child's aggressive behavior (Halperin & McKay, 2012). The CAS-P contains 33 items to be completed by the child's primary parent/caregiver and is scored on a 5-point scale (1 = *never*, 2 = *once a month or less*, 3 = *once a week or less*, 4 = *2–3 times a week*, 5 = *most days*; Halperin & McKay, 2012). The CAS-T contains 23 items to be completed by a teacher who is familiar with the child and has known the child for a minimum of 4 weeks. Items on the CAS-T are rated on the same 5-point scale as the CAS-P (Halperin & McKay, 2012). The coefficient alphas for the total aggression index across four normative groups ranged from .86 to .90 for the CAS-P and from .78 to .94 for the CAS-T. For the current sample, Cronbach's alpha for the total score at pretest was .88 for the CAS-P and .87 for the CAS-T.

Social Emotional Assets and Resilience Scales (SEARS). The SEARS (Merrell, 2011) is a strength-based assessment measuring the socioemotional competencies and assets of children and adolescents ages 5–18 across multiple settings. The SEARS measures a set of adaptive characteristics important for children's success at school, with peers, and in the outside world. The SEARS contains four primary rating scales with each targeting a specific rater and context. Assessment developers recommend using both a parent form (SEARS-P) and a teacher form (SEARS-T) to gain an increasingly holistic representation of a child's current functioning (Merrell, 2011). For the purposes of this study, the SEARS-P and SEARS-T were used. The SEARS-P is designed to be completed by parents, guardians, or other home-based caregivers of children in Grades K–12 and consists of 39 items across three subscales: Self-Regulation/Responsibility, Social Competence, and

Empathy. The SEARS-T is designed to be completed by a child's primary teacher in Grades K–12 based on the child's behaviors in the past 4 to 6 months. The SEARS-T is composed of 41 items that make up four subscales: Self-Regulation, Social Competence, Empathy, and Responsibility. Items are rated on a 4-point rating scale (1 = *never*, 2 = *sometimes*, 3 = *often*, 4 = *always*) on both the parent and teacher forms. For the current sample, Cronbach's alpha for the total score at pretest was .96 for the SEARS-P and .94 for the SEARS-T. In the current study, the Self-Regulation and Empathy subscales were used to operationalize constructs associated with aggressive behaviors exhibited by children. Because Merrell (2011) reported strong reliability mean estimates for the SEARS-T Self-Regulation score ($\alpha = .95, r = .90$), SEARS-P Self-Regulation score ($\alpha = .95, r = .92$), SEARS-T Empathy score ($\alpha = .91, r = .84$), and SEARS-P Empathy score ($\alpha = .87, r = .90$), we chose to use the subscales independently in analyses.

Procedure

After receiving institutional review board approval, we asked teachers and school personnel to identify children exhibiting highly aggressive behaviors across all four elementary schools. Once the children were identified, parents of referred children were asked to give informed consent for study participation and to complete the CAS-P, SEARS-P, and a demographic form. Subsequent to receiving parental informed consent, teachers were also asked to give consent for study participation and to complete the CAS-T and SEARS-T. Once all pretesting was completed and all parents and teachers of child participants had given full consent for participation in the study, a block randomization procedure was used in which each school served as a block and the children were entered into the study five to eight at a time. We chose to randomly assign children to groups in blocks of five to eight participants per school to expedite initiation of services. Once we received parental consents for five to eight children, we used an internet random assignment program to assign children to the treatment or waitlist control group (Hsu, 2008).

Children in the treatment group began receiving CCPT services in the school and were scheduled to receive 30-minute play therapy sessions twice a week for 8 weeks, totaling 16 sessions. Although it was originally intended for children in the treatment group to receive 16 sessions of CCPT over the course of 8 weeks, this was not feasible for the entire sample because of holidays and child absences. Thus, play therapy sessions ranged from eight to 16 sessions over 10 weeks, with a mean session count of 13.97 (mode = 16) sessions. Children in the waitlist control group received CCPT services following the 8-week intervention period. At the completion of the 8-week period, all parents and teachers were asked to complete the CAS and SEARS as a means of posttesting.

