



# Child-Centered Play Therapy and Childhood Depression: An Effectiveness Study in Schools

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## Abstract

Depression in childhood is a significant mental health concern, impacting cognitive, affective, social, behavioral, and physical domains. Children who experience depressive symptoms are at an increased risk for physical and mental health, social, and behavioral problems throughout adulthood. Children who are marginalized due to their socioeconomic status, racial and ethnic identities are at an increased risk to experience depression and limited access to mental health care. Further, previous research has demonstrated limited efficacy of depression treatments for young children. This study is an examination of the efficacy of child-centered play therapy [CCPT], a culturally and developmentally responsive treatment, on depression among young children. Participants were 71 children from five Title 1 elementary schools in the southwestern U.S. referred by school personnel for depressive symptoms (49 males, 22 females; ages 5–9, mean age  $M = 6.21$ ). The sample consisted of 14 (19.7%) African American, three (4.2%) Asian American, 15 (21.1%) biracial, 19 (26.8%) Caucasian, and 20 (28.2%) Latino children. Participants were randomly assigned to eight weeks of twice-weekly CCPT experimental groups ( $n = 34$ ) or a waitlist control group ( $n = 37$ ). Results of doubly multivariate repeated-measures MANOVA revealed statistically significant improvement in depressive symptoms for children who participated in CCPT on the *Mood and Feelings Questionnaire Parent* and *Direct Observation Form [DOF] Sluggish Cognitive Tempo Scale*. Repeated measures ANOVA on *DOF Total Problems* indicated that children in CCPT statistically significantly decreased their demonstration of overall problem behaviors as rated by blind observers. Results of this study support the effectiveness of CCPT with young children of diverse ethnocultural and socioeconomic background.

**Keywords** Play therapy · Children · Child-centered play therapy · Depression · Randomized control trial

## Highlights

- CCPT was effective in reducing observed and parent reported depressive symptoms for children.
- CCPT was effective in improving overall behavior problems among children with depressive symptoms.
- CCPT was effective in improving the depressive symptoms among young children who identified as at-risk and economically disadvantaged.

Across the United States, an estimated 1.9 million children, or 3.2% of minors, between the ages of three to 17 years are currently diagnosed with depression (Ghandour et al., 2016).

In 2012, 8.4% of American youth aged six to 17 years were, at one time, diagnosed with depression or anxiety (Bitsko et al., 2018). However, researchers estimated that 25% of youth in the U.S. will experience a depressive episode by the end of high school (Lewinsohn et al., 1999) and that 64% of these children will not receive treatment (Mental Health America, 2017). Notably, individuals living in poverty (Danziger et al., 1994) and African American and Latino persons are at an increased risk for developing depression (Rodriguez et al., 2018). Further, the intersectionality of marginalized socioeconomic status and racial and ethnic identity represent increased risk for the

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development of depressive symptoms (Wadsworth & Achenbach, 2005).

Experts believe the total incidence of depression among children is underestimated and underreported. Underrepresentation of the prevalence of depression may be attributed to varied methods of assessment of depressive symptoms, lack of measures normed for young children or children of marginalized identities, or researchers choosing to focus only on diagnoses of Major Depressive Disorder [MDD], rather than the clinical and practical manifestations of depressive symptomatology. Prior to the 1980s, depression was viewed as an “adult disorder” (p. 35) and children were not seen as mature enough to experience true depressive symptoms (Maughan et al., 2013). Contemporary researchers suggested that stakeholders often mistake depressive symptoms for alternative problems, such as conduct or oppositional defiant disorders, and miss the underlying depression etiology because they are masked by comorbidity with behavioral problems (Huberty, 2012; Maughan et al., 2013; National Institute for Health and Care Excellence [NICE], 2005; Weiss & Garber, 2003). Observed developmental differences in the onset of depression have helped differentiate the physiological, cognitive, affective, social, and behavioral sequelae of depressive symptomatology between children, adolescents, and adults (Kaufman et al., 2001).

## Childhood Depression

Depressive symptoms among children represent a wide spectrum of cognitive, affective, physiological, social, and behavioral concerns which may manifest as appropriate responses to severe impairment. Affective components of childhood depression include feelings of sadness, guilt, anger, irritability, hopeless or helplessness; anhedonia; mood lability; and tearfulness (Goodyer, 1996; Huberty, 2012; Son & Kirchner, 2000; Weiss & Garber, 2003). Physiological indicators of depression include insomnia; hypersomnia; weight loss, weight gain, or failure to gain weight with development; poor appetite or overeating; and psychomotor agitation or retardation; headache; stomach pain or nausea; musculoskeletal pain; and fatigue (Baji et al., 2009; Korczak et al., 2017). Social markers of depression may include social withdrawal or detachment from others; poor cooperation; decreased participation or avoidance of activities (Goodyer, 1996; Huberty, 2012). Behavioral symptoms include tantrums; poor self-care or hygiene; decreases in academic achievement or demonstration of limited effort; aggression; self-injurious behaviors, such as hitting self and suicide attempts (Barrocas et al., 2012; Huberty, 2012; Weiss & Garber, 2003). Cognitive symptoms of childhood depression may include new

or intensified worry; difficulty with concentration or attention; difficulty making decisions; stable, negative beliefs about self, the world, and the future; apathy; low self-worth or esteem; catastrophizing; and suicidal thoughts or preoccupation with death (Baji et al., 2009; Huberty, 2012; Korczak et al., 2017; Weiss & Garber, 2003).

The *DSM-V* (APA, 2013) specifies that subjective or observed lack of interest, poor concentration or difficulty thinking, and indecisiveness represent cognitive domains of depression. These cognitive components of depression may be described as sluggish cognitive tempo [SCT]. SCT has been examined related to Anxiety, Oppositional Defiant Disorder, and depressive symptoms (Barkley, 2018; Burns et al., 2013; Callahan et al., 2017) contributing to the likelihood that depressive symptoms may be under-recognized due to comorbid manifestation of symptoms such as SCT. Callahan et al. (2017) found there is a statistically significant, large effect in the relationship between depression and SCT. Specifically among children, Burns et al., 2013 found that SCT and depression are positively correlated (Burns et al., 2013). Cumulatively, the symptoms of depression are wide-ranging and pervasive.

