

Spring 5-15-2015

The Effectiveness Of Child-Centered Play Therapy On The Challenging Behaviors Of Early Elementary School Students

Corinne Wixson

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ACCEPTANCE

This dissertation, THE EFFECTIVENESS OF CHILD-CENTERED PLAY THERAPY ON THE CHALLENGING BEHAVIORS OF EARLY ELEMENTARY SCHOOL STUDENTS, by CORINNE S. WIXSON, was prepared under the direction of the candidate's Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of the requirements for the degree, Doctor of Philosophy, in the College of Education, Georgia State University.

The Dissertation Advisory Committee and the student's Department Chairperson, as representatives of the faculty, certify that this dissertation has met all standards of excellence and scholarship as determined by the faculty.

Joel Meyers, Ph. D.
Committee Chair

Laura Fredrick, Ph. D.
Committee Member

Catherine Perkins, Ph. D.
Committee Member

Andy Roach, Ph. D.
Committee Member

Date

Brian Dew, Ph. D.
Chairperson, Department of Counseling and Psychological Services

Paul Alberto, Ph. D.
Dean
College of Education

AUTHOR'S STATEMENT

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Corinne S. Wixson

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Corinne S. Wixson
2121 Kinridge Road
Marietta, Georgia 30062

The director of this dissertation is:

Joel Meyers, Ph. D.
Department of Counseling and Psychological Services
College of Education
Georgia State University
Atlanta, GA 30303

CURRICULUM VITAE

Corinne S. Wixson

ADDRESS:

2121 Kinridge Road
Marietta, Georgia

EDUCATION:

Ph.D.	2015	Georgia State University School Psychology
Education Specialist Degree	2009	Georgia State University School Psychology
Masters Degree	2008	Georgia State University School Psychology
Bachelors Degree	2003	Georgia State University Psychology

PROFESSIONAL EXPERIENCE:

2014-present	School Psychologist Cherokee County School District Canton, Georgia
2010-present	Contract School Psychologist Psychological Affiliates Marietta, Georgia
2011-2012	APPIC Predoctoral Intern Sarah A. Reed Children's Center Erie, PA
2008-2009	Graduate Intern Cobb County School District Marietta, Georgia
2006-2013	Graduate Research Assistant Georgia State University Atlanta, Georgia

PRESENTATIONS AND PUBLICATIONS:

- Roach, A. T., McGrath, D. C., Wixson, C. S., & Talapatra, D. (2010). Aligning an early childhood assessment to state kindergarten content standards: Application of a nationally recognized alignment framework. *Educational Measurement: Issues and Practice*, 29, 25-37.
- Steed, E., Wells, L., & Wixson, C. S. (2010, December). *Assessing implementation of positive behavior support in inner city childcare settings*. Paper presented at the 3rd annual conference for the Georgia Association for Positive Behavior Support: Atlanta, GA.
- LaSalle, T., Krause, T., Roach, A. T., & Wixson, C.S. (2010, March). *IEP Quality and Curricular Access for Students With Disabilities* Paper presented at the National Association of School Psychologists Annual Convention: Chicago, IL.
- Wixson, C. S., Talapatra, D., Garcia-Frederick, D., Heil, K., LaSalle, T., Roach, A.T., Varjas, K., & Chilungu, N. (2010, March). *Scorers' Perspectives and Decision-Making Processes in Evaluating Alternate Assessment Portfolios*. Paper presented at the National Association of School Psychologists Annual Convention: Chicago, IL.
- Roach, A. T., Wixson, C. S., Talapatra, D., & LaSalle, T. P. (2009). Missing voices in school psychology research: A review of the literature 2002-2007. *The School Psychologist*, 63, 5-10.
- Roach, A. T., Elliott, S., Kettler, R. J., Wixson, C. S., Talapatra, D., LaSalle, T., & Bolt, S. (2009, February). *Assessing Students with Disabilities: Cognitive Load Theory to Item Modifications*. Paper presented at the National Association of School Psychologists Annual Convention: Boston, MA.
- Wixson, C.S. (2009, February). *Evaluating the Vertical Alignment of Early Childhood Assessment Systems*. Paper presented at the National Association of School Psychologists Annual Convention: Boston, MA.
- Roach, A. T., Meyers, B., Wixson, C. S., Kavanagh, K., Czaplicki, K., & Kramb, D. (2008). Including students with disabilities in multiage classrooms: Perceptions of special educators. *Journal of Multiage Education*, 3, 22-26.
- Snyder, P. A., Wixson, C. S., Talapatra, D., and Roach, A. T. (2008). Assessment in early childhood: Instruction-focused strategies to support response-to-intervention frameworks. *Assessment for Effective Intervention*, 34, 6-14.

PROFESSIONAL SOCIETIES AND ORGANIZATIONS

- | | |
|--------------|--|
| 2006-present | National Association of School Psychologists |
| 2006-present | Student Affiliates in School Psychology,
Georgia State University Chapter |

THE EFFECTIVENESS OF CHILD-CENTERED PLAY THERAPY ON THE
CHALLENGING BEHAVIORS OF EARLY ELEMENTARY SCHOOL STUDENTS

by

CORINNE WIXSON

Under the Direction of Joel Meyers, Ph.D.

ABSTRACT

With the high prevalence of mental health disorders among children, there is a growing need for effective mental health interventions that will enhance overall wellness and functioning while meeting the developmental needs of children (Stagman & Cooper, 2010). In addition, there are increasing demands from policymakers, managed-care organizations, and educators to implement evidence-based interventions (EBIs), or treatments that are supported by strong research (Kratochwill & Shernoff, 2004). One treatment that shows promise as an effective, developmentally-appropriate intervention that meets the mental health needs of children is play therapy (Bratton, Ray, Rhine, & Jones, 2005; Landreth, 2002; Ray, 2011). Although results of play therapy studies have shown some significance in improving a variety of issues for children, the body of research has been criticized, primarily due to inconsistent or inconclusive results across studies or compromised research designs and methods (Phillips, 1985; 2010; Read, Hunter, & McMillan, 1999). In addition, the field also lacks differentiation among various

theoretical play therapy approaches across the research base (Phillips, 2010). To address these gaps in the literature, this study utilized a strong research design to examine the effectiveness of child-centered play therapy (CCPT) on the challenging behaviors of three kindergarten students. A single-case multiple baseline design was used to maintain a high level of control with rigorous data collection methods (Kennedy, 2005; Ray and Schottelkorb, 2010). Research methods were designed to meet the What Works Clearinghouse pilot standards for single-case designs, which use stringent criteria in evaluating quality of research (U.S. Department of Education, 2014). The integrity of the CCPT intervention was assessed to ensure accurate implementation. Results from direct observational data suggested a relationship between CCPT and the improvement of classroom behaviors. In contrast to direct observational data, teacher ratings did not indicate improvements in behavior. Ratings by parents yielded significant results for improving behaviors at home. This study made valuable contributions to the literature by utilizing a strong research design and demonstrating promising findings for CCPT. Practical implications include using as few as eight sessions of CCPT as a behavioral intervention at school and engaging in ongoing teacher consultation to supplement CCPT.

INDEX WORDS: Child-centered play therapy, Challenging behaviors, Children, Evidence-based interventions, Mental health, Play therapy, School-based interventions

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A Dissertation

Presented in Partial Fulfillment of Requirements for the

Degree of

Doctor of Philosophy

in

School Psychology

in

Department of Counseling and Psychological Services

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the College of Education

Georgia State University

Atlanta, GA

2014

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DEDICATION

This dissertation is dedicated to my late grandfather, Dr. Robert Brutsche'. He always taught me through his actions to reach for the stars and make the world a better place. This is for you, Granddaddy.

ACKNOWLEDGEMENTS

I would like to express my sincerest gratitude for the time and effort that my dissertation committee members have provided throughout this process. Dr. Joel Meyers, Dr. Laura Fredrick, Dr. Catherine Perkins, and Dr. Andy Roach have gone above and beyond their roles and busy schedules in providing knowledge, guidance, and support to help me produce my best work. I learned valuable skills from each of them that I will carry on throughout my professional career. I also would like to acknowledge Dr. Joanna White and Dr. Lauren Wynne for teaching me the practice of play therapy and inspiring me to pursue this area for further research.

I also would like to acknowledge my friends for their support along the way. I would like to thank all of the dear new friendships I have made while in the program: Dr. Lisa Wells, Dr. Laura Tenenbaum, Ashley Shepps, Dr. Samuel Kim, Dr. Kimberly Oliver Robinson, Daniel Sparrow, Dr. Julia Juechter, Allie Schwartz Farnham, Alicia Boudreault Gapen, and Dr. Tanya Talapatra. May our friendships continue and be long-lasting. I also would like to thank my dear friends that I have known for a long time that have been supportive for most of my life: Lindsay Wise Killebrew, Leslie Kennedy, Jen O'Neill Smith, Anna McFarland, Melissa Smith Whitehouse, and Kris Drees. Thank you for being understanding and supportive of my goals and dreams, which has required a very busy lifestyle.

Lastly, I owe more than I can express to my family. My mom and dad, Suzi and Jim Wixson, have been extremely supportive throughout this process in so many ways. I would not have been able to get through school and complete my dissertation without them. Thank you for all that you have done for me! Thank you also to my brothers, sister-in-law, and my extended family for all the love and support you have given me throughout my life! I also would like to again express my gratitude to my grandfather, Dr. Robert L. Brutsche', who has been a major inspiration to me due to his hard work, dedication, knowledge, persistence, compassion for others, kind and calm nature, and his desire to reach for the stars and make a mark on the world. He will be greatly missed and I will continue to live out his legacy with everything I do.

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ABBREVIATIONS

ANCOVA	Analysis of Covariance (statistical measure)
ANOVA	Analysis of Variance (statistical measure)
CCPT	Child-centered play therapy
EBI	Evidence-based intervention
QED	Quasi-experimental design
PTSC	Play Therapy Skills Checklist
RCT	Randomized controlled trial
SCD	Single-case design
SSIS-RS	Social skills improvement system - rating scale
WWC	What Works Clearinghouse

1 IS CHILD-CENTERED PLAY THERAPY SUPPORTED BY RESEARCH? A REVIEW OF THE LITERATURE USING EVIDENCE-BASED CRITERIA

With the high prevalence of mental health disorders among children in the United States, there is a growing need for effective mental health interventions that meet the developmental needs of children while helping them to function more effectively at home and school (Stagman & Cooper, 2010). In addition, there are increasing demands from educators, policymakers, and managed-care organizations to implement evidence-based interventions (EBIs), or treatments that are supported by rigorous research. One treatment that shows promise for providing an effective, developmentally-appropriate intervention that meets the mental health needs of children is play therapy (Bratton, Ray, Rhine, & Jones, 2005; Landreth, 2002; LeBlanc & Ritchie, 2001; Ray, 2011). Although some researchers have found some promising results for play therapy in improving a variety of academic, psychological, and social outcomes for children, the overall body of research has been criticized, primarily because of inconsistent and inconclusive results across studies, as well as compromised research designs and methods (Phillips, 1985; 2010; Reade, Hunter, & McMillan, 1999). However, some play therapy researchers have argued that the field has come a long way in recent years in conducting more well-designed, controlled studies that have led to establishing a more credible, empirical research base for play therapy (Baggerly & Bratton, 2010; Baggerly, Ray, & Bratton, 2010; Ray & Bratton, 2010).

One way to determine if play therapy studies have demonstrated sufficient methodological rigor and evidence of efficacy to be considered an EBI is to apply evidence-

based criteria to evaluate current play therapy research (Urquiza, 2010). While Phillips (2010) applied Nathan and Gorman's (2002) typology to various play therapy studies and found that most had significant methodological flaws with simple research designs (Type III studies), Baggerly and Bratton (2010) found that many recent studies with stronger methodological designs, including those with randomized control trials, were not included in Phillips' review. Ray and Bratton (2010) conducted their own review of play therapy research using Rubin's (2008) framework for evaluating levels of research to determine whether existing evidence was sufficient. They reviewed and categorized 25 quantitative play therapy studies between 2000 and 2009 with the following ratings: (1) *experimental* – a study that meets the most rigid requirements, including a comparison or control group with random assignment, clear methodology, and consideration for validity threats; (2) *quasi-experimental* – a study that meets all of the criteria for an *experimental* study without the random assignment; and (3) *evidentiary* – a study that uses pre- and post-assessment without a comparison or control group (pre-experimental). After applying these evidence-based criteria, they labeled 13 studies as *experimental*, four as *quasi-experimental*, and eight as *evidentiary*. Based on Rubin's (2008) criteria, Ray and Bratton concluded that the majority of the play therapy studies met strict criteria that indicated clear and strong methodology; however, the researchers in these studies used a variety of approaches to play therapy. It also was unclear exactly which criteria were applied by Ray and Bratton or which aspects were evaluated.

Although play therapy researchers have taken steps to examine study quality and improve the evidence-base of play therapy, it may be important to differentiate among various theoretical play therapy approaches in determining its effectiveness. Critics have highlighted that many play therapy researchers do not clearly define the type of play therapy intervention used or they utilize

a mixture of approaches, and therefore, it is difficult to determine exactly which types of play therapy are or are not effective (Phillips, 2010; Urquiza, 2010). Bratton and Ray (2000) summarized and critiqued decades of play therapy research and stated that, although most studies included a control group to compare with the treatment group and found positive effects for play therapy, many researchers did not specify which approach to play therapy was utilized or provide clear definitions of treatment. In their meta-analysis of play therapy research, Bratton and colleagues (2005) broadly grouped various types of play therapy into a humanistic-nondirective approach ($N=73$) or a nonhumanistic-directive approach ($N=12$). Although the results of their meta-analysis yielded high effect sizes for both of these broadly-defined approaches in improving a variety of outcomes for children, it is difficult to determine the level of effectiveness for specific approaches and whether or not specific approaches were implemented as intended. In Ray and Bratton's (2010) review, there were a variety of play therapy approaches used among the studies. Out of the 25 studies in their review, the majority of the studies ($N=18$) were identified as using child-centered play therapy (CCPT), which is a humanistic-nondirective approach. This result is consistent with other reviews that have been conducted examining play therapy research (Bratton & Ray, 2000; Bratton et al., 2005). Although the majority of the studies that have been examined over the years have been labeled as using a nondirective, CCPT approach, some also blended other play therapy approaches or did not strictly adhere to the tenets of CCPT, which may have compromised the integrity of the intervention and affected the outcome.

Although play therapy researchers have demonstrated admirable efforts in establishing a stronger research base for play therapy as a whole, evaluating the quality of research within each theoretical approach would be an appropriate next step in validating various play therapy interventions within the field. CCPT is the dominant approach in the play therapy literature and

is the most widely used approach nationally and internationally, yet there have not been any reviews specific to CCPT research that have evaluated quality of research, including adherence to CCPT. Examining only studies that strictly utilize CCPT would help to establish a more credible research base (Baggerly et al., 2010; Lambert et al. 2005; Ray, 2011; Ray & Bratton, 2010). This chapter presents a review that used evidence-based criteria established by the United States Department of Education's What Works Clearinghouse (WWC; 2014) to evaluate studies that strictly adhered to the CCPT approach. In order to provide further context for this review, the tenets and principles of CCPT are explained first. Then, the EBI movement will be discussed to illustrate the importance of establishing CCPT as an EBI, as well as information about the WWC as a trusted source for examining scientific evidence.

Child-Centered Play Therapy

Many early philosophers, educators, and psychologists emphasized the importance of play in learning about children, building a therapeutic alliance between the therapist and child, and understanding children's subjective experiences through symbolic play (Freud, A., 1928; Freud, S., 1909; Hug-Hellmuth, 1921; Klein, 1932; Piaget, 1962; Rousseau, 2007; Vygotsky, 1966). Rooted in psychoanalytic approaches, these early ideas about play led to the formation of several developments of play therapy over the years, including Adlerian, cognitive-behavioral, Gestalt, Jungian, psychodynamic, and non-directive (child-centered) play therapy (CCPT) (Kottman, 2003; Landreth, 2002; Ray, 2011). These different therapeutic approaches to play therapy vary in their perspectives of human development and agents of change, and therefore, the role of play therapists varies accordingly from being more directive to nondirective.

The CCPT approach is a complete therapeutic system and was initially developed by Virginia Axline (1947), who applied the fundamental tenets of Carl Rogers' (1940, 1951) client-

centered approach, including unconditional positive regard, empathic understanding, and congruence, to her work in play therapy. Axline, a student of Rogers, developed eight basic principles that formed the essential guidelines of what was then referred to as *nondirective play therapy*. These principles are based on Rogers' theories of human development and sufficient conditions for therapeutic change. Thus, when a person is given a safe, nonjudgmental environment to examine experiences that are incongruent with his or her own self structure, the person can begin to integrate new experiences into a revised sense of self. Axline's principles for nondirective play therapy require that the therapist: (1) creates a warm, caring relationship with the child; (2) accepts the child exactly as he/she is; (3) creates a feeling of safety and permissiveness in the relationship, which allows the child to fully express his/her thoughts and feelings without feeling judged or stifled; (4) remains sensitive to the child's feelings and reflects those feelings in a manner that fosters self-understanding for the child; (5) believes deeply in the child's capacity to act responsibly and solve problems on his/her own; (6) trusts the child's inner direction, allows the child to lead in all areas of the relationship, and resists any urge to direct the child's play or conversation; (7) appreciates the gradual nature of the therapeutic process over time and does not attempt to rush through it or pressure the child to change in a specified amount of time or number of sessions; and (8) only sets limits that are absolutely necessary to make the child aware of important responsibilities in the therapeutic relationship and that interfere as minimally as possible with the other principles. For example, the therapist may set limits for children physically hurting themselves or others or destruction of property, but may not set limits about use of toy guns, appropriate use of specific toys, or use of language that may be considered inappropriate in other settings (Axline, 1947).

After Axline established the foundational principles of CCPT, other play therapists began to expand on her research and guidelines to create the framework for how CCPT is currently practiced (Ginott, 1961; Guerney, 2000; Landreth, 2002; Moustakas, 1953). These researchers and practitioners highlighted that play therapy appears to be a developmentally-appropriate method of therapy for children because they often lack the cognitive ability to express their thoughts and emotions in an adequate and fluid manner that is normally required for a verbal conversation between a client and therapist other forms of therapy. CCPT can be conducted in an individual or group format, in which children are able to explore a play room full of a variety of toys that allow them to express their thoughts and emotions through play. This can be effective because play is children's most natural mode of communication and self-expression (Landreth, 2002). Because play represents the child's inner world or subjective experience, the specific play themes and behaviors that the child exhibits during the play sessions guide the therapist in understanding and responding to the child's underlying emotional needs. Using the guidelines proposed by Axline (1947), child-centered play therapists use both nonverbal and verbal skills to promote a safe, therapeutic environment that fosters self-exploration and change for the child.

Evidence-Based Interventions (EBIs)

The push for evidence-based interventions (EBIs) gained momentum approximately 20 years ago in health care with the increased focus on the implementation of cost-effective practices (Waas, 2002). A range of professions began adopting EBIs in practice, including psychiatry, psychology, social work, and physical and occupational therapy (Addis, 2002; Gibbs & Gambrill, 2002; Norcross, Beutler, & Levant, 2006). EBI criteria provided a way to establish the efficacy of cognitive and behavioral interventions so that mental health care professionals can determine the likely benefit for clients and seek third-party reimbursement (Waas, 2002). In

addition, changes in research and service delivery to better serve the mental health needs of children through EBIs were promoted in reports issued by major professional organizations. For example, a task force on EBIs was created in the Division of Clinical Psychology of the American Psychological Association and this was followed by similar efforts by other fields in psychology, such as school psychology (Kratochwill & Stoiber, 2000, 2002). Chorpita (2003) stated that the EBI movement was a “revolution in practice development...[with a] new emphasis on principles of science, improvements in clinical research, and the connection of research findings to practice” (p. 42).

The importance of EBIs also expanded into the field of education. Researchers and practitioners concerned with improving educational services for children concluded that more effective, research-based interventions were needed to promote academic and social-emotional competence (Gresham, 2004; Reschly, 2004; Reschly & Ysseldyke, 2002; Shapiro, 2000). The report of the President’s Commission on Excellence in Special Education (U.S. Department of Education, Office of Special Education and Rehabilitative Services, 2002) recommended abandoning the current practices at that time in favor of a model based on response to evidence-based instruction and interventions. The need for a different approach to service delivery in education that was infused with the implementation of EBIs was also outlined by the Committee on Scientific Principles for Education Research (Shavelson & Towne, 2002). Efforts by researchers, practitioners, educational leaders, and the federal government significantly paved the way for evidence-based practices in the schools, including the development and implementation of EBIs, which have been labeled as essential to ensure improved outcomes for students (Schaughency & Ervin, 2006).