Treatment group. Children in the treatment group were provided individual play therapy according to protocol



as defined in the CCPT treatment manual (Ray, 2011). Counselors in this study sought to provide an environment in which children felt safe by establishing a strong therapeutic relationship characterized by warmth, genuineness, and empathic understanding. To facilitate such a relationship, counselors used intentional responses such as reflections of feeling, meaning, and content; limit setting when appropriate; encouragement; and returning of responsibility. Each type of response was meant to provide children with an environment where they could feel free to express themselves fully, further develop their internal locus of control, further develop their abilities to self-regulate, and better identify feelings and emotions of both themselves and others (Landreth, 2012). Playrooms were located in unoccupied classrooms within the school buildings. The playrooms in this study were assembled and materials were selected in accordance with Landreth's (2012) and Ray's (2011) recommendations. Specific to the current study, aggressive toys included plastic knives and swords, a rope, toy guns, handcuffs and keys, a bop bag, and aggressive plastic animals such as lions, snakes, and dinosaurs. A full list of playroom toys and materials included in this study can be found in Ray (2011).

To ensure treatment fidelity, the research team randomly selected and thoroughly reviewed one video for each participating child. The research team consisted of three doctoral counselor education students with 5 to 15 years of CCPT experience and 4 years of CCPT supervision experience. The videos were reviewed in accordance to the CCPT–Research Integrity Checklist (Ray, Purswell, Haas, & Aldrete, 2017) whereby responses from participating counselors were coded according to CCPT categories. Video review indicated that the counselors adhered to protocol for 98% of responses, exceeding Ray's (2011) guideline of 90% adherence. In addition, teachers and parents were not consulted over the course of the study. Parent and teacher consultations were held following the completion of data collection to maintain treatment fidelity.

Participating counselors included one faculty member who held a doctoral degree in counseling and registered play-therapist credential and six doctoral students in counseling who held a master's degree in counseling, successfully completed at least two play therapy courses, and successfully completed a counseling practicum with supervised play therapy experiences. There were seven female counselors (one African American and six Caucasian) and one Caucasian male counselor. All counselors were required to attend training prior to the study in which the Play Therapy Skills Checklist (Ray, 2011) and all study protocols and procedures were reviewed.

Waitlist control group. Children in the waitlist control group did not receive any treatment during the study. Upon the completion of data collection at pretest and posttest, children in the waitlist control group received the same CCPT

intervention that was implemented by the counselors with the treatment group. In addition, counselors followed the identical protocol as outlined for the treatment group.

Data Analysis

We used two descriptive discriminant analyses (DDAs) to discover what variables contributed most to group differences between the treatment and waitlist control groups from pre- to posttesting according to both parent and teacher report. The use of DDA for this randomized controlled trial was a precise method allowing for the simultaneous exploration of all three dependent variables (aggression, self-regulation, and empathy) as well as the shared relationship between them. Such an analysis closely mirrors the complexity of the variables of interest, allows for prediction, and promotes an increasingly accurate interpretation of results (Sherry, 2006; Tabachnick & Fidell, 2013). We intentionally selected DDA over other multivariate analyses because of its ability not only to assess for group differences among multiple dependent variables (as a multivariate analysis of variance [MANOVA] will do), but also to detect where exactly differences occurred among the variables within the same analysis. Sherry (2006) recommended use of DDA over MANOVA as a method of simultaneously indicating whether group differences exist and where those differences exist among the variables. Regarding sample size, researchers suggest a sample of 10 to 20 participants per dependent variable to accurately interpret the results of a DDA (Sherry, 2006). With the minimum recommendation of 10 participants per variable, the current study's sample size of 71 participants was sufficient, far exceeding the recommended 30 to 60 participants needed.

We conducted the DDAs using group membership (treatment or waitlist control) as the predictor of children's levels of aggression, self-regulation, and empathy. Specifically, the DDAs were used to identify which variables best captured group differences between the treatment and waitlist control groups based on parent and teacher reports. Aggression was measured using difference scores between pre- and posttesting on the total aggression score on the CAS-P and CAS-T, empathy was measured by difference scores on the Empathy subscale of the SEARS-P and SEARS-T, and self-regulation was measured by difference scores on the Self-Regulation subscale of the SEARS-P and SEARS-T. The first DDA was conducted with parent data, and the second was conducted with teacher data. The DDAs were conducted separately to compare the results of parent and teacher data independent of one another.