The occurrence of depression among children bears implications for socioemotional and behavior problems, poor academic functioning, and mental health challenges which may sustain into adulthood (Garaigordobil et al., 2017) and represents the leading cause of disability and early death among adults in developed regions across the world (Costello et al., 2006). Further, prognosis of depression is influenced by the early onset of symptoms (Kovacs et al., 2016). Korczak and Goldstein (2009) found individuals who reported depressive symptoms during childhood also reported the highest number and longest duration of recurrent depressive episodes; highest comorbidity of anxiety disorders, personality disorders, and substance misuse; and were four-times more likely to attempt suicide compared to adult-onset counterparts. Depression represents a significant public health concern which merits prevention and intervention across the lifespan.

## Treatment of Depressive Symptoms

During the past several decades, researchers have worked toward increasing the rigor of psychosocial intervention research to treat depressive symptoms in children. Three reviews of treatments for child and adolescent depression were conducted and published in the *Journal of Clinical Child & Adolescent Psychology* (Kaslow & Thompson, 1998; David-Ferndon and Kaslow (2008); Weersing et al., 2017). Most recently, eight efficacy studies of depression in children were identified (Weersing et al., 2017). Table 1 depicts comparisons between randomized childhood depression treatment outcome studies and includes the

**Table 1** Randomized childhood depression treatment outcome studies

Theoretical Orientation	Length of Treatment	Age	Race/Ethnicity	Depression Instruments	Comparison Condition	Outcome
Group CBT (De Cuyper et al., 2004)	16 60-min weekly session; 16-weeks	N = 20 M = 10 9–11 yrs	100% Caucasian (Dutch)	CDI	'Taking Action' CBT group compared to waitlist control group	<i>Equivocal.</i> Children in both groups demonstrated reductions in depressive symptoms <i>Group x time:</i> $F(1,18) = 0.21, p = 0.65$
Group CBT (Kahn et al., 1990)	12 50-min biweekly sessions; 6-weeks	N = 68 10–14 yrs	Not reported	CDI, BDI, RADS	Comparisons between CBT, relaxation training, self-modeling and waitlist control groups	<i>Positive.</i> Children in all three experimental groups demonstrated reductions in depressive symptoms <i>Group x time</i> CDI: $F(13,64) = 6.86, p < 0.01^{**}$ <i>Group x time</i> BDI: $F(3,64) = 6.51, p < 0.01^{**}$ <i>Group x time</i> RADS: $F(3,64) = 7.87, p < 0.01^{**}$
Group CBT (Liddle & Spence, 1990)	8 60-min weekly sessions; 8-weeks	N = 31 M = 9.2 7–12 yrs	Not reported	CDI, CDRS-R	Comparisons between social competence CBT, placebo attention, and waitlist control groups	<i>Null.</i> Children in all three groups demonstrated equivalent reductions in depressive symptoms <i>Group x time: nonsignificant*</i>
Individual CBT (Nelson et al., 2003)	8-weeks	N = 29 M = 10.3 8–14 yrs	African American = 7.2% Caucasian = 71.4% Hispanic = 21.4%	K-SADS-P, CDI	Videoconferencing CBT compared to face-to-face CBT	<i>Equivocal.</i> Children in both groups demonstrated reductions in depressive symptoms <i>Group x time:</i> Wilks $\lambda(1,26) = 0.83; \eta_p^2 = 0.37$
Group CBT (Stark et al., 1987)	12 50-min sessions; 5-weeks	N = 29 M = 11.2 9–12 yrs	Not reported	CDI, CDS, CDRS-R, CBCL	Comparisons between self-control and behavioral problem solving CBT groups and a waitlist control group	<i>Equivocal.</i> Children in both groups demonstrated reductions in depressive symptoms <i>Group x time</i> CDI: <i>nonsignificant*</i> <i>Group x time</i> CDS: <i>nonsignificant*</i> <i>Group x time</i> CDRS-R: $p < 0.05^{**}$ <i>Group x time</i> CBCL: <i>nonsignificant*</i>
Individual Psychodynamic (Trowell et al., 2007)	8-14 90-min SIFT sessions; 16-30 50-min FIPP sessions; 9 months	N = 72 M = 11.71 9–14 yrs	Asian = 6% White = 87% "Other" = 6% Missing = 1%	CDI, MFQ, K-SADS	Comparisons between SIFT family and FIPP individual therapy groups	<i>Null.</i> Children in both groups demonstrated equivalent reductions in depressive symptoms, without statistically significant separation of groups at posttest <i>Group x time: nonsignificant*</i>
Group CBT (Weisz et al., 2009)	M = 16.25 sessions; M = 25.2 weeks	N = 57 M = 11.77 8–15 yrs	African American = 26% Caucasian =	DISC 4.0, CDI, CDI-P, CBCL	PASCET CBT group compared to treatment as usual	<i>Equivocal.</i> Children in both groups demonstrated reductions in depressive symptoms <i>Group x time</i> CDI: $t(1,42) = 0.21, p = 0.83,$

Table 1 (continued)

Theoretical Orientation	Length of Treatment	Age	Race/Ethnicity	Depression Instruments	Comparison Condition	Outcome
			33% Latino = 26% "mixed/other" = 11%			$d = 0.06$ Group $\times$ time DISC-C 4.0: $t(1,41) = 1.20$ , $p = 0.24$ , $d = 0.06$ Group $\times$ time CDHP: $t(1,36) = -0.21$ , $p = 0.84$ , $d = -0.07$ Group $\times$ time CBCL Anx./Dep.: $t(1,31) = 0.22$ , $p = 0.83$ , $d = 0.08$ Group $\times$ time CBCL Withdrawn: $t(1,31) = 0.88$ , $p = 0.39$ , $d = 0.30$ Null. Children in both groups demonstrated reductions in depressive symptoms, without statistically significant separation of groups Group $\times$ time: <i>nonsignificant</i> *
Individual CBT (Vostanis et al., 1996)	9 sessions; 4–6 months	$N = 54$ $M = 12.7$ 8–17 yrs	Caucasian = 87.7%	K-SADS-P, MFQ	Comparison between CBT and nondirective supportive therapy	
Individual CCPT (current study)	16 30-min biweekly sessions; 8-weeks	$N = 71$ $M = 6.21$ $SD = 1.09$ 5–9 yrs	Black = 19.7% Asian = 4.22% Biracial = 21.1% White = 26.8% Latino = 28.2%	MFQ; DOF	Treatment group compared to waitlist control group	Positive. Children in the CCPT group demonstrated reductions in depressive symptoms Group $\times$ time: $F(1, 59) = 5.589$ , $p < 0.006$ , $\eta_p^2 = 0.159$