Researchers in school psychology also have taken a leadership role in the development and implementation of EBIs in education (Kratochwill & Shernoff, 2004; Kratochwill & Stoiber, 2002; Walker, 2004). Much of the previous research on EBIs from a range of disciplines could not be applied to school settings because of contextual differences that affected successful intervention implementation and outcomes in schools (Ringeisen, Henderson, & Hoagwood, 2003; Rones & Hoagwood, 2000). It was essential at that time that school psychology researchers and practitioners determine how to identify and implement EBIs specific to the school setting to enhance the current service delivery system and improve student outcomes. The efforts of school psychologists to identify EBIs for educational settings were accelerated when the Task Force on EBIs in School Psychology was formed in 1998 (Kratochwill & Stoiber, 2000, 2002). Sponsored by APA Division 16 and the Society for the Study of School Psychology (SSSP) and endorsed by the National Association of School Psychologists (NASP), the Task Force was formed to enhance the quality of research training, create evaluation criteria so that practitioners could identify EBIs to be used in school settings, and distribute the findings to school psychology researchers and practitioners (Kratochwill & Shernoff, 2004).

What Works Clearinghouse (WWC)

In a related effort, similar to the work of the Task Force (Kratochwill & Stoiber, 2002), the What Works Clearinghouse (WWC) was developed in 2002 by the Institute of Education Sciences within the U.S. Department of Education to improve outcomes for students (U.S. Department of Education, What Works Clearinghouse, 2014). The WWC is expected to (a) produce practice guides for educators, including evidence-based recommendations for classrooms; (b) assess the effectiveness of school-based interventions using an established set of rigorous criteria; (c) develop standards for research evaluation; and (d) provide support and

assistance to educators from registered education evaluation researchers. In determining which practices and programs can be considered evidence-based, the WWC reviews existing research, assesses the quality and effectiveness of the research, and produces reports for the public to view the findings of their reviews. In these reports, the WWC first categorizes research studies in one of three categories based on the quality of the study's research methodologies: (1) *Meets WWC Standards without Reservations*; (2) *Meets WWC Standards with Reservations*; and (3) *Does not Meet WWC Standards*.

The WWC then uses estimated effect sizes and reported statistical significance levels to characterize the findings for each outcome (i.e. academic achievement, reading fluency, social skills) within each study into five categories: (1) *statistically significant positive effect*; (2) *substantively important positive effect*; (3) *indeterminate effect*; (4) *substantively important negative effect*; and (5) *statistically significant negative effect*. Finally, the findings of all of the studies are combined for each outcome domain to assign a rating of effectiveness for the intervention (*positive effects, potentially positive effects, no discernible effects, mixed effects, potentially negative effects, or negative effects*) and the extent of the evidence (*small or medium to large*).

The WWC evidence-based standards were chosen as a basis for structuring this research review because the WWC has developed a comprehensive manual with stringent criteria for evaluating various research designs and critically assessing the scientific evidence presented in research (U.S. Department of Education, 2014). Stakeholders and decision-makers in education may be more likely to accept and implement CCPT within the schools if the research in the literature meets WWC evidence-based standards, which are focused on educational research. The purpose of this study is to review and critically assess the CCPT research literature using

standards established by the WWC. In the following sections, the method of this study will be explained along with each step of the WWC review process and the standards for determining evidence-based research. Next, the results of the review using WWC criteria will be presented. Lastly, the current state of CCPT research based on results of this review along with future directions for research in the field will be discussed.

Method

The What Works Clearinghouse (WWC) *Procedures and Standards Handbook, Version 3.0* was used in evaluating child-centered play therapy (CCPT) research studies on research quality and effectiveness across studies. The systematic WWC review process consists of four steps: (1) developing the review protocol; (2) identifying relevant literature; (3) screening and reviewing studies for quality of research; and (4) reporting on findings and characterizing the findings of an effect across outcomes. The steps in this process are presented and detailed in the following sections.

Developing the Review Protocol

The first step in conducting a review based on What Works Clearinghouse (WWC) procedures is to develop a protocol that defines the parameters of the review (U.S. Department of Education, 2014). Before beginning the literature search and screening, a review protocol was developed that included the following elements: (a) topic focus and parameters; (b) key terms and outcomes; (c) general study inclusion criteria; and (d) literature search terms and methods. Other than determining the topic focus on child-centered play therapy (CCPT) that was directly provided to children by a trained professional, the parameters for this research review were fairly broad. The CCPT sessions could be conducted in any setting or geographical location with children or adolescents of either gender in preschool to 12th grade. In addition, any type of

academic, social, emotional, or behavioral outcomes were considered in this review for children participating in CCPT.

Literature search criteria. The primary researcher obtained research studies using various search strategies. Five online databases were used through EBSCOhost, including Academic Search Complete, Education Resources Information Center (ERIC), PsycARTICLES, PsycEXTRA, Psychology and Behavioral Sciences Collection, and PsycINFO. These databases were chosen because, collectively, they provide an extensive, comprehensive resource for multidisciplinary research, with some of the databases focused on research in education, psychology, and other social sciences. In addition, a subset of these databases often are used in WWC searches and were included in the most recent meta-analytic reviews of play therapy research (Bratton et al., 2005; LeBlanc & Ritchie, 2001). An advanced search on EBSCOhost was utilized to set general parameters. Only scholarly (peer reviewed) journals were included in the search. Publication dates were set to include articles published between January 1, 1995 and May 24, 2014. The majority of CCPT research has been conducted since 1999 (Baggerly, Ray, & Bratton, 2010); therefore, the researcher chose to set the search parameters to start in 1995 to ensure that most CCPT studies were included for screening. Furthermore, only English-language research articles were considered. Lastly, the researcher used the key phrase “*child centered play therapy*” to search for research articles within this field. The key phrase was specific to child-centered play therapy to limit the selection pool to only those studies implementing this specific type of nondirective play therapy.

Screening to Determine Relevant Studies

After the review protocol was developed and the literature search was conducted, the primary researcher applied WWC screening guidelines to each study in order to determine

eligibility for inclusion in this review (U.S. Department of Education, 2014). Studies that did not meet all of the screening guidelines were excluded from further review. One screening criterion was that each study was required to align with the review protocol that was developed and discussed in the previous section, including topic focus and sample parameters, relevant outcomes, and relevant publication dates. Following this guideline, only research studies that implemented CCPT were selected for review. Studies that implemented other types of play therapy or a combined approach that included CCPT were excluded. In addition, as mentioned previously, studies were considered for review only if CCPT was directly provided to children by a trained professional, and therefore, studies related to filial (play therapy conducted by a child's parent), kinder (play therapy conducted by a child's teacher) play therapy, or other related interventions were excluded. Studies that investigated the social acceptability and knowledge of play therapy, CCPT training models, or scale development related to CCPT also were excluded from further review following these guidelines. Research studies with any type of behavioral, academic, or social outcome for children participating in CCPT that were published within the aforementioned relevant time frame were included in the review.

Each study also was required to directly examine the impact or effectiveness of an intervention and use an eligible research design to be included in the review (U.S. Department of Education, 2014). Editorials, literature reviews, meta-analyses, and any other documents that did not include experimental research were excluded. Any studies that did not have a comparison group or were not a single-case design were excluded from this review, including pre-experimental studies that used a pre-test/post-test design with no comparison group and qualitative studies. Eligible research designs included randomized controlled trials (RCTs), quasi-experimental designs (QEDs), regression discontinuity (RD) designs, and single-case

designs (SCDs). Each of the eligible designs is described briefly below with the exception of the RD design, which was not used in any of the studies that surfaced in the screening process.

Randomized controlled trials (RCTs). RCT is a group design in which the researchers use random assignment to determine groups for each study condition that should be similar on both observable and unobservable characteristics. It is a true experimental design that provides the strongest evidence for an intervention because it eliminates selection bias for treatment groups and decreases the risk of extraneous variables that could potentially affect the outcome of the study (Suter, 2006). Randomization allows for the researcher to “more confidently attribute an obtained difference to the experimental manipulation” rather than to other variables that may bias the results (Minium, Clarke, & Coladarci, 1999, p.267).

Quasi-experimental designs (QEDs). A QED is similar to a true experimental design, such as an RCT, however, random assignment to study conditions is absent in a QED (Suter, 2006). QEDs include participants who are self-selected (volunteers) or selected through another non-random process to the study conditions (U.S. Department of Education, 2014). QEDs are often used when random assignment is not possible due to limited resources or ethical concerns (Shaughnessy, Zechmeister, & Zechmeister, 2000). Because random assignment is not used in this type of design, the research lacks the degree of control that is present in RCTs, and therefore, researchers must take extra steps to eliminate threats to internal validity. Factors such as establishing baseline equivalence between study groups and controlling extraneous variables become more critical in a QED so that every effort is made to emulate the more controlled conditions of a RCT design.

Single-Case Designs (SCDs). Single-case designs (SCDs), also referred to as single-subject designs, involve a rigorous degree of experimental control by holding all conditions of

the study constant except for the independent variable or intervention/treatment (Kennedy, 2005; U.S. Department of Education, 2014). Experimental control is demonstrated by one “case,” which may include a single participant or a cluster of participants that serve in both the control and experimental conditions. In traditional SCDs, the independent variable is systematically implemented and then withdrawn to investigate the effects of the intervention. In order to demonstrate a causal or functional relation between the intervention and the dependent variable, a study must replicate the intervention. This process results in data collection of the outcome variable across multiple levels or phases of the study. For example, one type of SCD is an ABAB design that consists of a baseline phase (A), intervention phase (B), withdrawal/reversal phase (A), and a second intervention phase (B).

Another type of SCD is a multiple baseline design that uses staggered implementation of an intervention across different tiers of behaviors, people, settings, or stimuli (Baer, Wolf, & Risley, 1968; Kennedy, 2005; U.S. Department of Education, 2014). Multiple baseline designs are used in situations where withdrawal or reversal of an intervention would be unethical or inappropriate because the effects of a therapeutic treatment would potentially last even when the intervention is taken away. Examples in which withdrawal or reversal conditions would not be used are CCPT or other counseling interventions. Ideally, the data in any type of SCD should reflect changes in the dependent variable across phases or tiers in order to determine that the intervention alone caused significant effects on the outcome variable.

The Review Process

After going through the screening process discussed in the previous section, the studies that remained after applying WWC screening criteria were included in this review. Overall, the review process entailed assessing the strength of various research elements based on WWC

evidence standards and assigning a rating that indicated the degree to which each study met these standards. The specific research elements that were evaluated depended on the type of design utilized in each study. In the following sections, the WWC standards for group designs (RCTs and QEDs) and the WWC pilot standards for SCDs will be discussed in detail.

WWC standards for group designs (RCTs and QEDs). Five variables were taken into account to assess the strength of the research and the degree to which studies met WWC group design standards: (1) study design; (2) sample attrition; (3) baseline equivalence; (4) outcome eligibility and reporting; and (5) confounding factors (U.S. Department of Education, 2014). For each study, these variables were evaluated in a step-by-step sequence with subsequent variables only being assessed based on the strength of the evidence provided in previous steps. After taking into account all appropriate research elements, each study then received one of the following ratings: (a) *Meets WWC Group Design Standards without Reservations* (strong evidence), (b) *Meets WWC Group Design Standards with Reservations* (weaker evidence), or (c) *Does Not Meet WWC Group Design Standards* (insufficient evidence). Each of the five variables included in the WWC group design standards that were used to evaluate the studies in this review are discussed in detail in the following paragraphs along with the procedures for assigning ratings to each study. For a visual representation of the review process for WWC group design standards, refer to Figure 1.1.

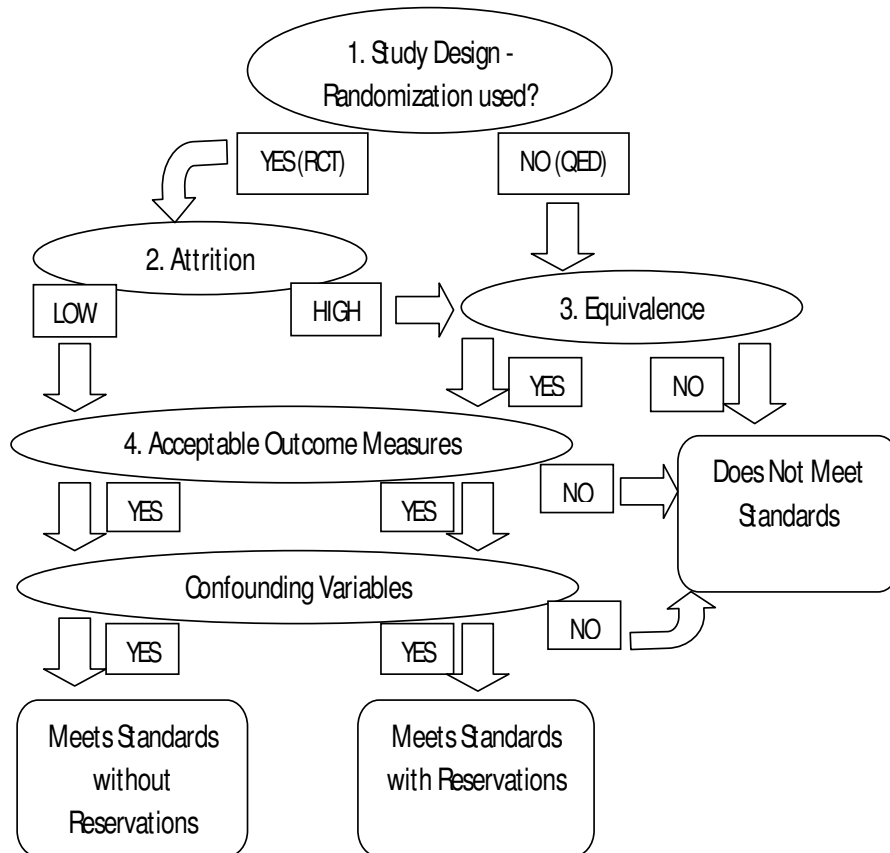


Figure 1.1 - The WWC Review Process for Randomized Controlled Trials (RCTs) and Quasi-Experimental Designs (QEDs)

1. Study design. The first step in evaluating group designs was to determine if randomization was used to assign participants to study groups. This step differentiates RCTs from QEDs. Following WWC group design standards, studies in this review were considered RCTs when the researchers used random assignment or a process that was functionally random to form two or more groups of participants (U.S. Department of Education, 2014). In general, RCTs provide the strongest evidence and have the potential to receive the highest rating, *Meets*

WWC Group Design Standards without Reservations, depending on other variables in the process. Participants must have been assigned to groups entirely by chance with an equal probability of falling into either group. If random assignment was not utilized to determine groups, the study was considered to be a QED. Because QEDs have a decreased amount of control compared to RCTs, the highest possible rating that could be assigned at the end of the review process for QED studies was *Meets WWC Group Design Standards with Reservations*, after taking into account other variables discussed below.

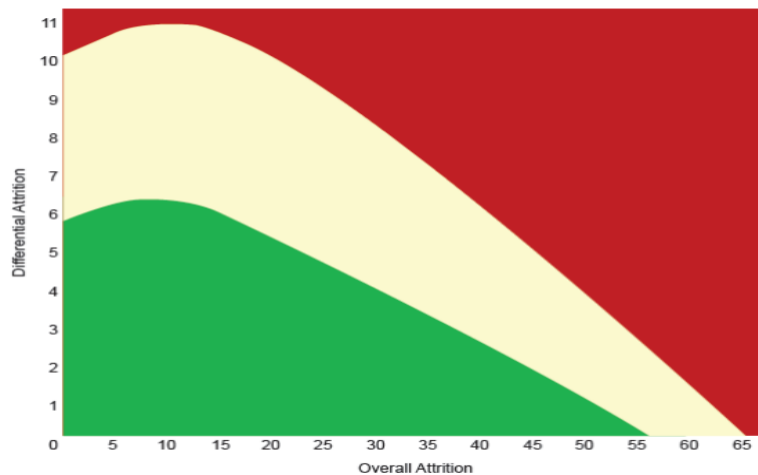


Figure 1.2 – *The WWC Model of Attrition Bias (U.S. Department of Education, 2014, p. 12)*

2. Sample attrition. After study design was determined and randomization procedures were evaluated, rates of attrition were assessed only for studies that used a RCT design (refer to Figure 1.1 for an illustration of this process). Attrition refers to a loss of research participants between the time of pretest and posttest (outcome) measures, which is a threat to the internal validity of the study because it may lead to biased estimates of an intervention's effectiveness (Suter, 2006). The WWC group design standards are not only concerned with overall attrition of

the sample, but also with differences in the rates of attrition between the treatment groups (U.S. Department of Education, 2014). Differential attrition examines the difference between the intervention and comparison groups in loss of participants in the post-data collection period.

Table 1.1 – The WWC Model of Attrition Bias (U.S. Department of Education, 2014, p. 13)

Overall Attrition	Differential Attrition		Overall Attrition	Differential Attrition		Overall Attrition	Differential Attrition	
	Conservative Boundary	Liberal Boundary		Conservative Boundary	Liberal Boundary		Conservative Boundary	Liberal Boundary
0	5.7	10.0	22	5.2	9.7	44	2.0	5.1
1	5.8	10.1	23	5.1	9.5	45	1.8	4.9
2	5.9	10.2	24	4.9	9.4	46	1.6	4.6
3	5.9	10.3	25	4.8	9.2	47	1.5	4.4
4	6.0	10.4	26	4.7	9.0	48	1.3	4.2
5	6.1	10.5	27	4.5	8.8	49	1.2	3.9
6	6.2	10.7	28	4.4	8.6	50	1.0	3.7
7	6.3	10.8	29	4.3	8.4	51	0.9	3.5
8	6.3	10.9	30	4.1	8.2	52	0.7	3.2
9	6.3	10.9	31	4.0	8.0	53	0.6	3.0
10	6.3	10.9	32	3.8	7.8	54	0.4	2.8
11	6.2	10.9	33	3.6	7.6	55	0.3	2.6
12	6.2	10.9	34	3.5	7.4	56	0.2	2.3
13	6.1	10.8	35	3.3	7.2	57	0.0	2.1
14	6.0	10.8	36	3.2	7.0	58	-	1.9
15	5.9	10.7	37	3.1	6.7	59	-	1.6
16	5.9	10.6	38	2.9	6.5	60	-	1.4
17	5.8	10.5	39	2.8	6.3	61	-	1.1
18	5.7	10.3	40	2.6	6.0	62	-	0.9
19	5.5	10.2	41	2.5	5.8	63	-	0.7
20	5.4	10.0	42	2.3	5.6	64	-	0.5
21	5.3	9.9	43	2.1	5.3	65	-	0.3

In accordance with WWC group design standards, attrition rates were determined by the rates that were reported by study authors (U.S. Department of Education, 2014). If attrition was not explicitly reported, the overall attrition rates were calculated by dividing the number of participants whose outcome measures were not available by the number of total participants. For differential attrition, the number of participants whose outcome measures were not available for each treatment condition were divided by the number of participants in that particular treatment

condition, and the difference was taken between the rates of each group. As indicated in WWC group design standards, any loss due to "acts of nature," such as hurricanes or earthquakes, were excluded from the initial sample in attrition calculations. If study authors reported some attrition but did not provide any explicit reasons for participant loss, the reason was assumed to be due to group assignment and those participants were included in attrition calculations.

The WWC attrition model was used to determine "low" and "high" rates of attrition based on the combination of overall and differential attrition rates. The model allows for the discretion of the reviewer to use either liberal or conservative estimates of expected bias based on the assumptions about the relationship between attrition and the outcomes of the study, and therefore, what is considered low or high rates of attrition is dependent on whether or not liberal or conservative estimates are being used (refer to Figure 1.2 and Table 1.1. for information about the WWC model of attrition). If there is reason to believe that most of the attrition is exogenous to the intervention, such as movement of students to another school district or random absences, the more liberal estimates should be used. If the attrition is believed to be endogenous to the intervention, such as high school students deciding not to participate in a counseling program in the middle of the study, more conservative estimates should be used. In accordance with the review process illustrated in Figure 1.1, if the combination of attrition rates were considered low for a RCT design, the study could move on in the process and receive the highest rating, *Meets WWC Group Design Standards without Reservations*, as long as the remaining steps are passed. If the attrition level was determined to be high, the highest rating that the study could ultimately receive is *Meets WWC Group Design Standards with Reservations*, depending on the remaining factors.

3. Baseline equivalence. If a study was determined to be a QED in the first step of the review process, the next step was to assess if equivalence requirements were met (U.S. Department of Education, 2014). Assessing baseline equivalence is the third step in the review process for RCTs that were determined to have high levels of attrition and the second step for QEDs (refer to Figure 1.1). Establishing baseline equivalence is important for reducing any potential biases due to a lack of random assignment (QED) or questionable ("high") rates of attrition (RCT). To demonstrate adequate baseline equivalence, the intervention and comparison groups in a study should have been equated on a pretest of each outcome domain and each measure within a domain for the analytic sample (participants that remained throughout the study).

According to WWC criteria, any absolute difference in the effect sizes between group means that is greater than 0.05 standard deviations and less than or equal to 0.25 standard deviations must be statistically adjusted, such as covariate adjustment using Analysis of Covariance (ANCOVA) designs. Any differences less than 0.05 standard deviations indicate that baseline equivalence is established. If the difference is greater than 0.25 standard deviations, the groups were determined to not be equivalent. If differences in the effect sizes between group means were not reported for any of the pretest outcome measures, these differences were calculated by first finding the effect size (ES) for each study group on an outcome measure or scale using the following formulas:

$$ES_1 = (\text{Pretest Mean}_1 - \text{Pretest Mean}_2)/SD_1$$

$$ES_2 = (\text{Pretest Mean}_1 - \text{Pretest Mean}_2)/SD_2$$

Next, the following formula was used to calculate the difference in ES between groups for each outcome measure or scale: $[ES_1 - ES_2]$. If RCTs with high attrition and QEDs being evaluated during this step of the review process did not demonstrate adequate baseline equivalence according to the aforementioned standards, they received a rating of *Does Not Meet WWC Group Design Standards*. For those studies that demonstrated adequate equivalence at baseline, the highest rating they could receive is *Meets WWC Group Design Standards with Reservations* if they passed the remaining steps. If some outcome measures/scales met this criterion, while others did not, only those outcomes that demonstrated equivalence between groups at pretest were considered to demonstrate sufficient evidence and were reported in the results of this review.