According to Sherry (2006), seven assumptions for DDA should be met to ensure accurate interpretation of the analysis results. After the initial data screening, measures were implemented to maintain the integrity of the data and subsequent analysis, including checking for all necessary assumptions. All seven assumptions for DDA were met.

According to Sherry (2006), a nonsignificant Box's M ($p > .001$) indicates the data met the assumption of homogeneity of variance. In the present study, Box's $M = 16.921$, approximate $F(6, 34417.29) = 2.69, p = .01$, indicating that the covariances were equal across groups and that cases were derived from the same population. Additionally, we examined multivariate normality following a recommendation of Henson (1999) to use Mahalanobis (D^2) distance for each case of the data to detect outliers. The dependent variables were determined to be multivariate normal using this method.

Results

Parent Reports of Aggression, Self-Regulation, and Empathy

All assumptions for the DDA on parent report were met. Because there were two groups, treatment and waitlist control, one discriminant function (Function 1) was obtained ($k - 1$). We then evaluated the statistical significance of the canonical discriminant function by examining the Wilks's lambda statistic. We determined that the degree to which the variables of interest contributed to the synthetic dependent variable was statistically significant at $p < .01$ with a moderate canonical correlation ($R_c = .39$) and effect size of $R_c^2 = .16$. This indicates approximately 16% of variance is accounted for in Function 1. Specifically, aggression, self-regulation, and empathy can account for 16% of the differences between the two groups. Table 1 presents these findings.

To further evaluate the unique and shared contribution of each dependent variable in accounting for group differences, we examined both standardized discriminant function and structure coefficients (Henson & Thompson, 2002). On Function 1, the standardized discriminant function coefficients indicated aggression was primarily responsible for group differences (.82), followed by empathy (-.29), and self-regulation (-.22). Due to the theoretical relationship of the three variables in the discriminant score, the absolute contribution of any one variable is not reflected by the standardized coefficients. Thus, aggression, self-regulation, and empathy all shared contribution in the synthetic dependent variable as indicated by the standardized coefficients.

TABLE 1

Wilks's Lambda and Canonical Correlation for Function 1 of Parent and Teacher Data

Variable	Wilks's λ	$\chi^2(3)$	p	R_c	R_c^2
Parent	.85	11.40	.010*	.39	.160
Teacher	.96	2.86	.413	.21	.042

Note. R_c = canonical correlation; R_c^2 = squared canonical correlation. * $p < .05$.

Examining structure coefficients further confirmed that aggression accounted for the largest degree of variance in the composite dependent variable ($r_s = .90$). However, self-regulation also accounted for a considerable degree of variance ($r_s = -.52$), followed by empathy ($r_s = -.51$). Specifically, aggression accounted for 81%, self-regulation accounted for 27%, and empathy accounted for 26% of the variance in scores on Function 1. This means aggression contributed the most to group separation, although self-regulation and empathy were strong contributors as well. Additionally, it is important to note that both empathy and self-regulation were negatively related to group differences whereas aggression was positively related. In other words, as members of one group became more aggressive, they also became less self-regulated and less empathic. All standardized coefficients and structure coefficients are reported in Table 2.

Group centroids were also examined to determine which group, treatment or waitlist control, contributed to group differences as observed on Function 1 pertaining to aggression, self-regulation, and empathy. It appears on Function 1, as noted by group centroids, that the waitlist control group (.43) was comparable to the treatment group (-.42) with respect to the magnitude of change. However, based on the positive and negative valances associated with each group, it appears as though the groups changed in differing directions. This indicates that group differences on Function 1 pertaining to aggression, self-regulation, and empathy were attributable to both the waitlist control and treatment groups. More specifically, children in the control group were more aggressive, less self-regulated, and less empathic from pre- to posttesting compared with children in the treatment group, who were reported by parents to be less aggressive, more self-regulated, and more empathic.