Note: *BDI* Beck Depression Inventory, *CBCL* Child Behavior Checklist, *CDRS-R* Children's Depression Rating Scale-Revised, *CDS* Child Depression Scale, *CBT* Cognitive Behavioral Therapy, *CDI* Children's Depression Inventory, *DISC 4.0* Diagnostic Interview Schedule for Children, *DOF* Direct Observation Form, *FIPP* Focused Individual Psychodynamic Psychotherapy, *MFQ* Moods and Feelings Questionnaire, *RADS* Reynolds Adolescent Depression Scale, *K-SADS-P* Schedule for Affective Disorders and Schizophrenia for Children—Present Episode, *SIFP* Systems Integrative Family Therapy

\*Due to nonsignificant results for interaction effects, data were not reported

\*\*Effect sizes were not reported

results of the present study. Cognitive-behavioral treatments were utilized in seven studies (De Cuyper et al., 2004; Kahn et al., 1990; Liddle & Spence, 1990; Nelson et al., 2003; Stark et al., 1987; Weisz et al., 2009; Vostanis et al., 1996) and psychodynamic therapy was utilized in one study (Trowell et al., 2007). Findings in only one study indicated positive effects (Kahn et al., 1990); findings in four studies were positive but equivocal to comparison conditions (De Cuyper et al., 2004; Nelson et al. 2003; Stark et al., 1987; Weisz et al., 2009); and findings were null in three studies (Liddle & Spence, 1990; Trowell et al., 2007; Vostanis et al., 1996) indicating that effective intervention for childhood depression is still unsubstantiated.

The developmental needs of young children with depressive symptomology may not have been fully addressed in previous research. Kaslow and Thompson (1998) described the studies included in their 1998 review as “downward extensions of approaches designed for adults and thus were not guided by a developmental psychopathology framework” (p. 149). Weersing et al. (2017) affirmed that much of the previous research of treatment efficacy has been focused on adaptations of adult treatment models for depression. David-Ferndon and Kaslow (2008) reported that within the child samples, younger children were as not responsive to the treatments as adolescents and that there was limited representation of children younger than 10 years old, which may suggest that cognitive treatments may not meet developmental needs of young children in therapy. David-Ferndon and Kaslow (2008) recognized increasing trend towards support for intervention based upon alternative theoretical approaches, including behavioral and nondirective therapies. Further, authors suggested that overall, ethnocultural factors were not adequately addressed or represented by existing research (David-Ferndon & Kaslow, 2008). Cardemil et al. (2007) suggested the majority of childhood depression outcome research has focused on middle class, Caucasian children. Overall, there is a need to further explore developmentally and culturally responsive treatments for children with depressive symptoms.

## Child-Centered Play Therapy (CCPT)

Depressive symptoms may develop from a broad range of underlying emotions and experiences. Although hopelessness, worry, and irritability are characteristic of depression (Goodyer, 1996; Huberty, 2012; Son & Kirchner, 2000; Weiss & Garber, 2003), many behaviors, such as withdrawal, avoidance, or aggression (APA, 2013; Barrocas et al., 2012; Huberty, 2012; Weiss & Garber, 2003) may manifest. From the person-centered perspective, affect, cognition, and behavior are considered holistically (Rogers, 1951), and are not parsed apart as targets of therapeutic intervention. Rather, the child-centered play therapist seeks to understand the child’s internal frame of

reference, without a focus on modifying behaviors or perceived deficits of the child (Landreth, 2012; Ray, 2011). Children’s behavior is directly consistent with the child’s view of self (Ray, 2011). Total communication from the child, inclusive of the child’s underlying emotional experiences, externalized behaviors, and ways of viewing self, the world, and relationships, allow the play therapist to empathically understand, and therefore accurately perceive the child’s expression of depressive symptoms. Children’s holistic engagement with their environment is their mechanism for satiating their needs and is thus not understood as maladaptive. Instead, children are seen as moving toward self-enhancement and growth (Landreth, 2012) released by the self-actualizing tendency (Rogers, 1961).

Children develop self-concept based on their lived experiences and need for acceptance in relationships (Rogers, 1951). Incongruence may develop as children experience discrepancies between their self-structure and experiences (Rogers, 1951); children’s responses to these discrepancies may include a wide range of emotions, behaviors, and meaning-making. A child’s perception of the attitudes of significant others may create conditions of worth the child feels they must ascribe to in order to gain or maintain acceptance in their environment. If a child perceives acceptance will only be provided conditionally, the child will develop a self-concept based on those conditions. Empathic understanding of the child’s phenomenological field is essential to holistically understanding the affect, cognitions, and behavior in their self-concept (Ray, 2011).

Theoretically, CCPT addresses the discrepancy between a child’s self-concept and their organismic experience; such discrepancies may result in a child’s feeling incapable of meeting the demands they perceive in their environment, and resultant depressive symptoms (Ray, 2018). From the CCPT perspective, children’s poor self-concept is addressed by the mechanisms of safety and relationship provided by the play therapist. The nondirective nature of play, attunement between the child and counselor in a calm environment, therapist congruence, and limit setting provide the child with safety (Ray, 2018). Additionally, the counselor’s provision of verbal and nonverbal responses, unconditional positive regard, and empathic understanding establish a relationship of acceptance and caring. Cumulatively, these components provide the child with freedom to express their experiences of depression, naturally moving towards confronting their perceptions of inadequacy, and beginning to experience themselves as capable as they build coping skills, resulting in positive integrations to self-concept (Ray, 2018).

## Research Base for CCPT

The research base of CCPT supports recognition as a promising treatment for anxiety, disruptive behaviors, and domestic violence victimization by the California

Evidence-Based Clearinghouse for Child Welfare (<https://www.cebc4cw.org/program/child-centered-play-therapy-ccpt/>) and as probably efficacious for disruptive behaviors in the *Journal of Clinical Child & Adolescent Psychology* (Kaminski & Claussen, 2017). In a meta-analysis of 53 CCPT play therapy studies, Lin and Bratton (2015) found that children who participated in CCPT demonstrated statistically significant improvement in behavioral and emotional concerns compared to children in placebo or waitlist control groups, with a medium effect size. In meta-analytic findings on CCPT in school settings, Ray, Armstrong, Balkin, and Jayne (2015) reported statistically significant improvement for children in CCPT when examining internalizing, externalizing, total problems, self-efficacy, academic achievement, and other behaviors.