4. Outcome eligibility and reporting. Studies in this review that were determined to be RCTs with low attrition, RCTs with high attrition that demonstrated adequate baseline equivalence, and QEDs that demonstrated adequate baseline equivalence were then evaluated based on their outcome measures. According to WWC group design standards, each study must have outcome measures that meet all of the following requirements: (1) demonstrate face validity and reliability; (2) are not overlapped with the intervention; and (3) are collected in the same manner for both intervention and comparison groups (U.S. Department of Education, 2014). Each of these criteria will be described in more detail below. If a study in the review failed to meet any of these requirements, the rating *Does Not Meet WWC Group Design Standards* was applied.

In order to demonstrate evidence of face validity, the authors must have provided a sufficient description of the outcome measure so that the reviewer could determine whether or not the measure is clearly defined and measures the variable it was intended to measure. In order

to demonstrate adequate reliability, the outcome measure must have met at least one of the following standards: (1) internal consistency (such as Cronbach's alpha) of 0.50 or higher; (2) temporal stability/test-retest reliability of 0.40 or higher; or (3) inter-rater reliability (such as percentage agreement, correlation, or kappa) of 0.50 or higher. Overalignment occurs with outcome measures that are more closely aligned to one of the research groups (intervention or comparison) and could bias the outcome of the study. For example, this might occur if an outcome measure consisted of reading passages that were used in the intervention group but not the comparison group. When considering whether or not outcome measures were collected in the same manner for both groups, the reviewer looked for statements in the study related to different modes, timing, or personnel in collecting the data, as well as if the measures were conducted differently for both groups.

5. *Confounding Factors.* Those studies that included adequate outcome measures based on the aforementioned WWC requirements were evaluated to determine if any confounding variables were present in the research. The first potential confounding variable that the WWC considers is the intervention cannot be combined with another intervention. This variable was already considered in the review protocol as exclusion criteria in the screening process. In order to be included in this review, CCPT could not be combined with any other intervention, and therefore, all of the studies in this review did not have this confounding variable.

Another potential confounding variable considered by the WWC is only having one unit of analysis, which can include: (a) only one person implementing the intervention to either group; (b) all of the classrooms in either group from only one school; or (c) all of the schools in either group from one district (U.S. Department of Education, 2014). These factors could potentially affect the outcome of a study because it would be difficult to tell whether or not the

differences between groups were due to the intervention, the interventionist, or a combination of both. If any of these potential confounding variables were present in a study in this review, a rating of *Does Not Meet WWC Group Design Standards* was given.

Evaluating whether or not an intervention was implemented as intended, (i.e., treatment integrity or treatment fidelity), was included as a potential confounding variable in previous versions of the WWC standards handbooks (U.S. Department of Education, 2008, 2011); however, due to expected variations of implementation in real-life settings, such as classrooms and schools, this potential confound was not included in the latest version (U.S. Department of Education, 2014). Instead, the WWC standards allow for variability at the reviewer's discretion in regards to which issues are substantive enough to include in a review protocol that would affect the quality, and therefore ratings, of a study. The integrity of how the CCPT intervention was delivered is of utmost importance in this review. Because this particular review is attempting to distinguish CCPT from other types of play therapy or play-based interventions, it is important that the intervention that is being used strictly adheres to the principles of CCPT so that the outcome can be attributed to CCPT alone. If treatment integrity was not assessed in a particular study or there was evidence that CCPT was not implemented as intended, the study received a rating of *Does Not Meet WWC Group Design Standards* due to insufficient evidence.

WWC pilot standards for single-case designs (SCDs). The criteria developed for evaluating the quality of SCDs were recently updated and included in the most recent version of the WWC handbook (U.S. Department of Education, 2014). Three design criteria were taken into account to evaluate the degree to which a SCD meets WWC standards (refer to Figure 1.3 for an illustration of these criteria).

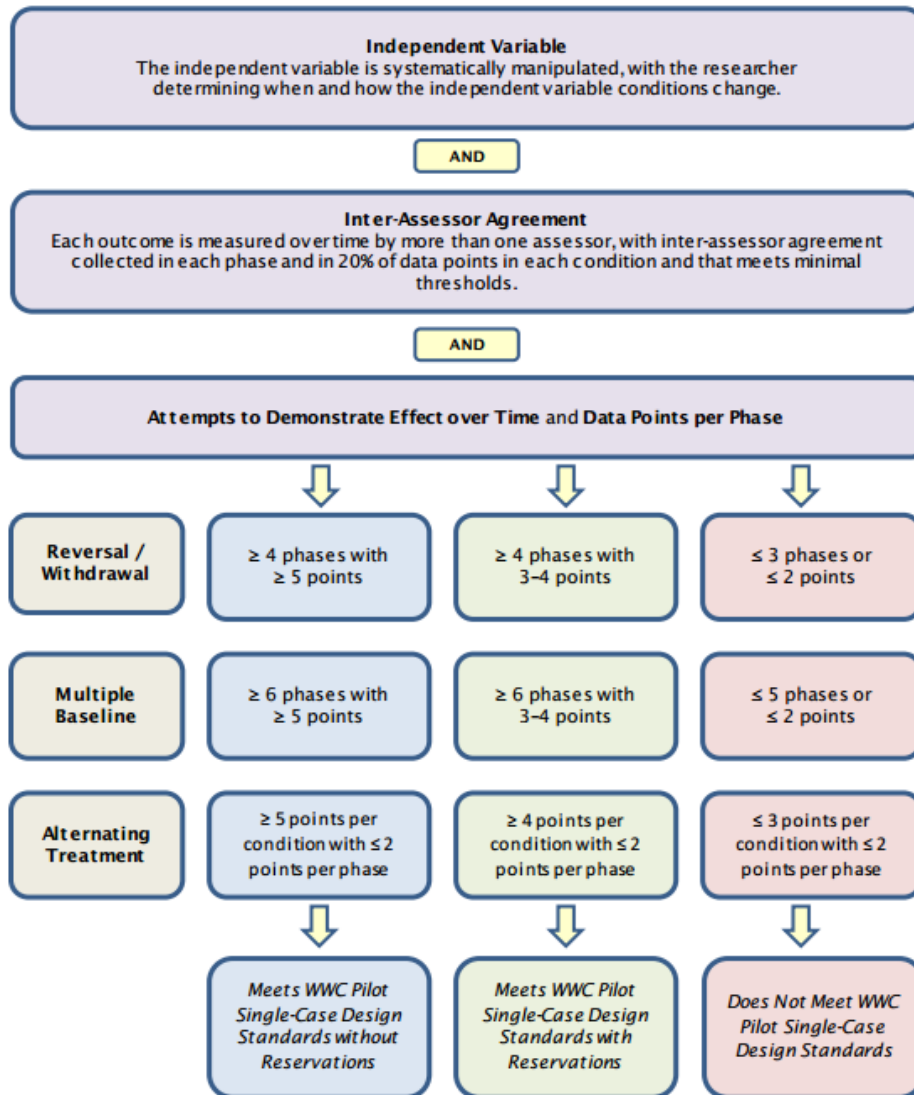


Figure 1.3 – The WWC Review Process for Single-Case Designs (SCDs; U.S. Department of Education, 2014, p. E.3)

First, the intervention (independent variable) had to be systematically manipulated, holding all other variables constant, and the authors were required to describe their methods for

determining when and how the intervention conditions would change across phases or tiers. Second, it was necessary that each outcome variable be systematically measured regularly by more than one researcher or observer. Researchers in a study utilizing SCD should have collected inter-observer agreement on at least 20 percent of the data points within each phase of the design. Acceptable inter-observer values must have been obtained, including a percentage agreement of 80 percent or above, or a Cohen's kappa value of at least 0.60 (Hartman, Barrios, & Wood, 2004).

The third criterion in evaluating SCDs is the researcher must have attempted to demonstrate an intervention effect for a certain number of points in time (phases within and across conditions or participants), depending on the type of SCD (Horner, Swaminathan, Sugai, & Smolkowski, 2012; Kratochwill & Levin, 2010; U.S. Department of Education, 2014). In addition, the phases must have at least the minimum number of data points required for a particular design. A study using a reversal/withdrawal design (AB, ABAB, etc.) must include at least four phases and a multiple baseline or multiple probe design must include at least six phases to meet standards with or without reservations. Studies that utilized these types of SCDs and included five or more data points per phase received a rating of *Meets WWC Pilot Single-Case Design Standards without Reservations*. Studies that only had at least three data points per phase received a rating of *Meets WWC Pilot Single-Case Design Standards with Reservations*. For alternating treatment types of SCDs, the effect must be demonstrated by rapidly alternating between treatments. Therefore, there can only be a maximum of two data points per phase (alternating between two or more interventions) with four or more data points per condition (baseline, intervention, etc.) to *Meet WWC Pilot Single-Case Design Standards with or without*

Reservations. For studies that include multiple intervention comparisons (such as A versus B, A versus C, etc.), each comparison is rated separately.

In addition to the aforementioned WWC criteria for evaluating SCDs, it is also suggested by the WWC to consider other criteria to be used at the discretion of the reviewer, including establishing parameters for considering treatment integrity and making decisions about whether or not a particular type of SCD is appropriate for a particular intervention. As stated in the previous section on potential confound variables for WWC group design standards, it is important that studies in this review assess for and report on treatment integrity to ensure that CCPT was implemented as intended, and not another type of play therapy or play-based intervention. For any SCD in this review, if treatment integrity was assessed and considered not adequate, if there was other evidence in the study compromising the integrity of CCPT, or if treatment integrity was not reported, the study was labeled as *Does Not Meet WWC Pilot Single-Case Design Standards*. In addition, if a type of SCD was used that was not appropriate to demonstrate the effects of CCPT, the study also was considered to not meet standards. Reversal/withdrawal and alternating treatment designs, for example, would not be appropriate because therapeutic treatments, such as CCPT, are intended to have lasting effects that may not easily be withdrawn.

Reporting on Findings

After evaluating the studies in this review for quality of research and evidence presented, the reviewer then assessed and characterized the findings of RCT and QED studies that earned a rating of *Meets WWC Group Design Standards* (with or without reservations). In accordance with WWC procedures for reporting study findings (U.S. Department of Education, 2014), the reviewer first calculated the effect sizes for each outcome within each study using the Hedges g

formula with a small sample size correction. Any calculated effect size of 0.25 or higher was considered to be substantively important. Next, statistical significance was determined to be p -values of 0.05 or less, as reported by study authors. Based on estimated effect sizes and levels of statistical significance, the findings for each outcome measure or scale within a study were characterized into one of five categories: (1) *statistically significant positive effect*; (2) *substantively important positive effect*; (3) *indeterminate effect*; (4) *substantively important negative effect*; or (5) *statistically significant negative effect* (refer to Tables 1.2 and 1.3 for more information about these ratings).

Table 1.2 - WWC characterization of findings of an effect based on a single outcome measure

Statistically significant positive effect	The estimated effect is positive and statistically significant (correcting for clustering when not properly aligned).
Substantively important positive effect	The estimated effect is positive and not statistically significant but is substantively important.
Indeterminate effect	The estimated effect is neither statistically significant nor substantively important.
Substantively important negative effect	The estimated effect is negative and not statistically significant but is substantively important.
Statistically significant negative effect	The estimated effect is negative and statistically significant (correcting for clustering when not properly aligned).

Table 1.3 - WWC characterization of findings of an effect based on multiple outcome measures

Statistically significant positive effect	<p>When any of the following is true:</p> <ol style="list-style-type: none"> Univariate statistical tests are reported for each outcome measure and either <ul style="list-style-type: none"> At least half of the effects are positive and statistically significant and no effects are negative and statistically significant in a properly aligned analysis, or At least one measure is positive and statistically significant and no effects are negative and statistically significant, accounting for multiple comparisons (and correcting for clustering when not properly aligned). The mean effect reported for the multiple outcome measures is positive and statistically significant (correcting for clustering when not properly aligned). The omnibus effect for all outcome measures together is reported as positive and statistically significant on the basis of a multivariate statistical test in a properly aligned analysis.
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Substantively important positive effect	The mean effect reported is positive and not statistically significant but is substantively important.
Indeterminate effect	The mean effect reported is neither statistically significant nor substantively important.
Substantively important negative effect	The mean effect reported is negative and not statistically significant but is substantively important.
Statistically significant negative effect	When any of the following is true: <ol style="list-style-type: none"> 1. Univariate statistical tests are reported for each outcome measure and either <ul style="list-style-type: none"> • At least half of the effects are negative and statistically significant and no effects are positive and statistically significant in a properly aligned analysis, or • At least one measure is negative and statistically significant and no effects are positive and statistically significant, accounting for multiple comparisons (and correcting for clustering when not properly aligned). 2. The mean effect reported for the multiple outcome measures is negative and statistically significant (correcting for clustering when not properly aligned). 3. The omnibus effect for all outcome measures together is reported as negative and statistically significant on the basis of a multivariate statistical test in a properly aligned analysis.

To determine the effectiveness of CCPT across studies for each outcome domain (i.e. externalizing behaviors, academic achievement), the average effect size and statistical significance levels were calculated (U.S. Department of Education, 2014). For example, if there were two studies that investigated the effect of CCPT on academic achievement, the estimated effect sizes for each outcome measure across both studies were used to find a mean effect size for the entire outcome domain of academic achievement. Average statistical significance levels were calculated by using the *t*-statistic. Based on mean effect sizes and statistical significance levels, a rating was given for the effectiveness of CCPT on each outcome domain: (a) *positive effects*; (b) *potentially positive effects*; (c) *no discernible effects*; (d) *mixed effects*; (e) *potentially negative effects*; or (f) *negative effects* (refer to Table 1.4). Lastly, the extent of the evidence was characterized as (a) *small* or (b) *medium to large*, based on the number of studies and participants for each outcome domain (refer to Table 1.5).

Table 1.4 - Criteria used to determine the WWC rating of effectiveness for an intervention

<p>Positive effects: Strong evidence of a positive effect with no overriding contrary evidence</p>	<ul style="list-style-type: none"> • Two or more studies show statistically significant positive effects, at least one of which meets WWC group design standards without reservations, AND • No studies show statistically significant or substantively important negative effects.
<p>Potentially positive effects: Evidence of a positive effect with no overriding contrary evidence</p>	<ul style="list-style-type: none"> • At least one study shows statistically significant or substantively important positive effects, AND • Fewer or the same number of studies show indeterminate effects than show statistically significant or substantively important positive effects, AND • No studies show statistically significant or substantively important negative effects.
<p>No discernible effects: No affirmative evidence of effects</p>	<ul style="list-style-type: none"> • None of the studies shows statistically significant or substantively important effects, either positive or negative.
<p>Mixed effects: Evidence of inconsistent effects</p>	<p>EITHER both of the following:</p> <ul style="list-style-type: none"> • At least one study shows statistically significant or substantively important positive effects, AND • At least one study shows statistically significant or substantively important negative effects, BUT no more such studies than the number showing statistically significant or substantively important positive effects. <p>OR both of the following:</p> <ul style="list-style-type: none"> • At least one study shows statistically significant or substantively important effects, AND • More studies show an indeterminate effect than show statistically significant or substantively important effects.
<p>Potentially negative effects: Evidence of a negative effect with no overriding contrary evidence</p>	<p>EITHER both of the following:</p> <ul style="list-style-type: none"> • One study shows statistically significant or substantively important negative effects, AND • No studies show statistically significant or substantively important positive effects. <p>OR both of the following:</p> <ul style="list-style-type: none"> • Two or more studies show statistically significant or substantively important negative effects, at least one study shows statistically significant or substantively important positive effects, AND • More studies show statistically significant or substantively important negative effects than show statistically significant or substantively important positive effects.
<p>Negative effects: Strong evidence of a negative effect with no overriding contrary evidence</p>	<ul style="list-style-type: none"> • Two or more studies show statistically significant negative effects, at least one of which meets WWC group design standards without reservations, AND • No studies show statistically significant or substantively important positive effects.

Table 1.5 - Criteria used to determine the WWC extent of evidence for an intervention

Medium to large	<ul style="list-style-type: none"> • The domain includes more than one study, AND • The domain includes more than one setting, AND • The domain findings are based on a total sample of at least 350 students, OR, assuming 25 students in a class, a total of at least 14 classrooms across studies.
Small	<ul style="list-style-type: none"> • The domain includes only one study, OR • The domain includes only one setting, OR • The domain findings are based on a total sample size of fewer than 350 students, AND, assuming 25 students in a class, a total of fewer than 14 classrooms across studies.

Results

Screening to Determine Relevant Studies

The key search phrase “*child centered play therapy*” yielded 255 articles after exact duplicates were automatically removed. As mentioned in the method section, an article was determined to be eligible for the review if it: (1) directly examined the impact or effectiveness of an intervention; (2) aligned with the review protocol, including topic focus and sample parameters, relevant outcomes, and relevant publication dates; and (3) used an eligible research design, including a RCT, QED, RDD, or SCD (U.S. Department of Education, 2014). Six articles were excluded because they were duplicates (that had not been automatically removed) or presented in a language other than English. Out of the remaining 249, 135 articles were excluded because they "were not considered to be the primary analysis of the effect of an intervention", including two editorials, 98 position papers, 10 meta-analyses/literature reviews, and 25 qualitative/case studies (U.S. Department of Education, 2014, p. 7). Another 32 articles were excluded because they were exploratory in nature by using surveys or rating scales to explain phenomena or make inferences without using statistical analyses. Some of these topics

included investigating the therapeutic processes of CCPT, professional development issues, social validity of CCPT, CCPT training and supervision, and assessment/scale development.

Out of the remaining 82 articles, 52 were excluded because they did not align with the protocol elements for this particular review, including 25 filial or kinder therapy studies, 10 studies of child-parent or child-teacher relationship therapy (CPRT/CTRT), and 17 studies utilizing other play therapy or counseling approaches, play-based treatments, or a combination of CCPT with another type of treatment. Although the remaining 30 articles all included studies that analyzed the effects of CCPT specifically, 12 of these articles were excluded because the researchers utilized a pre-experimental, pre-test/post-test design without a comparison group, which was not an eligible design to be included in this review. Another study was excluded because a comparison group was not included. Although the authors of this study used exemplar research methods and used random assignment of participants into groups, both groups participated in CCPT, either short-term or long-term (Ray, Henson, Schottelkorb, Brown, & Muro, 2008). In sum, a total of 238 articles were excluded from the selection pool because they failed to meet screening criteria and were labeled as "*Ineligible for WWC Review.*" Therefore, a total of 17 studies met inclusion criteria and each were evaluated based on the WWC standards outlined in the method section to determine the strength of CCPT research.

Reviewed CCPT Studies

Out of the 17 research studies reviewed using WWC standards (U.S. Department of Education, 2014), four were rated as *Meets WWC Group Design Standards without Reservations*, two met the criteria for *Meets WWC Group Design Standards with Reservations*, and eleven were rated as *Does Not Meet WWC (or Pilot Single-Case) Design Standards*. Each of these studies will be discussed along with various aspects of the research that contributed to their

ratings. The four exemplar studies that received the highest rating, *Meets WWC Group Design Standards without Reservations*, will be discussed in the most detail to illustrate all aspects of the studies so that they can serve as a model for future research. This will include reporting dependent variables, gender and ethnic breakdown, treatment conditions, and outcome measures utilized. The two studies that received the rating *Meets WWC Group Design Standards with Reservations* also will be discussed in some detail because many of their study elements demonstrated sufficient evidence. The eleven remaining studies that were rated as *Does Not Meet WWC Group (or Pilot Single-Case) Design Standards* will be summarized collectively based on the strengths and weaknesses of their research designs.

Meets WWC standards without reservations. There were four studies within this review that earned the label *Meets WWC Group Design Standards without Reservations* (Blanco & Ray, 2011; Bratton, et al., 2013; Ray, 2007; Ray, Schottelkorb, & Tsai, 2007). In all four of these exemplar studies, the researchers used randomization to assign participants to conditions, and therefore, the studies were considered to be randomized controlled trials (RCT's). The research studies also demonstrated low rates of attrition according to What Works Clearinghouse (WWC) criteria and used reliable and valid outcome measures in a manner that was consistent across study groups (U.S. Department of Education, 2014).

In addition, there was no evidence of potential confounding variables for CCPT outcomes. The researchers used multiple play therapists/interventionists for each treatment condition, which allowed for the effects to be attributed to CCPT rather than the interventionist or "one unit of analysis." Each of these studies also assessed treatment integrity by videotaping all play therapy sessions and supervising each of the interventionists on a weekly basis. A randomized check of adherence to CCPT principles utilized during sessions was conducted using

the Play Therapy Skills Checklist (PTSC; Ray, 2011). Each of the four studies will be described below by publication year, starting with the most dated. Basic elements of the studies will be highlighted, including dependent variables, sample size and population, gender and ethnic breakdown, treatment conditions, and outcome measures.