Because confidence intervals indicated statistical differences between the control and treatment groups, we conducted a post hoc one-way analysis of variance (ANOVA) between the composite dependent variable and the grouping variable to examine the magnitude of group differences and to improve ability to interpret findings (Sherry, 2006). Specifically, the differences between the control and treatment groups with respect to aggression, self-regulation, and empathy were

TABLE 2

Standardized Discriminant Functions and Structure Coefficients for the Two Groups

Function 1	Coefficient	r_s	r_s^2
Aggression	.82	.90	.81
Self-regulation	-.22	-.52	.27
Empathy	-.29	-.51	.26

Note. Coefficient = standardized canonical function coefficient; r_s = structure coefficient; r_s^2 = squared structure coefficient.

statistically significant, $F(1, 69) = 12.69, p < .01$. In addition, the Cohen's d effect size for centroid differences on the discriminant function score between the two groups was determined to be large ($d = .85$). Table 3 presents the centroids for each group, along with corresponding 95% confidence intervals from the one-way ANOVA.

Teacher Reports of Aggression, Self-Regulation, and Empathy

All assumptions for the DDA on teacher report were met. In examining the canonical discriminant function, we found a nonsignificant ($p = .413$) and small canonical correlation ($R_c = .21$), with an effect size of $R^2_c = .042$. This indicates approximately 4.2% of variance is accounted for in Function 1. Specifically, aggression, self-regulation, and empathy can account for 4.2% of the differences between the treatment and waitlist control groups based on teacher report (see Table 1). Due to insignificant findings (Sherry, 2006), the standardized discriminant function coefficients, structure coefficients, and group centroids were noninterpretable for the teacher data.

Discussion

In this study, we sought to explore the degree to which differences in children's scores on aggression, self-regulation, and empathy per teacher and parent report, from pre- to posttesting, contributed to group differences between children in the treatment group receiving CCPT and children in a waitlist control group. Results indicated that parents perceived aggression, self-regulation, and empathy as contributing to differences between children who received CCPT and those who did not. Specifically, parents identified the most meaningful change in their children's behaviors as contributable to their overall degree of aggressive symptomatology followed by self-regulation and empathy. Teachers, however, perceived very little difference between children who did and those who did not participate in CCPT for the three variables of interest. These results indicate clinical considerations and implications for practice and further research.

Aggression

On the basis of both the statistical and practical results of this study, it may be suggested that parents of children referred to counseling for aggressive behaviors perceived their

children as less aggressive and increasingly self-regulated and empathic subsequent to participation in CCPT. Such shifts in behavioral manifestations of aggression may not only help children in their everyday functioning but also in their relationships with others. Although these findings are comparable to previous studies regarding positive changes, at least from parents' perspectives following CCPT (Bratton et al., 2005; Lin & Bratton, 2014; Ray, Armstrong, Balkin, & Jayne, 2014), this study is unique in that the chosen statistical analysis allows for interpretations based on prediction. As the structure coefficients and corresponding 81% of variance accounted for in group differences suggest, it can be reasonably predicted that children might become less aggressive, more self-regulated, and more empathic through participation in CCPT as compared with receiving no services at all. This finding suggests that CCPT may decrease aggression, which in turn may improve children's healthy functioning and development over time related to behavioral symptomatology, academic achievement, interpersonal functioning, ability to form and maintain relationships, and overall sense of contentment (Cochran et al., 2010; Connor, 2002; Kingston & Prior, 1995; Risser, 2013).

The population of focus for this study may be of importance when considering the lack of statistically or practically significant findings for teachers. Teachers face ongoing challenges and demands in the classroom. Considering the interference to classroom instruction a single disruptive child may cause, it is not entirely implausible to assume teachers could formulate negative perceptions of these children (Morrison & Bratton, 2011). Although it is understandable that aggressive children may need increased focus and attention, these are often resources teachers are unable to provide given the magnitude of responsibility they face in balancing curriculum with classroom management. Teachers' perceptions of children referred for aggressive behaviors do, however, appear important in their ability to provide emotional and relational support to their students (Helker, Schottelkorb, & Ray, 2007; Morrison & Bratton, 2011). It may therefore be possible that the children in this study continued to struggle in getting individualized needs met and thus continued to act out aggressively in class as a result of unfulfilled relational needs. It could also be theorized that children's behaviors may have changed in the classroom, although the changes may be difficult to detect because of teachers' decreased sensitivity to any behavioral variation in highly aggressive children.