Regarding depressive symptoms specifically, CCPT has demonstrated effectiveness in reducing broader internalizing symptoms with statistically significant outcomes and large effects (Lin & Bratton, 2015; Ray et al., 2015). Baggerly (2004) conducted the only study to date exploring the impact of CCPT narrowed to the specific outcome of depression on children, measured by the *Children's Depression Inventory [CDI]* (Kovacs, 1992), before and after 9–12 sessions of CCPT. Baggerly concluded that child participants experienced significant improvement in depressive symptoms, yet the lack of randomized methodology prevented generalization of findings.

Research concerning the reduction of depressive symptoms among young children is limited. Previous outcome studies exploring the efficacy of the treatment of depressive symptoms demonstrated limited representation of children younger than 10-years-old and has focused on middle class, Caucasian children (Cardemil et al., 2007; David-Ferndon & Kaslow, 2008). CCPT is an intervention specifically designed for children between the ages of three to 10-years-old (Ray, 2011) and researchers demonstrated effectiveness of CCPT with children who identify as racial or ethnic minorities (Bratton & Garza, 2005; Lin & Bratton, 2015). Researchers highlighted need for more rigorous methodologies that include a randomized design with group comparison of treatment approaches (Kaslow & Thompson, 1998) and studies utilizing more experienced clinicians (David-Ferndon & Kaslow, 2008). Further, Weersing et al. (2017) and Arora et al. (2017) suggested that researchers have adapted adult treatments for depression and applied them to children. A randomized controlled trial with a larger sample, increased rigor in methodological design, and a comprehensive construct for measuring depressive symptomology may lead to greater implications regarding evidence-based practice for depression among children.

## The Current Study

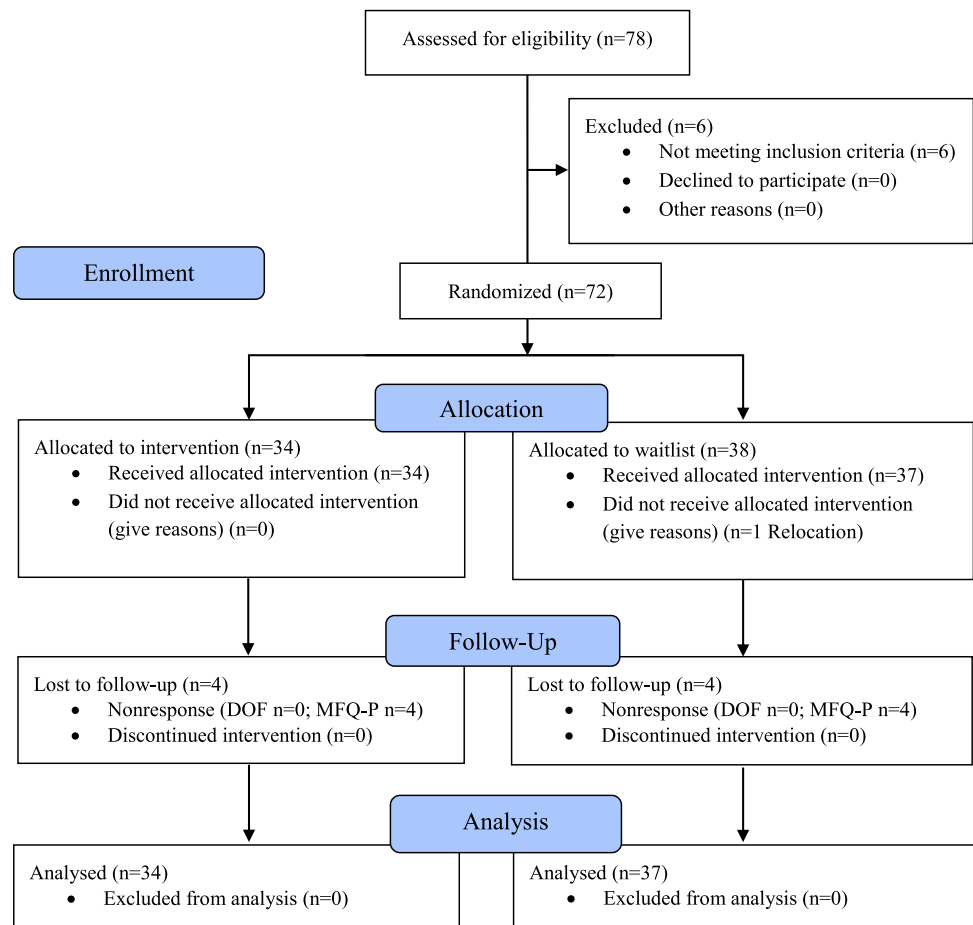
To strengthen the knowledge base of practitioners selecting their training and treatment modalities, further research on CCPT with depressive symptoms must be explored. Increased focus on the holistic construct of depression among young children and culturally diverse populations may support researchers and practitioners understanding of, and ability to respond effectively to, depressive symptoms among young children. The purpose of this study was to conduct a randomized controlled trial to explore the effectiveness of CCPT as a culturally and developmentally sensitive treatment for children who have been historically minoritized and are underrepresented in treatment efficacy studies of depression, and to address criticisms of methodological rigor identified in earlier research, including treatment fidelity considerations and sample size. Procedures for the current study took place in the context of the Play for the Future project (Ray et al., in press) on the use of CCPT with children exhibiting academic or behavioral problems in school. Unique to the current study were the inclusion of instruments and measurement of depression symptoms. We evaluated two research questions regarding the impact of CCPT with children who have clinical symptoms of depression. First, do children who have been referred due to depressive symptomology demonstrate improvement in symptoms following participation in CCPT? Given the extensive range of symptoms associated with depression, this study included an evaluation of the effectiveness of CCPT with children who have depressive symptoms on a measure of comprehensive mental health symptomology. Second, do children with depressive symptomology demonstrate improvement in overall behavioral problem symptoms following participation in CCPT?