Ray, 2007. The first published study in this review that met WWC standards was conducted by a researcher who investigated the impact of CCPT on teacher-child relationship stress. Participants included 93 prekindergarten through fifth grade students who were identified for exhibiting emotional and behavioral difficulties and 59 teachers from three Title I elementary schools in the southwestern United States. The breakdown of participants per school was as follows: 43, 30, and 20 students. Using a table of random numbers, participants were assigned into one of three treatment conditions: (1) child-centered play therapy only (CCPT); (2) teacher consultation only (CO); or (3) child-centered play therapy and teacher consultation (CCPT+C). Children in the CCPT group ($n = 32$) received individual CCPT for sixteen 30-minute sessions over 8 weeks and children in the CO group ($n = 29$) received eight 10-minute consultation sessions over the same amount of time. Participants in the CCPT+C group ($n = 32$) received the same treatment as the CCPT group and the CO group combined. In regards to gender and ethnic breakdown, the CCPT treatment condition was comprised of 24 males and eight females, including six African American students, nine Hispanic students, 15 Caucasian students, and two biracial students. Participants in the CO condition consisted of 21 males and eight females, including two African American students, 16 Hispanic students, 10 Caucasian students, and one biracial student. Lastly, the CCPT+C treatment condition was comprised of 23 males and nine females, including four African American students, 13 Hispanic students, 14 Caucasian students, and one biracial student. The teachers of each of the student participants completed the Index of

Teaching Stress (ITS; Abidin, Greene, & Konold, 2004) for each student prior to and after treatment. The ITS was used to measure the level of stress experienced by teachers in their relationships with each student participant. The ITS produces a Total Stress score, which is comprised of three major scales, including the ADHD Domain, the Student Characteristics Domain, and the Teacher Characteristics Domain.

Ray, Schottelkorb, & Tsai, 2007. In the second study that earned the highest rating for study quality, the researchers investigated the impact of CCPT on Attention-Deficit/Hyperactivity Disorder (ADHD) symptoms and teacher-child relationship stress. Participants included 60 kindergarten through fifth grade students from three Title I elementary schools in the southwestern United States who were identified for exhibiting ADHD symptoms, including issues with attention and hyperactivity. The breakdown of participants per school was as follows: 16, 26, and 18 students. Using a table of random numbers, participants were assigned into one of two treatment conditions, either child-centered play therapy (CCPT) or reading with a mentor (RM). Children in the CCPT group ($n = 31$) received individual CCPT for sixteen 30-minute sessions conducted by one of 10 play therapists over 16 weeks. Children in the RM group ($n = 29$) also received sixteen 30-minute individual reading mentoring sessions conducted by one of four reading mentors over 16 weeks. The reading mentoring sessions consisted of either the mentor reading to the child or the child reading to the mentor, depending on what the participant chose to do during each session. In regards to gender and ethnic breakdown, the CCPT treatment condition was comprised of 26 males and five females, including five African American students, 10 Hispanic students, 15 Caucasian students, and one biracial student. Participants in the RM condition consisted of 22 males and seven females, including five African American students, 11 Hispanic students, and 13 Caucasian students.

All of the teachers of the participants completed the Conners Teacher Rating Scale – Revised: Short Form (CTRS-R:S; Conners, 2001) and the Index of Teaching Stress (ITS; Abidin, Greene, & Konold, 2004) for each student prior to and after treatment. The CTRS-R:S was used to assess the classroom behaviors most commonly associated with ADHD and the ITS was used to measure the level of stress experienced by teachers in their relationships with each student participant. Although the CTRS-R:S has four subscales, only the ADHD Index score was used in the data analysis. The ITS produces a Total Stress score, which is comprised of three major scales, including the ADHD Domain, the Student Characteristics Domain, and the Teacher Characteristics Domain. Only the ADHD and Student Characteristics Domains were used in the data analysis, including the individual Student Characteristics Domain subscales, Emotional Lability/Low Adaptability (ELLA), Anxiety/Withdrawal (ANXW), Low Ability/Learning Disability (LALD), and Aggressive/Conduct Disorder (AGCD).

Blanco & Ray, 2011. The third study that met WWC criteria in this review was conducted by researchers who examined the efficacy of CCPT on academic achievement for students in first grade. Participants included 41 students from four Title I elementary schools in the southwestern United States who were identified for being at risk for school failure. The breakdown of participants per school was as follows: 13, eight, 11, and nine students. After randomly placing participants into treatment groups according to school and playroom space, 21 students were assigned to receive CCPT treatment in the experimental group and 20 children were assigned to the wait-list control group. Children in the experimental group received individual CCPT for sixteen 30-minute sessions over eight weeks as opposed to the children in the wait-list control group, who did not receive any intervention over the course of the study. The experimental group (CCPT) was comprised of 16 boys and five girls and the control group

consisted of 10 boys and 10 girls. In regards to ethnicity, the experimental group (CCPT) was comprised of four African American students, seven Hispanic students, nine Caucasian students, and one Asian American student. The wait-list control group was comprised of three African American students, seven Hispanic students, and 10 Caucasian students. All of the participants were individually administered the Young Children's Achievement Test (YCAT; Hresko, Peak, Herron, & Bridges, 2000) before and after the eight weeks of CCPT or no intervention. The YCAT was used to measure the overall early academic achievement (Early Achievement Composite) levels for each participant based on the following five subtests: General Information, Reading, Mathematics, Writing, and Spoken Language.

Bratton et al., 2013. In the most recent study that earned the highest rating for study quality, the researchers investigated the impact of CCPT on disruptive behaviors. Participants included 62 preschool students (ages 3-4) from a Head Start program in the southwestern United States who scored within the clinical or borderline range on the Externalizing, Aggressive Behavior, or Attention Problems scales of the Caregiver-Teacher Report Form (C-TRF; Achenbach & Rescorla, 2000). Only 54 students completed the study due to geographical relocation of the families. Using randomized block assignment, participants were assigned into one of two treatment conditions, either child-centered play therapy (CCPT) or reading mentoring (RM). They received either intervention individually for 30 minutes twice per week. Children in the CCPT group ($n = 27$) participated in a range of 17 to 21 sessions (mean of 20). Children in the RM group ($n = 27$) participated in a range of 16 to 20 sessions (mean of 19.4). The authors did not report the gender and ethnic breakdown per study group; however, did report these statistics collectively. Approximately 42% of the participants identified as African American, 39% as Hispanic, and 18% Caucasian. Two thirds of the participants were male. Teachers

completed the Caregiver-Teacher Report Form (C-TRF; Achenbach & Rescorla, 2000) before the study to determine qualification and baseline/pre-test behaviors. They also completed the C-TRF after the 10th RM or CCPT intervention session (midpoint) and also post-intervention. The Externalizing Problems, Aggressive Behavior, and Attention Problems scales of the C-TRF were used to measure disruptive behaviors.

Meets WWC standards with reservations. Two studies in this review earned the rating *Meets WWC Group Design Standards with Reservations* (Ray, Blanco, Sullivan, & Holliman, 2009; Schottelkorb, Dumas, & Garcia, 2012). One of these studies used randomization to assign participants to study conditions and met all other standards; however, demonstrated high differential attrition between groups (Schottelkorb et al., 2012). The other study met most of the evidence-based criteria but did not use random assignment in distributing participants to study conditions (Ray et al., 2009).

Because one study did not use random assignment (QED) and the other used random assignment (RCT) but demonstrated high differential attrition, both of the studies were required to establish equivalence in order to demonstrate sufficient evidence with reservations. In order for baseline equivalence to be established, the WWC criteria requires that the difference of effect sizes (ES) between study groups at pretest are less than 0.05 standard deviations (SDs). The ES difference had to be calculated by the reviewer for each study (refer to Method section of this paper to review the formula for calculation). One study (Schottelkorb et al., 2012) established baseline equivalence on all outcome measures (UCLA ES difference = 0.03 SDs; PROPS ES difference = 0.02 SDs), while the other study (Ray et al., 2009) only established baseline equivalence on one measure (TRF ES difference = 0.03 SDs). Although the authors performed a one-way between-groups ANOVA to compare pretest means on the other outcome measure

(CBCL) and did not find statistical significance, the ES differences between groups was 0.09 and needed statistical adjustment in order to meet WWC group design criteria. Therefore, only the results of the TRF and not the CBCL will be reported for the Ray et al. (2009) study.

In evaluating other research elements, the researchers in both studies used outcome measures that demonstrated adequate reliability and validity and were implemented in the same manner across groups (Ray et al., 2009; Schottelkorb et al., 2012). They also used multiple interventions/play therapists for each study condition, which allowed for attributing the effects to CCPT rather than to the interventionist or "one unit of analysis" (U. S. Department of Education, 2014). In addition, treatment integrity was assessed using videotaped sessions, supervision, and random checks using the Play Therapy Skills Checklist (PTSC; Ray, 2011). The details of each of these studies are summarized below.

Ray, Blanco, Sullivan, & Holliman, 2009. Ray and colleagues (2009) investigated the impact of CCPT on children with aggressive behaviors using a quasi-experimental design with a wait-list control group. Originally, Ray and colleagues planned on using randomization procedures to assign participants to treatment conditions; however, because some of the children were demonstrating aggressive behaviors in the classroom, school administrators requested that these children receive CCPT immediately. Participants included 42 prekindergarten through fifth grade students from two Title I elementary schools in the southwestern United States who were identified for aggressive behaviors in the classroom. The number of students selected from each school was 28 from School 1 and 14 from School 2. Children in the CCPT treatment condition ($n = 19$) received individual CCPT for 14 30-minute sessions over seven weeks. Children in the wait-list control group ($n = 22$) did not receive any intervention over the course of the study. In regards to gender and ethnic breakdown, the CCPT treatment condition was comprised of 15

males and four females, including one African American student, five Hispanic students, nine Caucasian students, and four biracial students. Participants in the wait-list control group consisted of 16 males and six females, including five African American students, eight Hispanic students, and nine Caucasian students. All of the teachers and parents of the student participants completed the Child Behavior Checklist (CBCL) and Teacher Report Form (TRF; Achenbach & Rescorla, 2001) for each student before and after treatment. Both measures demonstrate adequate reliability and validity and were used to measure issues with aggression at home and at school for each participant. The CBCL and TRF consist of multiple domains and scales; however, only the Aggressive Problems subscales of each measure were used for the purposes of this study. Because baseline equivalence was not established between groups on the CBCL, only the results of the TRF were considered when reporting the findings in the following section.

Schottelkorb, Dumas, & Garcia, 2012. Schottelkorb and colleagues (2012) investigated the impact of CCPT on the post-traumatic stress disorder (PTSD) symptoms of refugee children who had experienced trauma. Recruitment occurred at three elementary schools in the northwestern United States that had higher percentages of students who were identified as English Language Learners (ELLs) than the district average. Upon obtaining ELL teacher referrals for students and parent permission, the referred students completed the UCLA PTSD Index for DSM-IV (Pynoos, Rodriguez, Steinberg, Stuber, & Frederick, 1998) and their parent(s) completed the Parent Report of Posttraumatic Symptoms (PROPS; Greenwald, 2005) to determine qualifications for participation. Based on high PTSD scores, 31 participants were eligible and chosen to participate in the study. Children were excluded if they were receiving any outside counseling.

Using a table of computer-generated random numbers, participants were assigned into one of two treatment conditions, either child-centered play therapy (CCPT) or trauma-focused cognitive behavioral therapy (TF-CBT). Children in the CCPT group (n = 14) received 30-minute individual CCPT sessions twice per week for 12 weeks conducted by one of nine play therapists. The researchers also intended to add six 15-minute parent consultation sessions, which is recommended but optional according to the CCPT manual developed by Ray (2011). Due to scheduling conflicts, the therapists only engaged in an average of three parent consultation sessions and 17 CCPT sessions with students. Children in the TF-CBT group (n = 17) also received 30-minute individual sessions of TF-CBT twice per week for 12 weeks conducted by one of nine therapists. Similar to the CCPT group, participants in the TF-CBT group only received 17 sessions on average and the therapists met with parents an average of two times due to scheduling and commitment issues.

Both measures, the UCLA PTSD Index and the PROPS, were completed before and after the interventions and demonstrated adequate reliability and validity to measure PTSD symptoms. Of the 31 participants, only 26 remained in the study at posttest (all five were lost from the comparison group) and two participants were missing the parent report (one from the CCPT group and one for the comparison group) for a total of 24 PROPS. The researchers conducted chi square analysis and found that there was a significantly higher rate of attrition in the TF-CBT group, indicating high differential attrition. In addition, the percentage of differential attrition was calculated by the reviewer and determined to be in the high range according to WWC criteria.

Does not meet evidence standards. Eleven of the 17 articles in this review did not provide enough evidence to meet WWC standards, and therefore, received the rating *Does Not*

Meet WWC Group (or Single-Case) Design Standards. The eleven studies that failed to meet evidence standards are organized into four groups based on similar characteristics: (1) RCTs with low levels of attrition; (2) RCTs with unclear/high levels of attrition; (3) QEDs; and (4) one single-case design (SCD). Each of these studies failed to establish enough evidence to meet criteria for various reasons, which will be described below.

RCT's with low levels of attrition. Four of the studies that did not provide sufficient evidence to meet WWC standards used random assignment to form study conditions and demonstrated low levels of attrition (Danger & Landreth, 2005; Fall, 1999; Garza & Bratton, 2005; Shen, 2002). The researchers conducting these studies utilized a strong research design by using randomization to assign participants to study conditions and they maintained low attrition. Studies that meet these criteria have the potential to receive the highest WWC rating; however, there were issues in each of these studies that compromised the integrity of the research. Garza and Bratton (2005) explored the effects of CCPT on Hispanic children who were exhibiting behavioral difficulties at school. In addition to using randomization to form study groups and maintaining low attrition, they also demonstrated a strong research design assessing treatment integrity by videotaping intervention sessions and determining the therapist's adherence to treatment. However, this study failed to demonstrate sufficient evidence because of potential issues with outcome eligibility and reporting. The researchers stated that there were issues with the teacher-completed BASC measures during posttesting. The teachers were not provided a controlled environment for completing the BASC measures as the parents were provided, and several teachers were observed hurriedly completing the measures at the end of the year to meet deadlines, which may have affected the results of the study. In addition, some parents completed the Spanish-translated BASC, which was reported to lack reliability and validity information.

Researchers in this study also created a potential confounding variable by only including one therapist/interventionist per treatment condition, which causes difficulty in separating the effects of the intervention versus the interventionist.

Three of the four studies that used a RCT design and maintained low attrition did not report assessment of treatment integrity, and therefore, the extent to which CCPT was implemented with fidelity is unknown (Danger & Landreth, 2005; Fall, 1999; Shen, 2002). In addition, the researchers in two of the studies only used one interventionist for both treatment conditions, which created a potential confounding variable in teasing out the effects of CCPT from the interventionist (Danger & Landreth, 2005; Shen, 2002). Also, while Danger and Landreth (2005) and Fall (1999) utilized outcome measures that demonstrated adequate reliability and validity and administered these measures in the same manner across study groups, there were weaknesses with the reliability and validity of the outcome measures in Shen's (2002) study. In examining the effectiveness of CCPT with elementary school children in Taiwan who had experienced a recent earthquake, Shen met WWC criteria of face validity in her description of all three instruments used to assess the outcome variables; however, reliability information was not reported or available for two of the outcome measures. In addition, none of the instruments were designed for or standardized with Chinese children, although the same person interpreted the items for each child, which allowed for some level of control in the way they were administered.

RCTs with unclear/high levels of attrition. Three of the studies used RCT but did not meet standards because either the attrition level was high according to the WWC attrition model (Murphy Jones & Landreth, 2002; Ray, Stulmaker, Lee, & Silverman, 2013), or the authors did not provide enough information to determine the rate of attrition present among participants,

which was assumed to be high (Fall, Navelski, & Welch, 2002). In either case, baseline equivalence needed to be established in order to determine adequate equality between study groups. Ray and colleagues (2013) demonstrated strong research components in most respects, including a RCT design, reliable and valid outcome measures administered in the same manner across groups, treatment integrity that was carefully assessed and reported, and the use of more than one interventionist per study condition. However, the differential attrition was high (15%), due to three students moving away in the CCPT group (and no participants leaving in the control group). Although participants leaving due to moving is considered exogenous to the intervention and may not impact the results, even the liberal assumptions of the WWC attrition model consider differential attrition of 15% to be unacceptable. Equivalence between groups was not established for any scale on the outcome instrument based on reviewer calculations (ES differences on scales of .10 - .52 with no statistical adjustment), which fails to meet WWC criteria.

The other two RCT studies that demonstrated high attrition both established equivalence; however, failed to meet WWC standards because treatment integrity was not reported. Fall, Navelski, and Welch (2002) stated that a random selection procedure was used to assign participants to the CCPT group ($n = 43$) and to the no-treatment control group ($n = 23$). The authors did not report why the groups consisted of significantly unequal numbers. In addition, the degree of attrition of participants was unclear and not explicitly described. In a table displaying pretest and posttest means, it appears that two students in the control group and 10 students in the CCPT group did not have posttest data on some measures. This would create high levels of overall and differential attrition and compromise the results of the study and the comparability of the study groups. Equivalence data were not reported; however, calculations by

the reviewer indicated that the criterion of baseline equivalence was met on most scales of the CTRS-R-L (range of ES differences = 0.001 - 0.05 for teacher-completed self-efficacy, problem behavior, and social problems scales and case manager-completed problem behavior, anxiety, and social problems scales). Calculations could not be derived from the S-ES because Fall and colleagues did not report means and standard deviations for this measure.

In Murphy Jones and Landreth's (2002) study, attrition was considered high (13%) due to one participant out of 15 in the CCPT group and three participants out of 15 in the control group not completing posttest instruments. Equivalence data were not reported; however, calculations by the reviewer indicated that baseline equivalence was established (all ES differences ranged from 0.004 - .14 and statistically adjusted using ANCOVA). In addition to not reporting treatment integrity, the authors also did not report any information about the instruments used to measure the outcome variables. Due to the reviewer's search for additional information related to these instruments, it was determined that two out of the three instruments were questionable in meeting outcome eligibility and reporting due to lack of reliability and validity information.

Quasi-Experimental Designs (QEDs). Three of the 17 studies in this review that did not meet WWC standards were considered QEDs because the researchers did not use randomization procedures to assign participants to study conditions. Although two of these studies met the criterion of equivalence among study groups based on calculations by the reviewer, treatment integrity was not reported (Kot, Landreth, & Giordano, 1998; Post, 1999). In addition, the participants in Post's (1999) study received a wide range of CCPT sessions (1-25 with a mean of 4), which exhibits considerable inconsistency in the implementation of CCPT and could affect results and the validity of the study. Tyndall-Lind and colleagues (2001) failed to demonstrate baseline equivalence, and therefore, did not meet WWC standards. Although ANCOVA was

used to adjust for pretest differences, the effect size differences between group pretest means were greater than 0.25 standard deviations for most outcome measures. In addition, treatment integrity was not reported, potentially confounding the validity of the study.

SCD. The final study in this review that did not provide sufficient evidence and received the rating *Does Not Meet Pilot Single-Case Design Standards* utilized a single-case research design with four kindergarten through fifth grade students to determine the effectiveness of CCPT on Attention Deficit Hyperactivity Disorder (ADHD) symptom reduction (Schottelkorb & Ray, 2009). The authors attempted to measure the impact of CCPT on ADHD symptoms by alternating treatments across phases. For two of the participants, CCPT alone was compared with CCPT combined with person-centered teacher consultation (PCTC). Reading mentoring was used for the other two participants instead of CCPT+PCTC.

Although interobserver agreement of 97% was reached by two observers on all data points across the study, which meets WWC criteria for single-case designs, the authors failed to meet any other criteria. The independent variable, CCPT, is systematically manipulated; however, when and how CCPT conditions changed was not explicitly reported. In addition, for each student, the phases switch from baseline (A) to CCPT (B) to either CCPT+PCTC (C) or RM (D) to follow-up (A). Therefore, the design for each student was either ABCA or ADDBA. This does not meet the standards requirements for four or more attempts to demonstrate effects over time because the CCPT treatment alone is not replicated. Also, due to the nature of CCPT having lasting effects that may carry-over from one phase to the next, the specific type of SCD that was used is not appropriate due to potentially confounding the results. It is difficult to determine whether observed effects were due to the CCPT, another intervention, or both.

Reporting on Findings

After evaluating the 17 articles included in this review, the six articles that demonstrated enough evidence to *Meet WWC Group Design/Pilot SCD Standards* (with or without reservations) were evaluated further to determine the effectiveness of CCPT on each outcome domain. The six studies included in this part of the review investigated the effect of CCPT on the four following broad outcomes: academic achievement, externalizing behaviors, posttraumatic stress disorder (PTSD) symptoms, and teacher-child relationship stress. The findings for each of the studies were characterized based on the effects for each of the outcomes within each study (refer to Table 1.2 and 1.3 at the end of this chapter for more information). Then the effectiveness of CCPT was rated across all of the studies for each outcome domain (see Table 1.4) along with the extent of the evidence (see Table 1.5). Results are described below.