Self-Regulation

Parents perceived their children's participation in CCPT as predictive of their increased abilities toward self-regulation. This finding may be particularly noteworthy because self-regulation is an essential tenet in the philosophy of CCPT. Person-centered theories, from which CCPT emerges,

TABLE 3

Centroids and 95% Confidence Intervals (CIs) for Each Group on Discriminant Function Scores

Group	Centroid	SD	SE	95% CI
Treatment	-.42	1.02	.17	[-.76, -.07]
Waitlist control	.43	0.98	.17	[.09, .77]

emphasize the drive toward self-regulation as an innate aspect of the human experience and that childhood motivations “tend naturally to harmonize into a complex and changing pattern of self-regulation” (Rogers, 1989, p. 405). Thus, the very nature of the skills and specific responses used by the counselors in this study likely contributed to children’s increased abilities toward self-regulation. Specifically, as children acted out aggressively in the playroom, they were met not only with empathic understanding but also with a sense of trust in their abilities to control their impulses and identify increasingly enhancing means of self-expression.

Furthermore, in order for parents to perceive notable differences in their child’s self-regulatory processes, the skills were able to transcend beyond the therapeutic environment and be infused into the child’s being beyond the structure of play therapy. Thus, the study’s findings suggest that children participating in CCPT became better able to control their impulses and express themselves in increasingly beneficial ways both within the therapeutic setting and beyond. Many reasons may exist for the lack of statistically or practically significant results with respects to teacher data on self-regulation. Findings of this study support the notion of shared variance between aggression, self-regulation, and empathy as originally hypothesized. Thus, it may be reasonably assumed that if teachers do not perceive meaningful change in overall aggression, they may also report a lack of change in self-regulation and empathy.

Empathy

Parents perceived their children’s participation in CCPT as predictive of an increased propensity toward empathy. This is of particular importance, because very limited research currently exists with respect to children’s developed sense of empathy subsequent to receiving CCPT. Some researchers have suggested that children are capable of conceptually understanding empathy although they are unable to emotionally experience it (Dadds et al., 2008). However, other researchers starkly contradict this notion and have suggested that providing children with an environment in which they may experience empathic understanding, such as in CCPT, may advance their ability to convey empathy toward others (Ray, 2011; Ray et al., 2013). Pertinent to this study, the structure coefficient for empathy and the corresponding 26% of variance accounted for in group differences provide support for this supposition. In addition, the results provide preliminary evidentiary support for the use of CCPT to enhance empathy for children struggling with aggressive behaviors.

Children who are struggling with aggressive behaviors often find relationships taxing and difficult to maintain. These relational hardships highlight the appropriateness of CCPT with this population, because the central premise of the child-centered philosophy is entering into

relationships with children in which they feel authentically seen, understood, and accepted despite any emotional or behavioral challenge they may face. Child-centered therapists believe unconditional relationships are both healing and contagious (Axline, 1974; Landreth, 2012; Ray, 2011; Rogers, 1989). As children experience the conditions set forth in CCPT, they become better equipped to demonstrate care and acceptance toward themselves and others. In other words, they become better equipped to experience and express empathy. Empathy between the child and the CCPT therapist may be of particular relevance when considering the population of children in this study. Aggressive children often face ongoing relational struggles as a result of their externalized manifestations of anger, guilt, shame, and other emotional experiences. As aggressive children continue to face relational hardships, the message that they are not worthwhile may become increasingly internalized. As children start to see themselves in this light, they will continue to display behaviors consistent with their internal experiences and dialogues (Moustakas, 1953; Rogers, 1989). Thus, although introducing a relational experience inconsistent with a child’s existing self-structure may prove challenging, it may also lead to children changing the lens through which they view themselves and others. The therapeutic relationship then becomes the primary agent of change (Landreth, 2012; Ray, 2011).