## Methodology

### Participants

Participants were recruited from five elementary schools in the southwestern United States. Each of the five schools was a designated Title-I school, meaning that per census data, more than 40% of the families of enrolled students are considered economically disadvantaged (U.S. Department of Education, 2015). For inclusion in the study, children were: (1) in grades Kindergarten through third; (2) spoke English or Spanish; (3) referred by school counselors or teachers for emotional problems; and (4) demonstrated clinical symptomology on the *SCT* domain on the *Direct Observation Form* with a cutoff score above 64. The total number of children recruited was 72; one child in the control group withdrew due to relocation resulting in 71

Fig. 1 Flow of participants



total participants (CCPT = 34; Control=37), outlined in the CONSORT flow diagram in Fig. 1. No statistically significant differences were found between groups. The sample consisted of 49 (69%) males and 22 (30.9%) females, ages of five to nine years old ( $M = 6.21$ ,  $SD = 1.09$ ). Of the 71 participants, 26 (36.6%) were in Kindergarten, 22 (30.9%) were in first grade, 14 (19.7%) were in second grade, and nine (12.7%) were in third grade. Of participants, 14 (19.7%) identified as Black, three (4.2%) as Asian, 15 (21.1%) as biracial, 19 (26.8%) as Caucasian, and 20 (28.2%) as Latino.

## Instruments

The *Direct Observation Form (DOF)* (McConaughy & Achenbach, 2009) is a standardized rating observation tool to evaluate children's observed behavior, affect, and interpersonal interactions at school for children between the ages of five to 14 (Dowdy et al., 2013, McConaughy & Achenbach, 2009). The *DOF* is rated in school settings by trained, objective observers for 10-minute increments. Following each observation, the observer responds to an 89-item rating scale regarding the cognitive, social, emotional,

and behavioral conduct the child demonstrated during the observation period. Each of the 89-observation items were rated on a scale of 0 (not observed) to three (definite occurrence with severe intensity or occurrence lasting more than 3-minutes in duration).

Depressive symptoms were measured with the *SCT DOF* syndrome scale and *Total Problems* composite scale. McConaughy & Achenbach (2009) reported a Cronbach's alpha of 0.49 for the SCT syndrome scale and 0.87 for Total Problems composite score. Content validity of the DOF was established by Achenbach and Rescorla (2001), given significant discrimination between referred children from demographically similar children who were not referred. For the current sample, the Cronbach's alpha was 0.86, which indicates a high level of internal consistency with this sample.

In the present study, three research team members served as objective raters for the DOF. Raters were two doctoral students who had completed a master's in counseling and one master's student in the last semester of a master's program. In preparation for data collection, the observers were trained in assessment observation protocol to establish standardization of observations and conducted observations

over a two-week period to establish interrater reliability. Raters conducted 30 simultaneous but independent observations of children in a school setting; scoring discrepancies were documented and refined in team meetings at regular intervals until they reached a reasonable level of interrater reliability. The interrater reliability score was 0.95.

The *Mood and Feelings Questionnaire [MFQ] - Parent* (Angold et al., 1987) is parent-rated assessment of depression in children between the ages of 6–17. The *MFQ* is a unifactorial scale for depression (Angold et al., 1995). Regarding reliability, Wood et al. (1995) reported a Cronbach's alpha of 0.92 on the *MFQ-P*. Angold et al. (1995) established criterion validity for the *MFQ* given its attention to the clinical and taxonomic components of depression in children, across affective, cognitive, somatic, and suicidal domains of depression symptomology. The *MFQ-P* is considered an evidence-based instrument according to the California Evidence-Based Clearinghouse for Child Welfare (n.d.). For the current sample, the Cronbach's alpha was 0.92, which indicates a high level of internal consistency.

## Procedures

Following human subjects approval, we sought referrals from parents, teachers, school counselors, and school administrators for children identified as experiencing emotional or depressive symptoms, such as tearfulness and withdrawal. Confidential envelopes were provided to each child's guardians, containing informed consent and *MFQ-P* form. Upon receipt of the informed consent and *MFQ-P*, research team members met with each child participant to attain assent. The *DOF* observers were then assigned study participants for three 10-minute periods at different times of the day in a two to four-day period, per the *DOF* manual (McConaughy & Achenbach, 2009). Raters were blind to group assignment. Because an important objective of this study was to evaluate the holistic functioning of children with depressive symptoms, all observations were completed during class instruction or activity times. Pretest observations were completed within two weeks prior to the beginning of CCPT treatment and posttest observations were completed within two weeks of the completion of treatment.

In accordance with randomized controlled trial procedures, children who met criteria for participation were randomly assigned to the experimental CCPT group or the waitlist control group. Recruitment of child participants occurred over the course of three weeks. We utilized block randomization for group assignment within each school and electronic randomization software to determine group assignment for the child participants. Following completion of 16 play therapy sessions, or the eight-week experimental period, confidential envelopes were provided to guardians

containing the *MFQ-P*, to be completed by the same parent who completed pre-data assessment. Pre and post data were not able to be collected on the *MFQ-P* for seven child participants because a Spanish *MFQ-P* was not available, and two parents did not return the posttest of the *MFQ-P*.

## Treatment and Control Group Procedures

The CCPT treatment group received 16-biweekly 30-minute individual play sessions across a total of eight weeks. Due to student or counselor absences, children in the experimental group received between 14 and 16 sessions of play therapy, with a mean of 15.94 sessions. Children in the waitlist control group did not receive treatment during the eight-week experimental period of the study. Group assignment and intervention procedures were intended to be blind, thus parents were not given information regarding their child's group assignment.

CCPT sessions were conducted in accordance with Ray's (2011) CCPT treatment manual. Nonverbal components of CCPT include a body position which is forward, open, and follows the child; the play therapist's tone is congruent with child affect as well as verbal responses to the child (Ray, 2011, p. 293–315). Verbal responses made by the play therapist to the child include tracking behavior, reflecting content, reflecting feeling, facilitating decision making, facilitating creativity, esteem building and encouraging, facilitating relationship, and limit setting. Playrooms and were set up in accordance with Landreth's (2012, p. 160–170) guidelines. Toys included in each room were specifically chosen to represent items from the categories: real-life toys, such as a family of dolls, vehicles, costumes; acting-out aggressive-release toys, including a bop bag, toy soldiers, rubber knives/swords; and toys for creative expression and emotional release such as sand, paints, scissors.