Academic achievement. Only one out of the six studies investigated the effect of CCPT on academic achievement (Blanco & Ray, 2011). Based on the estimated effect size calculated by the reviewer ($g = 0.25$) and the statistical significance value reported by the authors ($p=0.03$), this particular study outcome was characterized to have a *statistically significant positive effect* due to a statistically significant ($p \leq 0.05$) and substantively important ($g \geq .25$) effect of CCPT on academic achievement (refer to Table 1.2 for ratings and more information). For the entire domain, CCPT was shown to have *potentially positive effects* on achievement with the extent of evidence being *small* due to only one study and a sample size of 350 or less within this outcome domain (refer to Table 1.4 and 1.5 for ratings and more information).

Externalizing behaviors. Three of the six studies investigated the impact of CCPT on various types of externalizing behaviors, such as aggression, disruptive behaviors, or hyperactivity. Bratton and colleagues (2013) used three scales to measure disruptive behaviors. The findings were characterized to have a *statistically significant positive effect* due to at least

half of the measures showing statistical significance ($p = <.001 - .009$; refer to Table 1.3 for rating information). The other two studies in this outcome domain only used one outcome measure/scale (or only one measure was considered adequate based on this review) to assess externalizing behaviors (refer to Table 1.2 for rating information). The findings for one of these studies were characterized to have a *substantively important positive effect* due to a large effect size ($g = 0.28$) but no statistical significance ($p = 0.15$; Ray et. al., 2007). The findings for the last study were characterized to have an *indeterminate effect* for CCPT on externalizing behaviors due to the effects not being significant ($p = 0.12$) or substantively important ($g = 0.11$) according to WWC criteria (Ray et al., 2009). When all three studies were combined to find an average effect size ($g = 0.43$) and average statistical significance ($t = 1.55$; critical value = 2.01; $p = 0.13$), an intervention rating of *potentially positive effects* was given for CCPT on externalizing behaviors due to being substantively important but not statistically significant (refer to Table 1.4 for rating information). There is a *small* extent of evidence due to a sample size of 350 or less within this outcome domain (refer to Table 1.5).

Posttraumatic stress disorder (PTSD) symptoms. One of the six studies that met WWC standards (with or without reservations) investigated the impact of CCPT on PTSD for refugee children (Schottelkorb et al., 2012). The findings of the two instruments were characterized to have an *indeterminate effect* for CCPT on PTSD (refer to Table 1.3). Neither of the measures indicated statistical significance ($p = 0.32 - 0.85$) or substantive importance ($g = 0.21 - 0.24$). When both measures were combined to find an average effect size ($g=0.23$) and average statistical significance ($t=.56$; critical value= 2.06; $p = 0.58$), an intervention rating of *no discernible effects* was given for CCPT on PTSD with a *small* extent of evidence due to only one

study and a sample size of 350 or less within this outcome domain (refer to Table 1.4 and Table 1.5).

Teacher-child relationship stress. Two out of the six studies investigated the impact of CCPT on teacher-child relationship stress. Ray (2007) used four scales of an instrument to measure the outcome variable. The findings were characterized to have an *indeterminate effect* due to the mean effect being neither statistically significant ($t = .88$; critical value = 2.00; $p = 0.38$) nor substantively important ($g = 0.23$). The six scales used by Ray and colleagues (2007) also yielded findings that had an *indeterminate effect* due to the mean effect being neither statistically significant ($t = .62$; critical value = 2.00; $p = 0.54$) nor substantively important ($g = 0.16$). When both studies were combined to find an average effect size ($g = 0.19$) and an average statistical significance score ($t = .72$; critical value = 2.00; $p = 0.54$), an intervention rating of *no discernible effects* was given for CCPT on externalizing behaviors with a *small* extent of evidence due to a sample size of 350 or less within this outcome domain (refer to Table 1.4 and Table 1.5 for more information).

Discussion

Play therapy offers a potentially effective and developmentally appropriate intervention for children with a variety of issues (Baggerly et al., 2010; Bratton et al., 2005; Landreth, 2002; LeBlanc & Ritchie, 2001; Ray, 2011; Ray & Bratton, 2010). With the push for evidence-based interventions (EBIs), it is important that play therapy researchers design studies that provide enough evidence to determine its effectiveness. The play therapy literature has been criticized for a lack of credible evidence due to inconclusive results and compromised methodology (Phillips, 1985; 2010; Reade, Hunter, & McMillan, 1999). Although some steps have been taken to evaluate play therapy research and assess study quality, many researchers have not clearly

defined the specific type of play therapy intervention implemented or they have reviewed play therapy studies that utilized a combination of approaches (Baggerly & Bratton, 2010; Baggerly et al., 2010; Bratton & Ray, 2010; Ray & Bratton, 2010).

This paper makes a unique contribution to the literature because there is not any other research in the play therapy literature that has assessed both study quality and effectiveness. Researchers who have conducted meta-analyses on play therapy studies have investigated the effectiveness of various approaches combined into categories (such as humanistic/nondirective versus nonhumanistic/directive); however, have not taken into account research quality or distinguished between different theoretical approaches (Bratton et al., 2005; LeBlanc & Ritchie, 2001; Phillips, 2010). Previous researchers who have evaluated the quality of play therapy studies have not assessed the effectiveness across studies or outcome domains, and also have not focused their review specifically on the CCPT approach (Baggerly & Bratton, 2010; Bratton & Ray, 2000; Phillips, 2010; Ray & Bratton, 2010). In this review, the researcher only included studies that specifically utilized CCPT, applied a different set of stringent evidence-based criteria (WWC; U. S. Department of Education, 2014), and assessed the effectiveness of CCPT for studies that demonstrated adequate study quality (met evidence standards with or without reservations). This allowed for the researcher to specifically investigate the effectiveness of CCPT only for studies that demonstrated strong research designs and methodology.

In a literature search that yielded a total of 255 articles, 30 articles quantitatively analyzed the effects of CCPT. Thirteen of the 30 articles were excluded because they used a pre-experimental, pretest/posttest design without a control or comparison group, which lacked strong enough evidence to demonstrate the effectiveness of CCPT. Out of the remaining 17 articles that were reviewed using What Works Clearinghouse (WWC) evidence-based criteria, only four met

WWC standards without reservations (Blanco & Ray, 2011; Bratton, et al., 2013; Ray, 2007; Ray, Schottelkorb, & Tsai, 2007), two studies met standards with reservations (Ray, Blanco, Sullivan, & Holliman, 2009; Schottelkorb, Dumas, & Garcia, 2012), and 11 studies failed to demonstrate enough evidence to meet WWC criteria (Danger & Landreth, 2005; Fall, 1999; Fall et al., 2002; Garza & Bratton, 2005; Kot et al., 1998; Murphy Jones & Landreth, 2002; Post, 1999; Ray et al., 2013; Scottelkorb & Ray, 2009; Shen, 2002; Tyndall-Lind et al., 2001).

The studies that met standards without reservations used randomization to assign participants to study conditions, maintained low levels of attrition, used reliable and valid outcome measures consistently across the study, utilized multiple play therapists or interventionists across study conditions, and assessed and reported adequate treatment integrity for CCPT (Blanco & Ray, 2011; Bratton, et al., 2013; Ray, 2007; Ray, Schottelkorb, & Tsai, 2007). The studies that met standards with reservations utilized some strong research components according to WWC criteria; however, the researchers either did not use random assignment to assign participants to study conditions or they used randomization but had high levels of attrition among participants (Ray, Blanco, Sullivan, & Holliman, 2009; Schottelkorb, Dumas, & Garcia, 2012)..

The majority of the studies did not meet WWC standards (with or without reservations) for a variety of reasons. Two of the criteria that many of these studies failed to meet were assessing and reporting treatment integrity and using reliable and valid outcome measures in a consistent manner. Six out of the 11 studies could have met WWC criteria (with or without reservations) if treatment integrity had been assessed and reported (Fall, 1999; Kot et al., 1998; Murphy Jones & Landreth, 2002; Post, 1999; Shen, 2002; Tyndall-Lind et al., 2001). Although the researchers indicated that CCPT was utilized, there is no way of knowing whether or not

CCPT was implemented as intended, and therefore, whether or not the outcome is truly due to the effects of CCPT. Several studies also used outcome measures that had questionable reliability and validity, such as scales in development that did not have psychometric information available or scales that were translated into other languages that were not normed for that particular population (Garza & Bratton, 2005; Murphy Jones & Landreth, 2002; Shen, 2002). Some of these researchers also reported inconsistency of instrument administration between pretest and posttest, which may have an unintended effect on the outcome.

In addition to these more prominent issues in CCPT research, some of the studies did not meet standards for other reasons. Many studies demonstrated high or unclear attrition, often due to raters not completing posttests, and the researchers not establishing adequate equivalence between groups when needed (Fall et al., 2002; Murphy Jones & Landreth, 2002; Ray et al., 2013; Tyndall-Lind et al., 2001). Another issue with three of the studies was that only one intervention/play therapist was used for one or both study conditions, which creates a potential confounding variable in attributing the outcome to CCPT rather than to the interventionist specifically (Danger & Landreth, 2005; Garza & Bratton, 2005; Shen, 2002). There was one single-case design in this study review that assessed for treatment integrity and used rigorous data collection methods; however, the design was flawed and did not meet evidence criteria (Schottelkorb & Ray, 2009).

After assessing the effectiveness across the six studies that demonstrated adequate research quality (met WWC standards with or without reservations), CCPT was found to have *potentially positive effects* on academic achievement (Blanco & Ray, 2011) and externalizing behavior, including aggression, hyperactivity, and impulsivity (Bratton et al., 2013; Ray et al., 2007). These results are similar to other studies that found statistically significant results for

CCPT on academic achievement (Blanco, Ray, & Holliman, 2012) and externalizing behaviors (Garza & Bratton, 2005; Kot et al., 1998; Muro, Ray, Schottelkorb, Smith, & Blanco, 2006; Ray, 2008; Ray, Blanco, Sullivan, & Holliman, 2009; Tyndall-Lind et al., 2001); however, researchers in these previous studies have not demonstrated sufficient evidence due to flawed designs and/or methodology. Although the results of this review suggest promise for CCPT as an effective intervention for improving academic achievement and externalizing behaviors for children, these results are based only on a few studies that demonstrate sufficient research quality.

The results of CCPT on the other two outcome domains, post-traumatic stress disorder (PTSD) symptoms (Schottelkorb et al., 2012) and teacher-child relationship stress (Ray, 2007; Ray et al., 2007), indicated *no discernible effects*. This is in contrast to other studies that found statistically significant and positive effects for CCPT on internalizing, clinical issues (Baggerly, 2004; Baggerly & Jenkins, 2009; Dutta & Mehta, 2006; Tyndall-Lind, et al., 2001) and teacher-child relationship stress (Muro, Ray, Schottelkorb, Smith, & Blanco, 2006; Ray, Henson, Schottelkorb, Brown, & Muro, 2008); however, researchers in these previous studies have not demonstrated sufficient quality of evidence due to implementing research designs without control groups or exhibiting other methodological issues. Within all four outcome domains assessed in this review, the extent of the evidence was found to be *small* due to a limited number of studies and participants within each outcome area. This is consistent with other reviews that have indicated small sample sizes, limited studies within each outcome domain, and therefore, difficulty in generalizing the results (Baggerly & Bratton, 2010; Bratton & Ray, 2000; Ray & Bratton, 2010)

Limitations

One limitation in this study is that the reviewer did not strictly adhere to every single detail stated in the WWC guidelines and instead used what was relevant to the purposes of this particular study. Although many of the guidelines were followed, there is room for the reviewer to adapt some of the criteria to his or her particular protocol. For instance, treatment integrity as a confounding variable was listed in previous publications of the WWC standards manual; however, was not a required component in the most recent version (U. S. Department of Education, 2008; 2011; 2014). Instead, the WWC standards indicate that the reviewer can add this component along with evaluating for other potential confounding variables if relevant. Because this was a significant aspect in the purpose of this study, the reviewer added this criterion to the review protocol. Researchers conducting future studies may wish to further investigate and evaluate other specific confounding variables not explicitly stated by the WWC.

A second limitation in this study is possible publication bias. The search that was conducted to review studies was set to include articles published in peer-reviewed journals. Because many journal editors tend to publish those studies that have produced statistical significant or possibly substantively important results, there may be more CCPT studies that have utilized strong research components yet were not published. Researchers conducting future studies should consider including dissertations or other resources that may include exemplar studies with strong designs and methodology that produced mixed or inconclusive results.

Implications and Future Directions

The results of this study suggest that there is limited evidence of the effects of CCPT. Because there are a limited number of CCPT studies with strong research components, only a small pool of literature remains that can be used to adequately demonstrate the effects of CCPT. In order to address methodological flaws in CCPT research, researchers need to design their

studies based on various evidence-based criteria of reputable organizations, such as the American Psychological Association (APA) or the What Works Clearinghouse (WWC; U. S. Department of Education, 2014). The following suggestions for future research are based on the WWC evidence-based standards. First, a strong research design, such as a randomized controlled trial (RCT), regression discontinuity design (RDD), or single-case design (SCD), needs to be utilized. A quasi-experimental design (QED) could also be used; however, this type of design is not as controlled as the others. Second, researchers using RCTs with high levels of attrition or QEDs should establish equivalence between groups and adjust any discrepancies using appropriate statistical measures, such as analysis of covariance (ANCOVA). Third, reliable and valid outcome measures need to be utilized and administered consistently throughout the study. Fourth, integrity to CCPT treatment needs to be assessed and reported in every study to document that CCPT was implemented as intended. Lastly, all components of the research need to be explicitly described, such as randomization procedures, percentages and causes of attrition, how equivalence was established if needed, psychometric properties and administration of outcome measures, and when and how treatment integrity was assessed. These details will allow readers or reviewers to examine various components of studies without leaving many questions unanswered, as well as encourage researchers to evaluate and strengthen their own studies when including these components. Once researchers in the field begin to produce more studies with sound methodological components that meet evidence-based criteria, there will be more CCPT studies and participants across various outcome domains to adequately demonstrate the effectiveness of CCPT (Baggerly & Bratton, 2010; Phillips, 2010; U. S. Department of Education, 2014; Urquiza, 2010).

While strengthening CCPT research using evidence-based criteria and an increased number of participants is ideal, researchers and practitioners may have difficulty implementing RCTs, which are not always practical or feasible (Friere, 2006; Morgan & Morgan, 2009; Ray & Schottelkorb, 2010; Urquiza, 2010). First of all, many play therapists may not have the resources available to implement a large-scale randomized study. Some schools or parents may be reluctant for their children to participate; and therefore, it may be difficult to produce an adequate sample size. In addition, it may be difficult to randomize students due to the ethical dilemma of not serving referred children who need an intervention. Students with the more severe issues may need to be in the intervention group and then there may be a failure to demonstrate baseline equivalence among study conditions. A solution to these issues in CCPT research is to use either a regression discontinuity design (RDD) or single-case design (SCD). In a RDD, participants are not assigned to study groups through randomization, and instead are assigned to the treatment group through a predetermined cutoff score (Jacob & Zhu, 2012). For example, the children with the most challenging behaviors who receive the highest scores on a teacher-completed rating scale may be placed in the treatment group, while other students with lower scores are placed in a control group. CCPT researchers who are interested in conducting RDDs should follow evidence-based criteria outlined by the WWC for this specific type of design (U. S. Department of Education, 2014).

Another solution to these issues could be using SCDs to demonstrate the effectiveness of CCPT. Ray and Schottelkorb (2010) discussed the importance of using SCDs to demonstrate the effectiveness of play therapy treatment because of the strong level of control that this research design allows. In addition, only a small number of participants are needed for SCDs to demonstrate a functional relation between the independent and dependent variables. Fewer

participants may be more ideal in a setting where access to a large group of participants for an intervention or control group may be difficult for a RCT or RDD. Researchers should follow WWC guidelines for SCDs to ensure that evidence-based criteria are being met in order to help strengthen the CCPT literature base (U. S. Department of Education, 2014).

Conclusion

Child-centered play therapy (CCPT) offers a potentially promising intervention for children exhibiting a variety of issues; however, there are a limited number of studies that provide enough evidence for its effectiveness. Researchers conducting future studies should follow evidence-based guidelines, use more controlled research designs, and incorporate more stringent methodological components to help strengthen the CCPT research base. Using a regression discontinuity design (RDD) or single-case design (SCD) may be beneficial in ethically providing CCPT treatment to children in need of an intervention while also using a controlled research design that meets evidence-based criteria. By implementing stronger research designs that demonstrate improved outcomes for children participating in CCPT, researchers will provide significant contributions to the field as well as improving children's mental health and well-being.

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2 THE EFFECTIVENESS OF CHILD-CENTERED PLAY THERAPY ON THE CHALLENGING BEHAVIORS OF EARLY ELEMENTARY SCHOOL STUDENTS

In light of numerous high visibility cases of school violence as well as the overall high

rates of children and adolescents who struggle in school due to social, emotional, and behavioral issues, it is becoming increasingly critical for our society to address children's mental health concerns at an early age. Children's social and emotional issues often manifest at school as noncompliant, aggressive, disruptive, and/or off-task behaviors. Approximately 20% of children exhibit these challenging behaviors as early as preschool through first grade (ages 4-7 years), resulting in many negative consequences (Feil, Walker, Severson, & Ball, 2000). First, the emotional and behavioral issues of children can lead to poor academic performance and a trajectory of negative future outcomes if left untreated, such as increased risk of school absences, dropping out of school, juvenile delinquency, gang involvement, incarceration, substance abuse, and unemployment (Nagin & Tremblay, 1999; Olson, Bates, Sandy, & Lanthier, 2000; Smith, Katsiyannis, & Ryan, 2011). Unfortunately, many young students at risk for serious emotional or behavioral issues do not receive the basic services they need through the school system or in their community (Kauffman, 1999; Kauffman & Landrum, 2009; Rones & Hoagwood, 2000).

In addition, students exhibiting emotional issues and challenging behaviors not only affect their own learning and future outcomes, they also put a tremendous burden on the school system, teachers, and other students at school (Carrell & Hoekstra, 2009; Feil et al., 2000; Fletcher, 2013). These issues are extremely challenging for teachers who often lack the adequate training and skills to accommodate students with challenging behavior and feel frustrated in their attempts to create safe classroom environments (Gettinger, Stoiber, Goetz, & Caspe, 1999; Sugai & Horner, 1999). Many teachers report the stress of dealing with challenging behaviors as one of the main reasons for leaving the profession (Gonzalez, Brown, & Slate, 2008).

Because of the vast number of young children exhibiting challenging behaviors in school and the long-term negative effects that can occur if these behaviors are left untreated, it is critical

that behavioral and/or mental health interventions are implemented. Behavioral interventions implemented after third grade have been shown to have limited long-term benefits; and therefore, providing these interventions at a younger age may prove to be more effective (Hamre & Pianta, 2001). Schools offer a unique and convenient context for providing emotional and behavioral interventions to many students who otherwise may not receive services in the community due to limited resources (Weist, Evans, & Lever, 2003). By being more proactive and implementing effective school-based behavioral interventions, serious behavioral issues may be prevented while creating more positive school climates (Archer & Cote, 2005; Ray, Blanco, Sullivan, & Holliman, 2009; Ray, Schottelkorb, & Tsai, 2007).

Child-Centered Play Therapy (CCPT)

Researchers have introduced child-centered play therapy (CCPT) as an intervention that is developmentally appropriate for young children and can be used in the schools (Bratton, Ray, Edwards, & Landreth, 2009; Landreth, 2002; Ray, 2011). The general basis for play therapy is the idea that play is a child's natural form of communication and is one of the most developmentally appropriate ways in which a child can express his or thoughts and emotions (Landreth, 2002). The CCPT approach is a complete therapeutic system and was initially developed by Virginia Axline (1947), who applied the fundamental tenets of Carl Rogers' (1940, 1951) client-centered approach, including unconditional positive regard, empathic understanding, and congruence, to her work in play therapy. Axline, a student of Rogers, developed eight basic principles that formed the essential guidelines of what was then referred to as the *nondirective play therapy* approach. These principles were based on Rogers' theories of human development and conditions for therapeutic change. These theories propose that when a person is given a safe, nonjudgmental environment with a therapist using a nondirective

approach, the person can begin to examine his or her own self structure and integrate these experiences into a revised sense of self

Axline's (1947) principles for nondirective play therapy require that the therapist: (1) creates a warm, caring relationship with the child; (2) accepts the child exactly as he/she is; (3) creates a feeling of safety and permissiveness in the relationship, which allows the child to fully express his/her thoughts and feelings without feeling judged or stifled; (4) remains sensitive to the child's feelings and reflects those feelings in a manner that fosters self-understanding for the child; (5) believes deeply in the child's capacity to act responsibly and solve problems on his/her own; (6) trusts the child's inner direction, allows the child to lead in all areas of the relationship, and resists any urge to direct the child's play or conversation; (7) appreciates the gradual nature of the therapeutic process over time and does not attempt to rush through it or pressure the child to change in a specified amount of time or number of sessions; and (8) only sets limits that are absolutely necessary to make the child aware of important responsibilities in the therapeutic relationship and that interfere as minimally as possible with the other principles. For example, the therapist may set limits for children physically hurting themselves or others or destruction of property, but may not set limits around using toy guns, appropriate use of specific toys, or using language that may be considered inappropriate in other settings (Axline, 1947). Using the guidelines proposed by Axline, the therapist practicing CCPT uses both nonverbal and verbal skills to promote a safe, therapeutic environment that fosters self-exploration and change for the child.