Study Limitations

Despite the current findings offering valuable information about the effectiveness of CCPT in decreasing aggression and increasing self-regulation and empathy, this study has several limitations. The study’s limitations include the specified age range and geographic location, as well as overrepresentation of boys and African American children, indicating the limited generalizability to all children who demonstrate aggressive symptoms. Because one cornerstone of randomized controlled trials is the comparison of treatment and nontreatment groups, this study used a no-treatment control group. However, the use of an evidence-based treatment or placebo group would have controlled for the variable of attention. Additionally, the length of the intervention should be considered based on the particular sample for this study. Children exhibiting aggressive behaviors, particularly those meeting criteria to be considered highly aggressive, may require a longer length of treatment than the 16 sessions allotted in order to transfer behaviors and coping skills from home to school environments. Given that the optimal effect of CCPT is approximately 30 to 40 sessions (Bratton et al., 2005; LeBlanc & Ritchie, 2001), CCPT with this population may need to be conducted over a longer period of time to stabilize findings and contribute to statistically significant results for teachers.

Clinical and Research Implications

The results of this study suggest that CCPT may be a promising intervention with children who demonstrate problematic aggressive behaviors. In CCPT, the relationship between the CCPT therapist and the child may be unlike any relationship in a child's life. Through the permissiveness, acceptance, and necessary limits provided to children in the playroom, they may begin to release and identify their inner feelings underlying aggressive acts. This type of relational experience for an aggressive child may be fundamental in the ability to identify increasingly enhancing and socially acceptable means of expressing needs to caregivers and peers alike.

In addition, CCPT appears to be a viable and practical option to further develop children's empathy. Through the empathic understanding conveyed by the CCPT therapist, children feel both understood and accepted despite any displayed acts of aggression. Through intentional reflections made by the CCPT therapist, children also become better aware of their own feelings and internal experiences. With more perceived experiences of empathy, children become increasingly capable of developing and displaying empathy toward others (Ray et al., 2013). Thus, as opposed to providing children with cognitive-based interventions to develop empathy, CCPT may serve as an applicable intervention that allows aggressive children to first experience empathy, promoting their subsequent ability to offer it to others. Furthermore, results of both the present study and prior literature support the notion that, with increased empathy, children may become decreasingly aggressive over time. As previously stated, the development and progression of empathy in children, particularly those struggling with aggression, may be a key factor in curtailing aggressive acts across development. Empathy allows children the ability to take on the emotional experiences of others, thus providing children the opportunity to become increasingly aware of the impact of aggressive acts on others.

Based on the findings and limitations of the present study coupled with prior research findings, several recommendations for future research are presented. To control for the variable of attention, we suggest that future studies use a placebo comparison group as opposed to a no-treatment waitlist control group. In addition, extended length of treatment may more accurately reflect the needs of this population and the recommendations of prior researchers regarding optimal effects of play therapy (Bratton et al., 2005; LeBlanc & Ritchie, 2001). As we discussed earlier, including teachers in the intervention process may lead to teachers feeling increasingly connected with aggressive children and more likely to notice and accept behavioral changes in the classroom. Furthermore, adding a clinical cutoff to participant inclusion criteria may increase the rigor of future studies with this population. Finally, follow-up measures may be helpful in monitoring the long-range impact of CCPT with aggressive children.

Conclusion

Because of the relevance of aggressive behaviors in childhood, the present study was meant to augment the current body of literature regarding CCPT with this population. This study examined the predictive ability of aggression, self-regulation, and empathy with respect to group membership to either a waitlist control or a treatment group by comparing parent and teacher reports of children's aggressive behaviors over time. The statistically significant findings between groups indicated that children's aggressive symptomatology, self-regulation, and empathy could be reasonably predicted based on their participation in one group over another as reported by parents. Specifically, it could be soundly predicted that children participating in CCPT would become less aggressive and increasingly self-regulated and empathic. Concurrently, it could be predicted that children receiving no treatment at all would become increasingly aggressive and less self-regulated and empathic. However, teachers did not report predictive abilities of group membership based on these three variables. This finding could be associated with a number of factors, including a lack of child behavioral change in the classroom, but is more likely attributable to teachers' decreased sensitivity to behavioral changes among this population of students, external hardships to completing pre- and posttest assessments, and a lack of teacher involvement in the intervention leading to increased feelings of frustration. Overall, the conditions provided through the therapeutic relationship in the present study appeared to foster children's increased abilities to self-regulate and demonstrate empathy, leading to decreased aggressive and acting-out behaviors, at least in terms of parent report.

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