Play therapists were doctoral level counselors who earned a master's degree in counseling or master's counseling students who were trained in CCPT and completed at least three graduate level courses in play therapy. Counselors included 15 females who identified as Multiracial ( $n = 1$ ), Caucasian ( $n = 9$ ), Asian ( $n = 4$ ), and Latina ( $n = 1$ ). Eleven counselors were doctoral students in a CACREP-accredited counseling program specializing in play therapy, three were master's interns in a CACREP-accredited counseling program specializing in play therapy, and one counselor was post-master's licensed professional counselor intern from a CACREP-accredited counseling program, who specialized in play therapy. All counselors participated in a two-hour training regarding clinical and procedural protocol in a school setting. Counselors were assigned to children based upon counselor and child availability.

Supervision was provided for the therapists on a weekly basis, consistent with CCPT treatment protocol. Fidelity



**Table 2** Mean Scores and Standard Deviations on MFQ-P

	Intervention Group ( <i>n</i> = 29)		Waitlist Control Group ( <i>n</i> = 33)	
	Pretest	Posttest	Pretest	Posttest
Total score				
<i>Mean scores and standard deviations on MFQ-P</i>				
<i>M</i>	11.97	7.52	11.27	11.00
<i>SD</i>	10.12	9.26	8.93	9.22
<i>Mean scores and standard deviations on DOF sluggish cognitive tempo</i>				
<i>M</i>	73.41	64.66	73.45	68.48
<i>SD</i>	5.77	8.59	4.35	6.86

*Note.* A decrease in mean scores indicates improvement in depressive symptoms on the MFQ-P and DOF

checks were conducted by a trained CCPT clinician using the CCPT Research Integrity Checklist (Ray et al., 2017) with one randomly selected session videorecording of each participant. For the current study, protocol adherence was calculated at 95%, confirming that CCPT protocol was followed.

## Results

### Depressive Symptomology

We conducted a doubly multivariate repeated-measures analysis of variance [ $2 \times 2$  MANOVA] to explore the effect of CCPT on the symptom cluster of depression as measured on the *MFQ-P* and *DOF SCT* scale.  $2 \times 2$  MANOVA analysis allows researchers to evaluate constructs that emerge as linear combinations of the dependent variables, as well as the relative contribution of individual dependent variables to group separation (Dimitrov, 2013), allowing for evaluation of the simultaneous effects of the depressive symptom measures. A priori power analysis using G\*Power 3.1 indicated a sample size of 66 was needed to detect a medium effect size ( $f = 0.25$ ) with a power of 0.8 and an  $\alpha \leq 0.05$  to complete a  $2 \times 2$  repeated measures MANOVA. Data met assumptions of multivariate normality and linearity of relations among the dependent variables (Leech, Barrett, & Morgan, 2015). The experimental group ( $n = 34$ ) and control group ( $n = 37$ ) were approximately equal, therefore the analysis was robust to the assumptions (Leech et al., 2015). There was no missing data for the *DOF SCT* scale. Due to nonresponse, four *MFQ-P* in each of the experimental and comparison groups were missing at random. Partial eta squared ( $\eta_p^2$ ) effect sizes were reported to assess practical significance of the results through variance accounted for.

In the  $2 \times 2$  MANOVA, we evaluated the impact between experimental and waitlist control groups at pre and posttest, whereby the independent variables were group

**Table 3** Summary for MANOVA for time and group assignment on the depression construct

Source	Pillai's Trace Value	F	Sig	$\eta_p^2$
Time	0.507	30.396	<0.001*	0.507
Group X Time	0.159	5.589	0.006*	0.159

*Note.* \* indicates statistical significance at  $p \leq 0.05$

assignment and time, on scores for two dependent variables of depressive symptoms. Examination of the means in Table 2 suggest greater improvement on the *MFQ-P* and *DOF SCT* in the intervention group as compared to the control group.

There was a statistically significant multivariate main effect for the interaction between group and time,  $F(1, 59) = 5.589$ ,  $p = 0.006$ ,  $\eta_p^2 = 0.159$  with a large effect size. The interaction effect indicates that the difference between the intervention and control group on the linear combination of the two dependent variables was different at posttest than it was at pretest. A statistically significant multivariate effect was found for the main effect time  $F(2, 17) = 30.396$ ,  $p < 0.001$ ,  $\eta_p^2 = 0.507$  with a large effect size. Results in Table 3 demonstrate the change of the depression construct across the independent variables, group and time, and the time  $\times$  group interaction.

Follow-up univariate ANOVAs on interaction effect for each dependent variable revealed a statistically significant interaction with medium effect size from pretest to posttest on the *MFQ-P*  $F(1, 60) = 7.165$ ,  $p = 0.01$ ,  $\eta_p^2 = 0.107$  indicating that the CCPT experimental group demonstrated improvement in depressive symptoms over the control group as reported by parents. Univariate analysis on the *DOF SCT* scale resulted in a statistically significant interaction with an approximate moderate effect  $F(1, 60) = 3.924$ ,  $p = 0.05$ ,  $\eta_p^2 = 0.061$  indicating that the CCPT experimental group demonstrated decreased symptoms on the *SCT* scale when compared to the control group as rated by blind observers.

### Overall Behavioral Problems

To assess the impact of play therapy on participants' overall behavior problem scores, we conducted a repeated-measures ANOVA wherein the independent variable was group assignment over time and the *DOF Total Problems* scale was the dependent variable. A priori power analysis using G\*Power 3.1 indicated a sample size of 34 was needed to detect a medium effect size ( $f = 0.25$ ) with a power of 0.8 and an  $\alpha \leq 0.05$  to complete a repeated measures ANOVA. The following assumptions were tested and met: (a) independence of observations; (b) normality; and (c) sphericity (Leech et al., 2015). Mean scores for pre and post *DOF Total Problems* are provided in Table 4.

**Table 4** Mean scores and standard deviations on DOF total problems

	Intervention group ( <i>n</i> = 34)		Waitlist control group ( <i>n</i> = 37)	
	Pretest	Posttest	Pretest	Posttest
<i>M</i>	78.50	65.53	77.24	69.92
<i>SD</i>	9.56	12.81	9.04	9.84

*Note.* A decrease in mean scores indicates improvement in overall behavioral problems on *DOF Total Problems*

**Table 5** Summary for repeated-measures ANOVA for DOF total problems

Source	df	SS	MS	F	p	$\eta_p^2$
Time	1	3648.940	3648.940	76.214	<0.001*	0.525
Time X Group	1	282.432	282.432	5.899	0.018*	0.079
Within (Error)	69	3303.539	47.877			

*Note.* \* Indicates statistical significance at  $p \leq 0.05$

There was a statistically significant effect for time, Wilks' Lambda 0.475,  $F(1, 69) = 76.214$ ,  $p < 0.001$ ,  $\eta_p^2 = 0.525$  with a large effect size, and significant interaction effect between group assignment and time, Wilks' Lambda 0.921,  $F(1, 69) = 5.899$ ,  $p = 0.018$ ,  $\eta_p^2 = 0.079$  with a medium effect size. Results in Table 5 demonstrate the change of the DOF Total Problems across the independent variable and the time x group interaction.