After Axline (1947) established the foundational principles of CCPT, other play therapists began to expand on her research and guidelines to create the framework for how CCPT is currently practiced (Ginott, 1961; Guerney, 2000; Landreth, 2002; Moustakas, 1953). These

researchers and practitioners contended that play therapy appears to be the most developmentally-appropriate method of therapy for children because they often lack the cognitive ability to express their thoughts and emotions in a manner that is required for a typical client and therapist interaction. CCPT can be conducted in an individual or group format, in which children are able to explore a play room full of a variety of toys. These toys allow children to express their thoughts and emotions through play, which is their most natural mode of communication and self-expression (Landreth, 2002). In other words, during play therapy sessions, the “toys are used like words by children, and play is their language” (Landreth, 2002, p. 16). Play represents the child’s inner world or subjective experience (Landreth, 2002; Ray, 2011). The specific play themes and behaviors that the child exhibits during the play sessions guide the therapist in understanding and responding to the child’s underlying emotional needs, which in turn facilitates positive change within the child.

Child-Centered Play Therapy Research

Researchers have shown significant improvements for children receiving CCPT in a variety of areas: (a) academic achievement (Blanco & Ray, 2011; Blanco, Ray, & Holliman, 2012); (b) internalizing behaviors, such as anxiety, depression, self-concept, and psychological adjustment (Baggerly, 2004; Baggerly & Jenkins, 2009; Dutta & Mehta, 2006; Kot, Landreth, & Giordano, 1998; Ray, Schottelkorb, & Tsai; Shen, 2002; Tyndall-Lind, Landreth, & Giordano, 2001); and (c) externalizing behaviors, such as aggressive and disruptive behaviors, and symptoms associated with Attention-Deficit/Hyperactivity Disorder (ADHD; Bratton et al., 2013; Garza & Bratton, 2005; Kot et al., 1998; Muro, Ray, Schottelkorb, Smith, & Blanco, 2006; Ray, 2008; Ray, Blanco, Sullivan, & Holliman, 2009; Tyndall-Lind et al., 2001). Although CCPT has shown positive results for a variety of outcomes, the body of research has been

criticized for not providing enough credible evidence to support the effectiveness of play therapy, primarily because of inconclusive results across studies or compromised research methods (Phillips, 1985; 2010; Reade, Hunter, & McMillan, 1999). Much of the research that indicates statistically significant results for CCPT have used a pretest/posttest, pre-experimental design with no comparison group, have failed to demonstrate equivalence between study groups if random assignment was not used, have used questionable outcome measures, or have not assessed for treatment integrity.

In investigating the effect of CCPT on externalizing or challenging behaviors, only one study in the literature has demonstrated statistically significant results in addition to utilizing strong enough research methodology to meet evidence-based criteria outlined by the What Works Clearinghouse (U.S. Department of Education, 2014). Bratton and colleagues (2013) investigated the impact of CCPT on the disruptive behaviors of preschoolers. Using randomized block assignment, participants were assigned into one of two treatment conditions, either child-centered play therapy (CCPT) or reading mentoring (RM) for 30 minutes twice per week. Teachers completed the Caregiver-Teacher Report Form (C-TRF; Achenbach & Rescorla, 2000) to measure disruptive behaviors. Children who received CCPT showed a statistically significant decrease in aggression and attention problems over the comparison group. In addition to having a comparison group and randomizing participants to study conditions, Bratton and colleagues also demonstrated low attrition among participants, used an outcome measure with good psychometric properties, and assessed and reported treatment integrity by video-recording CCPT sessions and using a CCPT skill checklist (Ray, 2011).

With increasing demands from educators, policymakers, and managed-care organizations for evidence-based interventions, researchers have recently illustrated a pressing need for

stronger research designs in the play therapy literature (Phillips, 2010; Urquiza, 2010). Ray and Schottelkorb (2010) discussed the potential of single-case designs to determine the effectiveness of CCPT treatment because of the strong level of control that single-case design research allows. Single-case designs often rely on frequent direct observation throughout the study to measure the outcome instead of rating scales completed by teachers or parents before and after the study. In the very few studies that have used a single-case design in the play therapy literature, the researchers utilized flawed designs or had missing research components (Schottelkorb & Ray, 2009).

The field of play therapy has been criticized for the lack of differentiation among various theoretical play therapy approaches in research studies (Phillips, 2010). Many researchers have not clearly defined the type of play therapy intervention used or they utilized a mixture of approaches, and therefore, it is difficult to determine exactly which types of play therapy are or are not effective (Urquiza, 2010). Although many CCPT researchers have stated that they have utilized the CCPT approach in their studies, many have not assessed for treatment integrity to ensure that this specific approach has been implemented as intended. In addition, until recently, there was not a CCPT manual or protocol to operationalize and standardize skills in practice. Ray (2011) addressed these challenges in her creation of a handbook that outlines steps and recommended practices for CCPT. In addition, Ray created the CCPT checklist, which has been used for supervision of play therapists in training and for treatment integrity in research to ensure essential CCPT principles have been utilized.

Purpose of this Study

The purpose of this study was to examine the effectiveness of CCPT on the challenging behaviors of early elementary students. In order to address concerns that play therapy research

has not used strong research designs, this study utilized a single-case multiple baseline design. Research methods were designed to meet the What Works Clearinghouse (WWC) evidence-based standards for single-case designs (U.S. Department of Education, 2014). The intervention followed CCPT principles outlined by Ray's (2011) treatment manual to distinctly investigate the efficacy of this theoretical approach to play therapy. This study was designed to enhance the literature regarding the efficacy of CCPT as well as to provide evidence about a potentially effective, evidence-based intervention that can be used in school for young students with challenging behaviors. The following research questions were addressed:

1. To what extent does CCPT: (a) increase classroom engagement (on-task behaviors) of early elementary school students based on direct observation of student behavior; (b) decrease challenging (i.e., off-task) behaviors based on direct observation of student behavior; (c) increase student social skills at school based on teacher report; and (d) decrease challenging behaviors at school based on teacher report?
2. To what extent does CCPT: (a) increase social skills at home based on parent report; and (b) decrease challenging behaviors at home based on parent report?

Method

Sampling Procedures and Participants

Participants. Participants included three kindergarten students, their teachers, their parent(s), and a school counselor who were recruited from one elementary school located in a suburb of a large city in the southeast region of the United States. Census bureau population estimates in 2010 for the county/school district were 688,078 with a racial composition of 56.3% White, 25.6% African-American, 12.4% Hispanic/Latino, and 5.7% other. Median household income in 2010 was \$65,180. The county/school district is large and composed of six cities. The

elementary school where recruitment occurred is in a small city with a population of 20,425, median income of \$54,529, and a very similar racial composition as the county. The school serves kindergarten and first grade for a total of 415 students, with a racial composition of 36.6% White, 31.6% African-American, 21.9% Hispanic/Latino, 2.3% Asian, and 7.4% other or multi-racial. As a Title I school, 57% of students receive free and reduced lunch benefits. The student participants in this study consisted of one White Non-Hispanic female (five years, 10 months), one African American female (six years, two months), and one White Hispanic male (five years, seven months).

Sampling Procedures. The researcher met with the school counselor, who was asked to refer the 10 students in kindergarten and/or first grade who were exhibiting the most challenging behaviors at school, which included aggressive, oppositional, disruptive, impulsive, and/or off-task behaviors. Only three students, who met these criteria were referred by the school counselor. The researcher provided the teachers with a packet to send home with each of the referred students for their parent(s) or legal guardian(s) to review. The packet included a cover letter (see Appendix A), a parental permission form (see Appendix B), a child assent form (see Appendix C), a brief additional child assent form (see Appendix D), and a student survey for social validity (see Appendix E).

The cover letter briefly explained the details of the study, stated that this was for a dissertation project, and provided information for returning a signed parental permission form to the child's teacher. The parental permission form provided more detailed information about the study and explained that participation was voluntary. A statement was included on the form that explained that, based on recruitment criteria for the study, their child may or may not participate in the study and the parent(s) or legal guardian(s) would be notified in writing to explain whether

or not their child was chosen to participate. In addition, information in the parent permission form explained that all play therapy sessions would be videotaped and social validity, or the extent to which the student participants liked the CCPT intervention, would be assessed at the end of the study. The last three forms (child assent, brief additional child assent form, and the student survey for social validity) included in the packet were for parents to keep so they could view what was administered to their child throughout the study. These forms are discussed in more detail in the remaining sections.

After the determined deadline for parent permission forms to be signed and returned, all of the teachers of the referred students were asked to sign informed consent (see Appendix F) if they were willing to participate in the study. Teachers then completed the Social Skills Improvement System Rating Scale (SSIS-RS; Gresham & Elliott, 2008) for each referred student to determine eligibility for the study. Only three students were referred for the study, and all three met the eligibility criteria of receiving the highest scores on the Problem Behaviors Scale of the teacher-completed SSIS-RS. Information from the teacher completed SSIS-RS also was used as pretest data for the participants. The researcher met with each of the three students individually to verbally-administer the child assent form (see Appendix C). The researcher read an age-appropriate script to each participant that explained the details of the study and that his or her participation was voluntary. Verbal assent was obtained due to the students' young age and their responses were documented on the form.

Teachers of participants were asked to complete a short, modified version of the Brief Behavior Questionnaire and Intervention Plan (BBQuIP; Crimmins, 2009; see Appendix G), which was used to gain more information about behaviors and to determine observation times for data collection. Parents of participants were asked to complete the SSIS-RS before CCPT

sessions began (in January/February 2014). As soon as the CCPT sessions ended for each participant, his or her teacher and parent(s) were asked to complete a posttest SSIS-RS (May 2014). The researcher also met with each participating student in May 2014, after his or her last CCPT session to verbally-administer a student survey for social validity purposes (see Appendix E). A brief additional child assent script (see Appendix D) was read to each participant and verbal assent was obtained before the survey was given.

Instrumentation

Recruitment and teacher and parent report. The Social Skills Improvement System – Rating Scale (SSIS-RS; Gresham & Elliott, 2008) includes standardized, norm-referenced scales and subscales to gather information about students in three domains: (1) Social Skills, (2) Problem Behaviors, and (3) Academic Competence. The Social Skills scale includes the communication, cooperation, assertion, responsibility, empathy, engagement, and self-control subscales. The Problem Behaviors scale includes the hyperactivity/inattention, bullying, externalizing, internalizing, and autism spectrum subscales. The Academic Competence scale was not used in this study. The SSIS-RS allows for teacher, parent, and student raters on four different forms: (1) Teacher (ages 3-18), (2) Parent (ages 3-18), (3) Student (ages 8-12), and (4) Student (ages 13-18). Only the Teacher and Parent forms of the SSIS-RS were used in this study. Teachers and parents rated the frequency with which each behavior occurred using a four-point scale of *Never*, *Seldom*, *Often*, and *Almost Always*. Teachers and parents completed a pretest and posttest SSIS-RS to address research questions 1(c), 1(d), and 2. The pretest SSIS-RS completed by the teacher also was used for recruitment purposes. The pretest was completed before any CCPT sessions occurred for any of the participants (January/February 2014) and the posttest was completed after the last CCPT session for each participant (May 2014).

Reliability data for the SSIS-RS parent and teacher scales for students ages 5-12 included high median scale reliability estimates of internal consistency (parent = .95, teacher = .97), substantial median scale correlation coefficients for test-retest reliability (parent = .87, teacher = .84), and moderate median scale correlation coefficients for interrater reliability (parent = .55, teacher = .62). Validity evidence for the SSIS-RS showed moderate to high correlations with the *Behavioral Assessment System for Children, Second Edition (BASC-2; Reynolds & Kamphaus, 2004)*, the *Social Skills Rating System (SSRS; Gresham & Elliott, 1990)*, and the *Vineland Adaptive Behavior Scale, Second Edition (Vineland II; Sparrow, Cichetti, & Balla, 2005, 2006)*.

Behavior questionnaire. A modified version of the Brief Behavior Questionnaire and Intervention Plan (BBQuIP; Crimmins, 2009; see Appendix G) was completed by teachers of participants at the beginning of the study so that the researcher could determine appropriate observation times. Teachers of participants were asked to describe the specific challenging behaviors for each participant, rank the behaviors of concern, report how often the behaviors occur, and describe when and where each behavior is most likely to occur.

Direct observation. The Behavioral Observation of Students in School (BOSS; Shapiro, 2011; see Appendix H) is an instrument used for systematically observing the classroom behaviors of students in any grade level. The BOSS was used to address research questions 1(a) and 1(b) by recording two categories of engagement (on-task behavior), active engaged time (AET) and passive engaged time (PET); and three categories of nonengagement (off-task behavior), off-task motor (OFT-M), off-task verbal (OFT-V), and off-task passive (OFT-P). These categories are defined in the section entitled "Target Behavior and Operational Definition." In addition to observing participants' behaviors, the BOSS requires that a student's behaviors are compared to the behaviors of peers in the same classroom. Every fifth interval is

dedicated to observing a peer in the classroom and recording instances of engagement and/or nonengagement in the same fashion. Observers randomly selected peers and followed the same order of rotation throughout the observation. More details about the BOSS form and procedures in data collection are presented in the following sections.

Treatment integrity. A CCPT treatment integrity form (see Appendix I) was used to assess the extent to which CCPT sessions were conducted in the way that CCPT was intended. The CCPT treatment integrity form consists of a total of 10 items and includes all of the essential basic skills of professionals practicing CCPT as proposed by Landreth (2002) and reiterated by Ray (2011). Eight of the items use a four-point scale to measure the extent to which the counselor used specific play therapy skills or provided an appropriate CCPT setting: (0) *Never*, (1) *Rarely/Some of the time*, (2) *Often/Most of the time*, or (3) *Always*. The other two items could only occur or not occur absolutely, and therefore, consisted of a two-point scale: *Never* (0) or *Always* (3). Details about the procedures in completing the treatment integrity form and calculating treatment integrity percentages are presented in the "Independent Variable" section.

Social validity. The degree to which participants found the CCPT intervention acceptable was assessed through a student survey (see Appendix E). The researcher met with student participants individually for approximately 5 minutes after his or her last CCPT session. First, a brief additional child assent script (see Appendix D) was read to each participant to obtain verbal assent before administering the survey. Next, the researcher verbally-administered the survey, which included questions about the participant's perceptions and experiences with CCPT.

Target Behavior and Operational Definition

The target behaviors for this study were based on the behaviors included on the Behavioral Observation of Students in Schools (BOSS; Shapiro, 2011; see Appendix H) form

utilized for data collection to address research questions 1(a) and 1(b). Two categories of on-task behaviors (engagement) were recorded, including active engaged time (AET) and passive engaged time (PET). Active engaged time (AET) included any time a student was actively attending to assigned work, such as writing, reading aloud, raising his or her hand, talking to a teacher or peer about an assignment, or looking up a word in the dictionary. Passive engaged time (PET) included any time a student was passively attending to assigned work, such as listening to a lecture, looking at academic work, reading assigned material silently, looking at the board during teacher instruction, or listening to a peer ask or answer a question.

Three categories of off-task behaviors (nonengagement) were recorded, including off-task motor (OFT-M), off-task verbal (OFT-V), and off-task passive (OFT-P). Off-task motor (OFT-M) included any type of motor activity that was not directly associated with a timed task, such as getting out of his or her seat when sitting was required, aimlessly flipping the pages of a book, manipulating objects not related to an academic task, drawing or writing something that was not related to an academic activity, turning around in his or her seat, or fidgeting in one's seat for at least three consecutive seconds while remaining off-task. Off-task verbal (OFT-V) included any verbalizations that were not related to an assigned academic task or were not appropriate, such as whistling, humming, forced burping, talking to another student about something that was not related to the assigned task, talking about an assigned task to another student when talking was prohibited, making inappropriate comments or remarks, or calling out answers after the teacher had stated that such behavior was not allowed. Off-task passive (OFT-P) included any time when a student was passively off-task and not attending to the assigned academic activity for at least three consecutive seconds. These behaviors included sitting quietly

during an assigned activity, looking around the room, staring out the window, or passively listening to other students talk about issues not related to the assigned activity.

Data collection using direct observation. The primary observer conducted 15-minute observations 3 days per week for each participant throughout the duration of the study. Observation days and times were dependent on what each teacher identified as times of the day that are most conducive to observing the participants engaging in challenging, off-task behaviors. Therefore, days and times of the observations varied across participants; however, remained consistent for each participant throughout the study. The 15-minute observation sessions were divided into 15-second intervals. It is important to divide observation periods into small intervals to decrease the risk of underestimation of the target behaviors (Kennedy, 2005). Using the BOSS form, the researcher used momentary time sampling to record whether or not there was an occurrence of engagement (AET or PET) at the start of each 15-second interval. For the remainder of each interval, the researcher used partial interval recording to document an occurrence (1) or nonoccurrence (0) of OFT-M, OFT-V, and/or OFT-P as previously defined. For each interval, it was possible to record one occurrence of each type of off-task behavior (i.e. OFT-M, OFT-V, and OFT-P). At the end of each observation session, the researcher made notes about specific off-task or challenging behaviors that occurred within these categories.

Interobserver agreement (IOA). The researcher/primary observer calculated interobserver agreement (IOA) for data collected on the BOSS for all phases of the study for each participant. The researcher first met with the secondary observer, who only conducted observations for the purposes of IOA, to review procedures and the operational definitions of the BOSS. The researcher/primary observer and the secondary observer engaged in 15-minute practice observation sessions simultaneously and independently in a classroom of

nonparticipants until a minimum of 90% average agreement was obtained on at least two separate occasions (Hartmann, Barrios, & Wood, 2004; Kennedy, 2005). The researcher considered agreement to be an interval in which both observers recorded the presence or absence of engagement (either AET or PET) and when both observers recorded the presence or absence of nonengagement (OFT-V, OFT-M, and/or OFT-P) for a participant. For example, if the researcher recorded AET and the secondary observer recorded PET for the start of the interval, this would count as an agreement because an occurrence of engagement was recorded, regardless of which type. For nonengagement, if both observers recorded one or more off-task behaviors, this was considered to be an occurrence of nonengagement (regardless of the type) and recorded as an agreement.

Interobserver agreement (IOA) was calculated using point-by-point agreement, in which the number of agreements were divided by the number of agreements plus disagreements, then multiplied by 100. This was calculated separately for engagement (on-task behaviors) and nonengagement (off-task behaviors) for each data collection session. The secondary observer simultaneously and independently recorded data with the researcher for at least 20% of observation sessions during each phase for each participant, which resulted in a total of 22% of sessions for Participant #1 (25% during baseline, 21% during intervention, and 20% during follow-up), 28% of sessions for Participant #2 (25% during baseline, 28% during intervention, and 50% during follow-up), and 23% of sessions for Participant #3 (20% during baseline and 25% during intervention).

Across participants and phases, the average IOA for Participant #1 ("Melissa") was 94% (90-98% range) for engagement and 96% (92-100% range) for nonengagement during the baseline phase, 94% (90-98% range) for engagement and 90% (90-92% range) for

nonengagement during the intervention phase, and 100% (only one point) for engagement and 94% (only one point) for nonengagement during the follow-up phase. For Participant #2 ("Alex"), IOA was 94% (92-96% range) for engagement and 91% (90-92% range) for nonengagement during the baseline phase, 96% (92-100% range) for engagement and 91% (90-94% range) for nonengagement during the intervention phase, and 98% (only one point) for engagement and 92% (only one point) for nonengagement during the follow-up phase. For Participant #3 ("Carmen"), IOA was 93% (90-98% range) for engagement and 90% (90-92% range) for nonengagement during the baseline phase, and 95% (92-96% range) for engagement and 91% (90-98% range) for nonengagement during the intervention phase.

Independent Variable

All three students in this study participated in a total of eight individual child-centered play therapy (CCPT) sessions with the school counselor. Although it was intended for CCPT sessions to occur once a week for a total of eight weeks, due to time constraints and unforeseen inclement weather circumstances, Participants #2 and #3 received eight sessions over six weeks. In addition, CCPT sessions were intended to last for at least 30 minutes per session; however, due to time constraints and scheduling conflicts, sessions were not always 30 minutes long. Video recordings that documented whole CCPT sessions indicated an average length of 23 minutes per session for Participants #1 and #2, and 21 minutes per session for Participant #3. Not all CCPT sessions were videotaped due to technical difficulties with the recording device, and therefore, CCPT session average times were based on four sessions for Participant #1, seven sessions for Participant #2, and five sessions for Participant #3. Play therapy occurred in a playroom, located within the media center of the school, which was specially equipped with a variety of toys appropriate for CCPT. The toys had sturdy construction and allowed for a wide

range of creative and emotional expression (Landreth, 2002). Categories of toys included real-life toys, such as a dollhouse and puppets; acting out/aggressive release toys, such as toy soldiers; toys for creative expression and emotional release, such as musical instruments and art supplies; and a sand tray with miniature toys.