## Discussion

To date, there have been no randomized controlled trials found in the literature that specifically targeted the impact of CCPT on children who exhibited clinical levels of depressive symptoms. Over the course of the present study, children who participated in CCPT demonstrated statistically significant improvement in depressive symptoms over children who were assigned to the control group on the linear composite, as well as independent scales, of the *MFQ-P* total score and the *DOF SCT* subscale. Additionally, children who participated in CCPT demonstrated statistically significant improvement in overall behavior problems on the *DOF Total Problems* scale. Statistical and practical significance exhibited in the parent report and observation of child participants provide evidence that depressive symptomology at home and at school significantly improved for children who participated in CCPT. The role of CCPT for young children with depressive symptoms may be to prevent the deterioration of mental health in children, thereby preventing serious outcomes in adulthood. Furthermore, findings of this study are consistent with previous research, wherein participation in CCPT was

associated with decreases in depressive or internalizing symptoms (Baggerly, 2004; Lin & Bratton, 2015; Ray et al., 2015).

The results of this study suggest that CCPT may improve child functioning across multiple critical environments, given parents and classroom observers noticed significant change in children's depressive symptoms following children's participation in CCPT. Although the participation of parents and teachers is preferred in mental health interventions for children, inclusion of caretakers is not always possible. Findings of the current study indicate that this intervention can be provided directly to children with encouraging outcomes, thereby supporting the use of this intervention when systemic partners are inaccessible.

Further, findings of this study regarding reduction of problem behaviors appear consistent with previous researchers' findings that CCPT is effective at addressing comorbid mental health symptoms (Bratton et al., 2005; Bratton & Lin, 2015; Ray et al., 2015). Child-centered play therapists seek to understand children's internal frame of reference from a holistic perspective, inclusive of the totality of their physical, emotional, social, behavioral, and cognitive qualities (Landreth, 2012; Ray, 2011). In CCPT, behavior is considered a reflection of a child's emotional well-being and is a reflection of the child's sense of self (Ray, 2011); commensurately, depressive symptoms are inclusive of behavior, cognition, affect, and social components, highlighting fitness of CCPT as a holistic intervention. Alternately, behavior and cognitive modification appear to be emphasized in current commonly utilized child mental health interventions. The reduction of overall behavior problems found in this study suggest the effectiveness of CCPT to address the broad symptomatic implications of depression. In CCPT, children who feel incapable of meeting the demands of their environment are able to experience their natural self-actualizing tendency to reconcile discrepancies between their self-concept and lived experiences (Landreth, 2012; Ray, 2011). For children with depressive symptoms, the developmentally sensitive environment of safety and relationship operationalized in CCPT offers an opportunity to experience self-acceptance and function in more self-enhancing ways.

The results of this study support the use of CCPT in school settings as a culturally responsive treatment that may address both systemic and individual barriers to treatment for children with minoritized identities. Researchers identified historical and current struggles with discrimination and racism both contribute to the etiology of mental health symptoms and contribute to barriers to accessing mental health services, including underutilization of services and disparities in access to appropriate treatment (Leong & Kalibatseva, 2011). Children in the current study were a statistically diverse sample, representative of the race,

ethnicity, and socioeconomic demographics in their respective schools. Services were provided at no cost and were conducted directly in the schools to reduce barriers to access by limiting the amount of time children were out of class or eliminating caregivers' need to take time out of work, school, or caregiving responsibilities to provide transportation to therapy. In addition to addressing structural barriers, culturally responsive counseling includes the value, knowledge, and adaptation of mental health interventions on the basis of culture, cross-culture relations, and attention to dynamics of cultural differences (Hall, 2003). Lo and Fung (2003) theorized that positive outcomes in cross-cultural therapeutic relationships may indicate the efficacy of culturally competent treatment. In the current study, children across identity groups improved in depressive symptoms, suggesting the philosophy and appropriate implementation of CPPT as a culturally responsive treatment, underpinned by the empathic understanding of each child's intersectional identity.

### Methodological Considerations

Previous research of childhood depression was criticized for methodological design problems and developmental misalignment of interventions. Regarding methodology, limitations included small sample sizes; lack of standard assessment of depressive symptoms; unclear participant inclusion criteria; lack of a clearly defined treatment protocol; lack of experience or description of clinicians; and lack of ethnocultural considerations (David-Ferndon & Kaslow, 2008; Wampold et al., 2017; Weersing et al., 2017). Interventions utilized in previous research were criticized for poorly addressing the developmental needs of young children. Researchers identified three considerations regarding development: previous research includes underrepresentation of children younger than 10 years old (Weersing et al., 2017); young children in CBT studies demonstrated weaker responses to treatment effects (David-Ferndon and Kaslow 2008); and treatments utilized in previous research represented adaptations of adult treatments for depression (Arora et al., 2017). The present study was designed to address the gaps identified in childhood depression research, including sample size, race and ethnicity, socioeconomic status, age, and developmentally sensitive intervention. A comparison of previous research and the current study are depicted in Table 1.

### Sample size

Sample sizes in previous randomized controlled trials of depression treatment outcome ranged from  $N = 20$  (De Cuyper et al., 2004);  $N = 29$  (Nelson et al., 2003; Stark et al., 1987);  $N = 31$  (Liddle & Spence, 1990);  $N = 54$

(Vostanis et al., 1996);  $N = 57$  (Weisz et al., 2009);  $N = 68$  (Kahn et al., 1990);  $N = 72$  (Trowell et al., 2007). The sample size in the present study was 71, a robust sample for comparison to earlier research and supports generalizability due to the power of the findings.

### Race and ethnicity

The diversity of participants was a strength in the present study and may contribute to empirical support for CCPT as a culturally responsive treatment. Participants in the present study included 14 (19.7%) Black, three (4.2%) Asian, 15 (21.1%) biracial, 19 (26.8%) Caucasian, and 20 (28.2%) Latino children. Among the randomized childhood depression treatment outcome studies, one appeared to include a diverse sample (Weisz et al., 2009) while three did not report race or ethnicity (Kahn et al., 1990; Liddle & Spence, 1990; Stark et al., 1987) and four studies were comprised of predominantly Caucasian participants (De Cuyper et al., 2004; Nelson et al., 2003; Trowell et al., 2007; Vostanis et al., 1996). In the current study, participants appeared representative of the school populations lending credibility to generalizability of findings.

### Socioeconomic status

The inclusion of community-level or environmental demographic information in the present study may support the applicability of CCPT for use among individuals with intersectionality of depressive symptoms and lacking financial privilege. Children in the schools where the intervention took place were identified as 52.9–87.8% economically disadvantaged and 50.0–66.6% at risk (<http://ritter.tea.state.tx.us/piems/standards/1314/e0919.html>). Three randomized childhood depression studies reported the socioeconomic status of participants, however only Weisz et al. (2009) worked specifically with children described as economically marginalized.

### Age

Age of participants in the current study may support the use of CCPT with young children. A significant feature of the current study was inclusion of young children, between five to nine years old ( $M = 6.21$ ,  $SD = 1.09$ ). None of the previous outcome studies of childhood depression served five or six-year-old children. Liddle and Spence (1990) included children seven to twelve years old in their study, however the mean age of child participants was  $M = 9.2$ ,  $SD = 1.15$ . All the researchers in previous studies utilized included adolescents or teens, as old as 17 years, within their samples (De Cuyper et al., 2004; Kahn et al., 1990; Liddle & Spence, 1990; Nelson et al., 2003; Stark et al., 1987; Trowell et al., 2007; Weisz et al., 2009; Vostanis et al., 1996).

## Development

The present study was uniquely designed to serve young children with depressive symptoms. CCPT is designed as a developmentally responsive treatment, as the use of play allows children to communicate in their natural language of expression (Axline, 1947; Landreth, 2012; Piaget, 1965; Ray, 2011, 2016; Vygotsky, 1966). David-Ferndon and Kaslow (2008) cautioned that children in the studies they reviewed (De Cuyper et al., 2004; Nelson et al., 2003; Trowell et al., 2007) did not appear to be as responsive to treatment effects as their adolescent or teen counterparts.

## Limitations

Findings of the current study offer meaningful information regarding the efficacy of CCPT on childhood depression, however limitations of the results are important to consider. Participants in the study were between the ages of five to nine years old and were enrolled in five Title 1 local elementary schools in a major metropolitan area in the southwestern US. Male children comprised 69% of the sample. External validity and generalizability of these results may be limited by the geographic location representation of the varying ages, genders, or demographic characteristics (Rubin & Bellamy, 2012).

There may have been limitations impacting the blind design of the study. It may have been possible for parents to deduce their child's group assignment, contributing to the possibility of rater bias (Rubin & Bellamy, 2012) on the *MFQ-P*. Additionally, there was no use of an alternative treatment group, limiting the ability to control for the effects of attention. Further, no follow-up data was collected, limiting the ability to explore long-term effects of treatment. A larger replication study utilizing a treatment comparison group may validate the findings of the current study of CCPT and childhood depression.

## Implications

CCPT appears to be a practical treatment option for children who are experiencing depressive symptoms. Short-term, school-based CCPT may be a feasible model for school counselors and school-based mental health counselors. Additionally, provision of evidence-based services in schools may improve the access and reduce the stigma and mistrust associated with mental health care. CCPT in schools may be an efficacious strategy to address mental health disparities and improve access to services for children who are marginalized.

Due to the behavioral and emotional expressions of depression among young children, mental health professionals may benefit from training in the identification of mental health

symptoms and delivery of services for this population. Mental health professionals may neglect to identify childhood depression when they rely on adult manifestations of specific symptomology. Understanding and observing overlooked symptoms (i.e., inattention, defiant behaviors, and emotional outbursts), in addition to commonly manifested symptoms, as depressive symptomology is critical to identification of need for intervention. Knowledge of child development support clinicians' empathic understanding, as well as the assessment and identification of depressive symptoms for systemic support, to include academic and clinical decision-making. In addition to training in identification and conceptualization of depression in young children, mental health professionals benefit from training in developmentally appropriate interventions. Findings from the current study appear to support the need for training and education in CCPT to meet the mental health needs of young children with depressive symptomology.

Because this was the first play therapy study to examine the treatment outcomes specifically focusing on children with clinical levels of depression, replication research is necessary to confirm the findings. Due to the complexity and difficulty measuring the full scope of depressive symptoms, it is important to continue efforts to contribute to the research base of treating childhood depression. Childhood onset of depressive symptoms are correlated with more poorer outcomes in quality of life throughout childhood and into adulthood related to social, emotional, behavioral, and achievement domains (Charles & Fazeli, 2017; Costello et al., 2005; Garaigordobil et al., 2017; Kovacs et al., 2016; Rao & Chen, 2009; Zisook et al., 2007). Longitudinal studies of early interventions for depressive symptoms may provide insight into long-term mental and physical health outcomes for children with depressive symptoms. Further, larger studies may contribute to the generalizability of results. While these results support the effectiveness of CCPT in reducing depressive symptoms immediately following treatment, longitudinal and follow-up studies may demonstrate the long-term impact of CCPT on depressive symptoms.

## Conclusion

This study examined the efficacy of CCPT on young children with symptoms of depression and overall behavior problems. Depressive symptoms in childhood may impact parent and peer relationships, success in school, sense of self, and mental health. Further, children who experience depression are more likely to struggle with depression across the lifespan. Without proper identification and treatment, children are likely to experience more prolonged and intense struggles with their mental health. This study evaluated the effect of CCPT on 71 children who were experiencing depressive symptoms

compared to children in a waitlist control group. Statistically significant differences were found in a linear composite of depression variables, as well as individual analyses on parent report and observation of children's behavior, affect, and interpersonal interactions, suggesting that children who received play therapy decreased their overall depression and behavior problems, while children in the waitlist group did not experience statistically significant changes. Children appeared to benefit from CCPT indicating that CCPT may be considered an efficacious treatment for children with depressive symptoms.

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## Compliance with Ethical Standards

**Conflict of Interest** The authors declare no competing interests.

**Ethical Approval** All procedures performed in this study involving human participants were in accordance with ethical standards and approved by the Institutional Review Board at the University of North Texas.

**Consent to Participate** Informed consent was obtained from caregivers and participants.

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