For each CCPT session, the school counselor brought one student participant to the playroom, where they entered together. In the initial session, the counselor introduced the participant to the playroom in a manner that exhibited permissiveness, such as “[participant's name], this is the playroom, and you can play with any of the toys in many of the ways you would like” (Bratton et al., 2009; Landreth, 2002). The participant was free to play with any of the toys and the counselor sat down in the playroom in a position that allowed for easily observing the child. While the participant played with the toys, the counselor engaged in the following essential CCPT skills to show that she was “present” with the student: (a) reflecting nonverbal behavior (tracking), (b) reflecting verbal content, (c) reflecting feeling, (d) facilitating decision making and returning responsibility, (e) facilitating creativity and spontaneity, (f) esteem building and encouraging, (g) facilitating relationship, and (h) limit-setting (Bratton et al., 2009; Landreth, 2002; Ray, 2006). Reflecting nonverbal behavior (tracking) involves verbalizing everything the child is doing as he or she plays. Reflecting feeling involves recognizing the emotion that the child is exhibiting through his or her play and expressing that awareness to the child. Facilitating decision-making and returning responsibility includes never doing something for a child that he or she can do himself or herself, and instead empowering and encouraging a child to make the decisions in the playroom. The counselor facilitated creativity and spontaneity by giving each child the freedom to express his or her uniqueness and allowing him or her to develop flexibility in thoughts and actions. Esteem-building and encouraging involves statements

that recognize the efforts of each child. In order to facilitate a relationship with a child, the counselor made an effort to respond to him or her when he or she addressed the therapeutic relationship through play or verbal responses.

The last essential CCPT skill is limit setting, which follows the A-C-T model: (a) acknowledging the feeling, (b) communicating the limit, and (c) targeting an alternative behavior. The counselor only set limits that were absolutely necessary to make the child aware of important responsibilities in the therapeutic relationship. Limits were set only if a participant was destroying property, hurting the counselor, or hurting himself or herself. These limits allowed for safety and responsibility, while interfering as minimally as possible with the other CCPT principles. For example, the therapist could set limits for a participant intentionally throwing or breaking something, but did not set limits around using toy guns, appropriate use of specific toys, or using language that may be considered inappropriate in other settings (Axline, 1947).

Treatment Integrity. The researcher, trained in CCPT, viewed five (21%) of the 24 video-recorded CCPT sessions across participants and completed the treatment integrity form (Appendix I) based on the school counselor's adherence to CCPT principles. Treatment integrity was calculated by dividing the number of points earned by the school counselor's adherence to CCPT essential skills by the total number of possible points and multiplying by 100. Mean treatment integrity was 93% with a range of 92-96%.

To assess the IOA from data collected for treatment integrity, the researcher and secondary observer reviewed each of the essential skills of CCPT assessed on the treatment integrity form. The researcher and secondary observer viewed video-recorded CCPT sessions and simultaneously and independently completed the treatment integrity form for two practice sessions to reach a minimum agreement of 90%. On the remaining five sessions, IOA was

calculated using point-by-point agreement, in which the number of items with agreements were divided by the total number of items, and multiplied by 100. Mean IOA was 97% with a range of 90-100%.

Design

The researcher used a single-subject multiple baseline design across participants to examine the impact of CCPT on the challenging behaviors of kindergarten students. A multiple baseline design was used as opposed to an ABAB withdrawal design to allow the researchers to show a functional relation between the dependent and independent variable without withdrawing treatment (Kennedy, 2005). In this study, it was inappropriate to withdraw the CCPT intervention because the therapeutic nature of the treatment creates potential changes that may be difficult for the researcher to remove. In addition, ethical issues may exist with withdrawing potentially necessary therapy for students with severe challenging behaviors. A functional relation is demonstrated by implementing the CCPT intervention at different points in time, across student participants and observing a change in behaviors for those participants who have started treatment.

Baseline. During baseline, the parents and teachers of participants completed a pretest of the SSIS-RS (Gresham & Elliott, 2008). The researcher also collected data on the classroom behavior of the three student participants in the study using the Behavioral Observation of Students in Schools (BOSS) form (see Appendix H). For the first tier (Participant #1), baseline data were collected for a minimum of five sessions and continued until data were stable. The researcher considered data to be stable when all data points fell within a range of 50% from the mean (Alberto & Troutman, 2013). Once data were stable in the baseline phase for the first tier (Participant #1), CCPT sessions began only for Participant #1, while Participants #2 and #3

remained in baseline. The criteria for moving from baseline to treatment in subsequent tiers (Participants #2 and #3) were dependent on changes in behavior in the previous tier. Once there were at least two out of three consecutive data points for Participant #1 that demonstrated an increase of 20% or more over the baseline mean for engagement, the intervention was implemented for the next participant (Participant #2). This same process was completed for Participant #3.

Intervention phase. During the intervention phase, participants engaged in eight CCPT sessions with the school counselor. Data on classroom behaviors BOSS were collected for each participant three days per week at the same days and times as baseline. No data on the target behaviors were collected during the CCPT sessions.

Follow-up phase. After each participant completed his or her last CCPT session, his or her parent(s) and teacher completed a posttest of the SSIS-RS (Gresham & Elliott, 2008). The researcher also met with each participant to verbally-administer the student survey (Appendix E) for social validity. In addition, follow-up data using direct observation were collected after each participant's last CCPT session to examine the lasting effects of CCPT. Although it was intended for follow-up data to be collected on all participants for five consecutive observation sessions two weeks after each of their last CCPT sessions, this could not be completed due to time constraints at the end of the school year. Instead, follow-up data were collected as intended only for Participant #1. Follow-up data could only be collected for two observation sessions continuously (not two weeks later) after the last CCPT session for Participant #2. Because the school year was ending, follow-up data were collected for two observation sessions immediately following the intervention rather than waiting two weeks. Follow-up data could not be collected

for Participant #3. Follow-up data for Participants #1 and #2 were collected at the same days and times and using the same method as during the baseline and intervention phases.

Data Analysis

The research questions were addressed using various methods of analysis. Research question #1 (classroom behaviors) was addressed using two different methods: (1) visual analysis of graphed observational data (research questions 1a and 1b); and (2) calculating the reliable change index (RCI) between pretest and posttest measures of the teacher rating scales (research questions 1c and 1d). Research questions #2a and b (behaviors at home) were addressed using only the RCI based on parent rating scales.

Visual analysis. As the data from classroom observations were collected during all phases, the behaviors recorded on the BOSS (see Appendix H) were graphed and analyzed continually throughout the study (Kennedy, 2005). Both engagement (on-task) and nonengagement (off-task) behaviors observed during each data collection session were plotted on graphs for each participant. The data points for engagement included the percentage of intervals in which AET or PET occurred. To calculate this percentage, the number of intervals in which AET or PET occurred was divided by the total number of possible intervals (48) during which the actual participant (as opposed to a peer) was observed, and multiplied by 100. The total number of possible intervals is 48 because the 15-minute observation divided into 15-second intervals yielded a total of 60 minus 12 intervals reserved for peer comparison. The data points for nonengagement or off-task behaviors included the percentage of intervals in which one or more of the off-task behaviors (OFT-V, OFT-M, and OFT-O) occurred. To calculate this percentage, the number of intervals in which one or more of the various types of off-task behaviors occurred were divided by the total number of possible intervals (48) during which the

participant was observed, and multiplied by 100. On-task behaviors (engagement) and off-task behaviors (nonengagement) were plotted on two separate data paths because they represent two different response classes.

Once data points were plotted, visual inspection was used to analyze specific types of patterns in the graphed data within and between all phases of the study, including the baseline, intervention, and follow-up (Kennedy, 2005). The purpose of visual analysis was to determine if a functional relation was established, and therefore, changes in classroom behavior can be attributed to the CCPT intervention. First, the researcher looked for within-phase patterns, including the *level* of the data. The *level* of the data was analyzed by calculating the mean within each phase, which allows for comparison across phases for each participant. Next, between-phase patterns were inspected by evaluating the *immediacy of effect* and the *overlap* of the data (Kennedy, 2005). The *immediacy of effect* is the rate at which changes occur in data patterns following a phase change. The What Works Clearinghouse reported that immediacy of effect should be calculated by finding the mean of the last three data points in baseline and the mean of the first three data points during the intervention phase, and then finding the difference between the two means (U.S. Department of Education, 2014). This aspect of between-phase patterns is generally referred to as rapid or slow. The more rapid the immediacy of effect, the more convincing the functional relation. *Overlap* refers to the degree to which adjacent phases share similar data points. The smaller the percentage of overlapping data points, the more demonstrative the effect (U.S. Department of Education, 2014)

Reliable change index. In addition to visual analysis of direct observational data, the researcher also used pretest and posttest teacher ratings on the SSIS-RS (Gresham & Elliott, 2008) to measure the effect of CCPT on classroom behavior before and after CCPT treatment

(research question #1c and #1d). In addition, pretest and posttest parent ratings on the SSIS-RS were used to measure the effect of CCPT on behavior at home before and after CCPT treatment (research question #2a and #2b). The Reliable Change Index (RCI; Jacobson & Truax, 1991) was used to analyze changes between pretest and posttest scores for each participant on the parent and teacher SSIS-RS. The RCI was calculated using the following formula:

$$RCI = X_{\text{post}} - X_{\text{pre}} / S_{\text{diff}}$$

where X_{post} and X_{pre} represent posttest and pretest ratings and S_{diff} represents the Standard Error of the Difference between the two test scores, which was calculated using the following formula:

$$S_{\text{diff}} = \text{SQRT}(2(\text{SE})^2)$$

where SE represents the Standard Error of Measurement (SEM) which was calculated using the following formula:

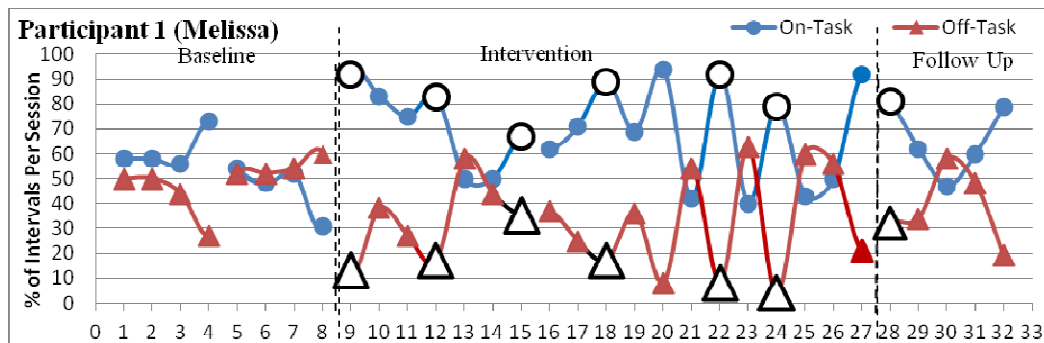
$$SE = SD_1 \text{ SQRT}(1 - r_{xx})$$

where SD_1 represents the Standard Deviation (SD) of the sample at Time 1, and r_{xx} represents the Test-Retest reliability coefficient of the measure (i.e., *SSIS-RS*: Social Skills Scale or Problem Behaviors Scale). Based on this formula, an RCI greater than +/-1.96 is unlikely due to chance ($p < .05$). Positive RCIs indicate an increase in a particular score and negative RCIs indicate a decrease in a particular score. Therefore, it is expected that RCIs for the Social Skills scale of the SSIS-RS will be positive (increase) and RCIs for the Problem Behaviors scale will be negative (decrease).

Results

A multiple baseline design across participants was utilized to demonstrate a functional relation between the independent variable (CCPT) and the dependent variable (challenging behaviors). In addition to direct observation three days per week, the dependent variables also

were measured using rating scales (SSIS-RS) completed by parents and teachers before (pretest) and after (posttest) the CCPT intervention occurred and the potential effect was analyzed using the Reliable Change Index (RCI). Results of the direct observation data and pre- and posttest data are discussed in the remaining sections. For each participant, the overall means during the baseline phase were discussed first, then the immediacy of effect from baseline to intervention. Next, the overall means during the intervention phase were reviewed along with the means for the data collection sessions immediately following CCPT sessions. These data were separately reviewed to compare the differences between all of the observed behaviors over the course of the intervention phase with only those that immediately followed CCPT treatment. Next, the means assessed during the follow-up phase were discussed and compared with the means in the baseline and intervention phases. All of the presented direct observational data can be viewed in Figure 2.1 and Table 2.1. Lastly, the results of the SSIS-RS data completed by parents and teachers are presented (refer to tables 2.2, 2.3, and 2.4).



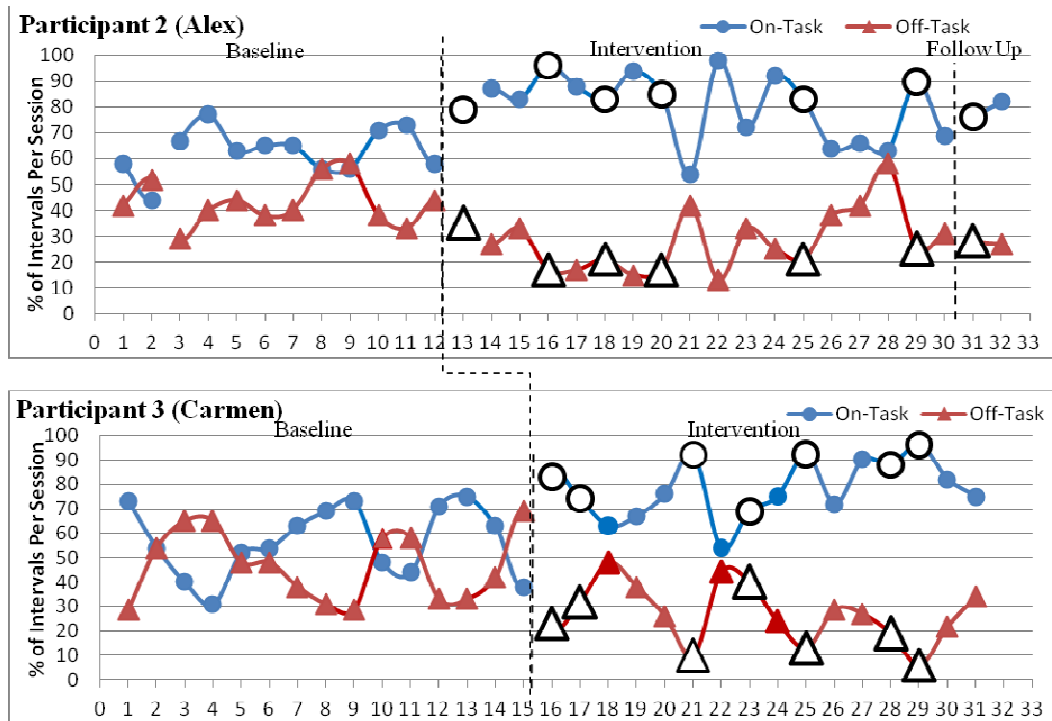


Figure 2.1 - Graph Illustrating Direct Observation Behaviors Across Participants. Open circles and triangles represent data points following CCPT sessions.

Table 2.1 - Mean percentages of direct observational data across phases and participants

	ON-TASK BEHAVIORS			OFF-TASK BEHAVIORS		
	Overall Means			Overall Means		
	Baseline	Intervention	Follow-Up	Baseline	Intervention	Follow-Up
Melissa	53.75	69.63	65.80	48.63	32.68	38.20
Alex	62.75	80.33	79.00	42.83	28.33	27.50
Carmen	56.53	78.00	---	46.67	27.19	---
	Overlap			Overlap		
	Baseline - Intervention			Baseline - Intervention		
Melissa	52%			42%		

Alex	28%		44%	
Carmen	50%		44%	
	Immediacy of Effect*		Immediacy of Effect*	
	<i>Baseline</i>	<i>Intervention</i>	<i>Baseline</i>	<i>Intervention</i>
Melissa	43.67	83.33	55.33	26.00
Alex	67.33	83.00	38.33	31.67
Carmen	58.67	73.33	48.00	34.33
	Mean of Data Immediately after CCPT Sessions		Mean of Data Immediately after CCPT Sessions	
	<i>Intervention</i>		<i>Intervention</i>	
Melissa	83.29		18.00	
Alex	85.47		23.43	
Carmen	84.85		20.42	

**Immediacy of Effect compares the mean of the last three data points in baseline and the mean of the first three data points in the intervention phase*

Participant 1: Melissa

Results of the direct observational data for Melissa can be viewed in Figure 2.1 and Table 2.1. During baseline, the mean percentage of intervals for on-task behavior for Melissa was 53.75% (range, 31 to 73%). Melissa was off-task for a mean of 48.63% of the intervals (range, 27-60%). Data were considered stable (within 50% of the mean) with no outliers identified (all points were within the range of 27-81% for on-task behaviors and 24-73% for off-task behaviors). Following eight baseline observations, Melissa started the CCPT sessions. A rapid immediacy of effect was noted, as there was an initial change in both on-task and off-task behavior following introduction of the intervention. On-task behaviors increased from 44% (mean of last three baseline data points) to 83% (mean of the first three intervention data points). Using the same calculation, off-task behaviors decreased from 55% to 26%.

During the intervention phase (19 data sessions), Melissa was on-task for a mean of 69.63% intervals (range, 40 to 94%). Melissa demonstrated off-task behaviors for a mean of 32.68% (range, 4 to 63%). These results indicate a 16% increase in on-task behaviors and a 16%

decrease of off-task behaviors between the means of the baseline and intervention phases. Fifty-three percent of the data points overlap between baseline and intervention for on-task and off-task behaviors. When only considering the data points that immediately followed an intervention (CCPT) session (open circles and triangles), Melissa demonstrated on-task behaviors for a mean of 83.29% (range, 67-92%) and off-task behaviors for a mean of 18% (range, 4-35%). These results indicate a 30% increase in on-task behaviors and a 31% decrease in off-task behaviors compared to the baseline mean for data collection sessions immediately following CCPT sessions.

Follow-up data (five data points) collected two weeks after the eighth and last intervention (CCPT) session indicated a mean of 65.8% of the intervals (range, 47 to 81%) for on-task behavior and a mean of 38.2% of the intervals (range, 19 to 58%) for off-task behavior. Although there was a slight decrease of 4% in on-task behavior and an increase of 6% in off-task behavior between the intervention and follow-up phases, Melissa still continued to demonstrate improvement over her baseline means. Comparing the follow-up means to the baseline means, Melissa exhibited an increase of 12% in on-task behavior and a decrease of 10% in off-task behaviors.

Table 2.2 - Reliable Change Index (RCI) Values for Participant #1 (Melissa)

SSIS-RS Scales	Parent Ratings			Teacher Ratings		
	Pretest	Posttest	RCI	Pretest	Posttest	RCI
Social Skills	95	109	4.68*	57	73	1.30
Communication	16	18	1.52	10	13	1.35
Cooperation	13	16	3.11*	9	10	0.51
Assertion	17	17	0.00	8	10	0.82
Responsibility	11	14	4.63*	5	8	1.02
Empathy	15	16	0.71	1	5	1.03
Engagement	13	16	4.33*	6	10	1.67

Self-Control	9	14	2.18*	4	8	1.23
Problem Behaviors	125	118	-8.99*	114	121	2.66*
Externalizing	15	13	-6.12*	17	16	-0.24
Bullying	5	5	0.00	4	3	-0.41
Hyper/Inattention	12	10	-3.54*	11	12	0.50
Internalizing	6	5	-0.58	0	4	1.76

*Indicates a statistically significant RCI value of + or - 1.96

Changes in behavior also were measured using the Social Skills Intervention System - Rating Scales (SSIS-RS). Melissa's father and teacher each completed the SSIS-RS before Melissa began CCPT treatment in January 2014 and again after Melissa ended CCPT treatment in May 2014. The Reliable Change Index (RCI) was calculated to determine the extent of difference between parent-completed pretest and posttest data. This analysis resulted in a significant RCI value of 4.68 on the Social Skills Scale and -8.99 on the Problem Behaviors Scale (refer to Table 2.2 for results of parent and teacher ratings for Melissa). These results indicate that Melissa's father viewed Melissa as having a significant increase of Social Skills and decrease of Problem Behaviors in her home environment. Significant scores also were noted on the Cooperation (RCI = 3.11), Responsibility (RCI = 4.63), Engagement (RCI = 4.33), and Self-Control (RCI = 2.18) subscales of the Social Skills Scale and on the Externalizing (RCI = -6.12) and Hyperactivity/Inattention (RCI = -3.54) subscales of the Problem Behaviors Scale. Ratings by Melissa's teacher only indicated one significant score on the Problem Behaviors Scale with an RCI value of 2.66, which indicates that her teacher viewed Melissa as having a significant increase of problem behaviors between pretest and posttest. Although the overall standard score of the teacher-completed Social Skills Scale increased from 57 to 73, the RCI value (1.30) did not indicate a significant change.

Participant 2: Alex

Results of the direct observational data for Alex can be viewed in Figure 2.1 and Table 2.1. During baseline, the mean percentage of intervals for on-task behavior for Alex was 62.75% (range, 44 to 77%). Alex was off-task for a mean of 42.83% of the intervals (range, 29-58%). Data were considered stable (within 50% of the mean) with no outliers identified (all points were within the range of 32-94% for on-task behaviors and 22-64% for off-task behaviors). Following 12 baseline observations, Alex started the CCPT sessions. A moderate immediacy of effect was noted, as there was an initial change in both on-task and off-task behavior following introduction of the intervention. On-task behaviors increased from 67% (mean of last three baseline data points) to 83% (mean of the first three intervention data points). Using the same calculation, off-task behaviors decreased from 38% to 31%.

During the intervention phase (18 data sessions), Alex was on-task for a mean of 80.33% intervals (range, 54 to 98%). Alex demonstrated off-task behaviors for a mean of 28.33% intervals (range, 13 to 58%). These results indicate an 18% increase in on-task behaviors and a 15% decrease in off-task behaviors between the means of the baseline and intervention phases. Only 33% of the data points overlap between baseline and intervention for on-task behaviors and 44% for off-task behaviors. When only considering the data points that immediately followed an intervention (CCPT) session (open circles and triangles), Alex demonstrated on-task behaviors for a mean of 84.57% intervals (range, 79-90%) and off-task behaviors for a mean of 23.43% intervals (range, 17-35%). Compared to the baseline mean, these results indicate a 22% increase in on-task behaviors and a 19% decrease in off-task behaviors during data sessions that immediately followed CCPT sessions.

Due to a lack of time to collect follow-up data two weeks after intervention, follow-up data for Alex were collected immediately following the intervention phase. After the eighth and

final CCPT session, two more data points were collected to determine the effect of CCPT treatment. The two data points that immediately followed treatment for Alex resulted in on-task behaviors for 76% and 82% (mean of 79%) of the observation intervals and off-task behavior for 28% and 27% (mean of 27.5%) of the intervals. Although there was a slight decrease of 1% in on-task behavior between the intervention and follow-up phases, Alex exhibited a 16% increase compared to the baseline mean. Alex demonstrated a total 15% decrease in off-task behaviors between the baseline and follow-up phases, with 1% of the decrease between intervention and follow-up.

Changes in behavior also were measured using the Social Skills Intervention System - Rating Scales (SSIS-RS). Alex's father and teacher each completed the SSIS-RS before Alex began CCPT treatment in February 2014 and again after Alex ended CCPT treatment in May 2014. The Reliable Change Index (RCI) was calculated to determine the extent of difference between parent-completed pre- and post-data and resulted in a significant RCI value of 9.02 on the Social Skills Scale and -35.95 on the Problem Behaviors Scale (refer to Table 2.3 for results of parent and teacher ratings of Alex's behaviors). These results indicate that Alex's father viewed Alex as having a significant increase of Social Skills and decrease of Problem Behaviors in his home environment. Significant scores also were noted on the Communication (RCI = 3.8), Cooperation (RCI = 2.07), Assertion (RCI = 4.71), Responsibility (RCI = 6.17), Empathy (RCI = 4.24), Engagement (RCI = 10.10), and Self-Control (RCI = 2.18) subscales of the Social Skills Scale and on the Externalizing (RCI = -27.56), Bullying (RCI = -15.31), Hyperactivity/Inattention (RCI = -12.37), and Internalizing (RCI = -4.05) subscales of the Problem Behaviors Scale. Ratings by Alex's teacher only indicated one significant score on the Responsibility subscale of the Social Skills Scale with an RCI value of -2.04, which indicates

that his teacher viewed Alex as having a significant decrease of social skills in this specific area between pretest and posttest. Although the overall standard score of the teacher-completed Problem Behaviors Scale decreased from 123 to 119, the RCI value (-1.52) did not indicate a significant change.

Table 2.3 - Reliable Change Index (RCI) Values for Participant #2 (Alex)

SSIS-RS Scales	Parent Ratings			Teacher Ratings		
	Pretest	Posttest	RCI	Pretest	Posttest	RCI
Social Skills	87	114	9.02*	92	80	-0.98
Communication	13	18	3.80*	15	14	-0.45
Cooperation	11	13	2.07*	4	4	0.00
Assertion	15	19	4.71*	14	11	-1.23
Responsibility	9	13	6.17*	11	5	-2.04*
Empathy	11	17	4.24*	10	5	-1.28
Engagement	13	20	10.10*	12	10	-0.84
Self-Control	9	14	2.18*	12	10	-0.61
Problem Behaviors	128	100	-35.95*	123	119	-1.52
Externalizing	16	7	-27.56*	21	20	-0.24
Bullying	5	0	-15.31*	7	6	-0.41
Hyper/Inattention	13	6	-12.37*	15	14	-0.50
Internalizing	10	3	-4.05*	5	3	-0.88

*Indicates a statistically significant RCI value of + or - 1.96

Participant 3: Carmen

Results of the direct observational data for Carmen can be viewed in Figure 2.1 and Table 2.1. During baseline, the mean percentage of intervals for on-task behavior for Carmen was 56.53% (range, 31 to 75%). Carmen was off-task for a mean of 46.67% of the intervals (range, 29-69%). Data were considered stable (within 50% of the mean) with no outliers identified (all points were within the range of 29-84% for on-task behaviors and 24-70% for off-task behaviors). Following 15 baseline observations, Carmen started the CCPT sessions. A rapid immediacy of effect was noted, as there was an initial change in both on-task and off-task behavior following introduction of the intervention. On-task behaviors increased from 58.67%

(mean of last three baseline data points) to 73.33% (mean of the first three intervention data points). Using the same calculation, off-task behaviors decreased from 48% to 34.33%.

During the intervention phase (16 data points), Carmen was on-task for a mean of 78% of the intervals (range, 54 to 96%). Carmen demonstrated off-task behaviors for a mean of 27.19% of the intervals (range, 6 to 48%). These results indicate a 21.47% increase in on-task behaviors and a 19.48% decrease in off-task behaviors between the means of the baseline and intervention phases. Fifty percent of the data points overlap between baseline and intervention for on-task behaviors and 44% for off-task behaviors. When only considering the data points that immediately followed an intervention (CCPT) session (open circles and triangles), Carmen demonstrated on-task behaviors for a mean of 84.85% of the intervals (range, 69-96%) and off-task behaviors for a mean of 20.42% of the intervals (range, 6-40%). These results indicate a 28% increase in on-task behaviors and a 26% decrease in off-task behaviors compared to the baseline means. Due to a lack of time before the school year ended, follow-up data were not collected for Carmen.

Changes in behavior also were measured using the Social Skills Intervention System - Rating Scales (SSIS-RS). Carmen's mother and teacher each completed the SSIS-RS before Carmen began CCPT treatment in February 2014 and again after Carmen ended CCPT treatment in May 2014. The Reliable Change Index (RCI) was calculated to determine the extent of difference between parent-completed pre- and post-data and resulted in a significant RCI value of 2.67 on the Social Skills Scale and -5.14 on the Problem Behaviors Scale (refer to Table 2.4 for results of parent and teacher ratings of Carmen's behaviors). These results indicate that Carmen's mother viewed Carmen as having a significant increase of Social Skills and decrease of Problem Behaviors in her home environment. Significant scores also were noted on the

Cooperation (RCI = 3.11) and Responsibility (RCI = 4.63) subscales of the Social Skills Scale and on the Externalizing (RCI = -9.19) and Bullying (RCI = -3.06) subscales of the Problem Behaviors Scale. Ratings by Carmen's teacher did not indicate any significant changes. Her ratings indicated a slight decrease in social skills (pretest standard score = 93; posttest standard score = 85) and a slight increase in problem behaviors (pretest standard score = 118; posttest standard score = 121).

Table 2.4 - Reliable Change Index (RCI) Values for Participant #3 (Carmen)

SSIS-RS Scales	Parent Ratings			Teacher Ratings		
	Pretest	Posttest	RCI	Pretest	Posttest	RCI
Social Skills	97	105	2.67*	93	85	-0.65
Communication	17	17	0.00	16	13	-1.35
Cooperation	10	13	3.11*	11	10	-0.51
Assertion	17	18	1.18	10	11	0.41
Responsibility	10	13	4.63*	15	11	-1.36
Empathy	13	14	0.71	11	10	-0.26
Engagement	15	15	0.00	13	11	-0.84
Self-Control	15	16	0.44	14	14	0.00
Problem Behaviors	127	123	-5.14*	118	121	1.14
Externalizing	16	13	-9.19*	6	8	0.49
Bullying	4	3	-3.06*	0	1	0.41
Hyper/Inattention	11	11	0.00	8	10	1.01
Internalizing	10	9	-0.58	11	10	-0.44

*Indicates a statistically significant RCI value of + or - 1.96

Social validity

The degree to which participants found the CCPT intervention acceptable was assessed through a student survey (see Appendix E) after each of their last CCPT sessions in May 2014. The researcher verbally-administered the survey, which included questions about participants' perceptions and experiences with CCPT. All three of the participants agreed that they enjoyed going to the playroom with the school counselor and felt happy during and after the sessions.

Participants reported a variety of specific reasons for what they liked best about the CCPT sessions, such as "the doggie" or "a pretend phone," but overall indicated that they liked playing with the toys and being with the counselor. Before starting the CCPT sessions, the participants reported that they had difficulty in the classroom doing work and some indicated that they felt "worried" or "sad." After all of their CCPT sessions, all of the participants reported that they had an easier time doing work and felt happier or "not scared anymore." These results indicate that participants viewed CCPT as a positive experience and would be likely to engage in CCPT in the future.

Discussion

Although the play therapy literature includes numerous studies with significant results across many outcome areas, many researchers have not utilized a research design with strong methodological components or assessed the treatment integrity of CCPT. This has led to criticism about play therapy research and the validity of the findings (Phillips, 2010; Urquiza, 2010). This study provides a unique contribution to the literature because there have been few studies that have investigated the effects of CCPT using a strong research design and highly controlled methodological components (Blanco & Ray, 2011; Bratton et al., 2013; Ray, 2007; Ray et al., 2007; 2009; Schottelkorb, Dumas, & Garcia, 2012). CCPT researchers have suggested using a single-case design, which may be more feasible to demonstrate effectiveness without a control group or a large number of participants (Ray & Schottelkorb, 2010). A single-case design demonstrates direct evidence of improved functioning through observation, provides individual as opposed to group data that can demonstrate cause and effect, and incorporates a unique design in which participants serve as their own control (Kennedy, 2005).

Although a single-case design has been utilized by at least one previous CCPT research study (Schottelkorb & Ray, 2009), the design was flawed in demonstrating the effectiveness of the intervention according to WWC standards (U.S. Department of Education, 2014). The researchers alternated CCPT with another intervention. There were not four or more attempts to demonstrate effects over time and the CCPT treatment alone was not replicated. Also, due to the nature of CCPT having lasting effects that may carry-over from one phase to the next, the specific type of SCD that was used was not appropriate because the results could have been confounded. It is difficult to determine whether observed effects were due to the CCPT, another intervention, or both.

The researcher in this particular study utilized a single-case design and the essential skills of CCPT were implemented and assessed using a treatment integrity form adapted from Ray's (2011) CCPT treatment manual and checklist. Evidence-based criteria from the What Works Clearinghouse (WWC) were used to strengthen methodological components of the single-case multiple baseline design (U.S. Department of Education, 2014). Using strong research components, this study sought to determine whether there is a functional relation between CCPT and the improvement of challenging behaviors at home and school.

Research Question #1: Behaviors at School

The first research question investigated to what extent CCPT improved behaviors at school using direct observation of behavior and teacher-completed rating scales. The direct observational data specifically measured on-task/off-task behaviors and the teacher-completed rating scales measured social skills and challenging behaviors.

Direct observational data. Visual analysis of direct observational data indicated that a functional relation was established in which an increase of on-task behaviors and a decrease of

off-task behaviors were observed as soon as each participant started CCPT treatment, while the participant(s) who remained in baseline continued to demonstrate a lower percentage of on-task intervals and a higher percentage of off-task intervals (refer to Figure 2.1). A functional relation between CCPT and classroom behaviors was further demonstrated by: (a) improvement in behaviors from baseline to intervention for all participants, including overall means and a separation of data paths; (b) rapid immediacy of effects between baseline and intervention; and (c) continued improvement in follow-up.

Improvement from baseline to intervention. Direct observation of classroom behaviors indicate an overall increase in the percentage of intervals of on-task behaviors and a decrease in the percentage of intervals of off-task behaviors compared to the baseline mean (refer to Table 2.1). Compared to the baseline mean, the mean percentage of intervals of on-task behaviors after eight CCPT sessions increased by 15.88% (Melissa), 17.58% (Alex), and 21.47% (Carmen). The percentage of intervals of off-task behaviors decreased by 15.95% (Melissa), 14.5% (Alex), and 19.48% (Carmen).

These results indicate that eight sessions of CCPT were effective in improving classroom behavior based on direct observation. Although these results are consistent with other studies that demonstrated an improvement in challenging behaviors at school after CCPT treatment (Bratton et al., 2013; Garza & Bratton, 2005; Kot et al., 1998; Muro et al., 2006; Ray, 2008; Ray et al., 2009; Tyndall-Lind et al., 2001), many of these studies have used pre-experimental designs, have not assessed for treatment integrity, and/or have relied on the ratings of teachers or parents to measure the outcome. This study is unique in utilizing a strong research design with observational data collected frequently to directly examine the impact of CCPT on classroom behaviors. No other studies that have demonstrated significant results for CCPT on externalizing

behaviors have used direct observational data. In addition, the other single-case design study in the CCPT literature has a flawed design that does not effectively demonstrated the effectiveness of CCPT (Schottelkorb & Ray, 2009).

A functional relation was further demonstrated by the separation of data paths between the percentage of intervals of on-task and off-task behaviors during baseline compared to the intervention phase. For both Alex and Carmen, the baseline data paths for on-task behaviors and off-task behaviors are overlapping and variable with narrow gaps between the two paths. During the intervention phase for these participants, the on-task and off-task data paths separate completely and the gap between the two paths widened. These results indicate that Alex and Carmen's behaviors are very variable during baseline; however, become more distinct during the intervention phase in increasing on-task behaviors and decreasing off-task behaviors. Data for Melissa demonstrate on-task and off-task data paths that are sometimes flat and touching during baseline, then become more extreme during the intervention phase. Thus, the gap between the data paths widened, demonstrating increasing on-task behaviors and decreasing off-task behaviors.

Immediacy of effect. A functional relation also was established between CCPT and challenging behaviors by the immediacy of the CCPT effects demonstrated by the data (refer to Table 2.1). As stated in the What Works Clearinghouse evidence-based pilot standards for single-case designs, the *immediacy of effect* is measured by comparing the mean of the last three baseline data points with the mean of the first three intervention data points (U.S. Department of Education, 2014). The immediacy of effect is rapid for Melissa, whose on-task behaviors increased by 39.63% of the intervals between the week before (baseline) and the week after the first CCPT session (intervention). During that same time frame, the intervals of off-task

behaviors for Melissa decreased by 29.33%. Although the immediacy of effect was not as rapid for Alex and Carmen, there was an increase of on-task behaviors by 15.67% of the intervals for Alex and 14.66% of the intervals for Carmen, and a decrease in off-task behaviors by 6.67% and 13.67% of the intervals, respectively.

The immediate effects of CCPT also were demonstrated by the data collected immediately after each intervention session throughout the study (refer to Figure 2.1 and Table 2.1). The observation/data collection session immediately following each CCPT session was marked differently to determine if there was a difference in behaviors immediately following the intervention. Results indicate that all participants demonstrated the most improvement in the percentage of intervals of on-task and off-task behaviors when considering only the mean of data collection sessions directly following a CCPT session. Perhaps by participating in CCPT sessions for a longer period of time, there may be a greater impact on students' classroom behaviors.

The immediacy of CCPT effects has not been measured in previous CCPT studies due to the nature of pretest/posttest designs using rating scales. Several researchers have attempted to measure the effects of CCPT during treatment by assessing progress through rating scales mid-study in addition to pretest and posttest (Blanco et al., 2012; Muro et al., 2006). Their results indicated slow progress throughout the duration of treatment with insignificant results between pretest and mid-study, as well as between mid-study and posttest. This is consistent with the results of this study showing improvement over the course of treatment; however, it is in contrast with the immediacy of CCPT effects demonstrated in this study. Although CCPT researchers have taken steps at assessing effects during treatment, these previous studies have used pre-experimental designs (no control group), relied on parent and teacher ratings to measure

outcome, and have not directly followed the effects throughout the study. A single-case design allowed the researcher of this study to provide a more accurate and controlled way to directly measure behavior throughout the study and examine the immediacy of CCPT effects. These results provide interesting insight into how quickly CCPT may take effect in improving behavior and should be further explored in future studies.

Follow-Up Data. Further evidence for a functional relation was provided by follow-up data that continued to demonstrate improvement in the percentage of intervals of on-task and off-task behaviors. Although follow-up data collected for Melissa and Alex show a slight decrease in the percentage of on-task behavior intervals compared to the intervention means, these data still demonstrate an improvement over the baseline means. Data for Melissa demonstrate an increase in the percentage of intervals of off-task/challenging behaviors from intervention to follow-up; however, the data still show improvement from baseline to follow-up. Alex's percentage of intervals of off-task behavior decreased between intervention and follow-up. However, data collected for Alex during the follow-up phase consisted of data sessions immediately following the last CCPT session, and therefore, do not accurately reflect the effects of CCPT several weeks after termination of treatment.

The findings from Melissa's follow-up data suggest that CCPT can have some continued effects on on-task and off-task behaviors once the intervention is terminated. This study is very similar to many other studies in assessing the effects of CCPT shortly after the treatment has ended, such as many of the pretest/posttest group designs that have been conducted and discussed. CCPT researchers have yet to conduct longitudinal studies that explore the effects of CCPT months or years after the treatment has ended. This is an area of CCPT research that needs to be further explored.

Teacher-completed rating scales. In addition to direct observation, data were collected through teacher-completed rating scales before (pretest) and after (posttest) the eight sessions of CCPT to address the other part of the first research question, the effects on increasing social skills and decreasing challenging behaviors. Although Melissa's teacher's ratings indicate an improvement in social skills and ratings by Alex's teacher indicate a decrease in challenging behaviors, these results were not significant (i.e., $RCI = \pm 1.96$). The remaining results revealed contradictory outcomes. Melissa's teacher's ratings suggest a significant increase in challenging behaviors. Alex's and Carmen's teachers rated them as having a decrease in social skills overall; however, these results are not significant. Ratings by Carmen's teacher also indicate that Carmen's challenging behaviors increased. These findings are in contrast to other pretest/posttest studies in which teacher-completed rating scales were utilized and results were significant for CCPT in reducing aggressive behaviors, ADHD characteristics, and total behavioral problems for students (Bratton et al., 2013; Muro et al., 2006).

There are several implications related to the results of the teacher-completed pretest/posttest data contrasting with previous studies as well as the direct observational data collected in this study. First, due to the timing of the study, the posttest rating scales were completed during the last two weeks of the school year. Therefore, the students were engaged in more frequent unstructured activities or other activities that were not part of the typical schedule. This may have allowed for more occurrences of challenging behavior that were not as apparent during the middle of the school year when pretests were completed. However, because increased challenging behaviors were not observed at the end of the year through direct observational data, another aspect for the incongruence of the data is that teacher perceptions may play a major role in influencing the results.

Therefore, the second implication is that teachers' ratings may be heavily weighted towards their attitude about the student or by their lack of understanding about his or her behaviors. This is consistent with other studies on teacher attitudes (not specific to CCPT) that indicate that teacher perceptions about students with challenging behavior may be difficult to change (Lewin, Nelson, & Tollefson, 1983; Poulou & Norwich, 2002; Safran & Safran, 1985). In addition, teacher ratings may have been biased by the most recent student behavior at the immediate time of completion. It may be beneficial to gain more insight into the attitudes of teachers and their perceptions about their students in addition to completing rating scales on student behavior. Researchers and practitioners may want to consider utilizing the optional consultation aspect mentioned in the CCPT treatment manual to engage in ongoing consultative sessions with teachers about student behavior (Ray, 2011).

A third implication related to the contrasting results between direct observational data and teacher-completed rating scales is related to the validity of using teacher ratings as the sole outcome measure to demonstrated effects. The majority of the studies within the CCPT literature have relied on rating scales alone to assess the effects of CCPT. A few studies that have found significant results for other outcome domains, such as academic achievement and internalizing behaviors, have utilized standardized achievement tests and a direct interview/coding system for self-concept, respectively (Baggerly, 2004; Blanco & Ray, 2011; Blanco et al., 2012; Kot et al., 1998; Tyndall-Lind et al., 2001). However, this is the first study that investigated the effect of CCPT on externalizing behaviors using rating scales in conjunction with direct observation. The contrasting results between behaviors that were observed directly by a trained researcher and behaviors that were rated by teachers highlight the importance of using direct observation to measure the outcome.

Research Question #2: Behaviors at Home

The purpose of the second research question was to determine the effects of CCPT on increasing social skills and decreasing challenging behaviors at home based on parent-completed rating scales. The results are dramatically different from the results of the teacher-completed rating scales. Parent ratings indicate a significant increase of social skills and a significant decrease of challenging behaviors for all participants. These findings are consistent with other studies in which parent ratings indicated significant improvement in externalizing behaviors (Dutta & Mehta, 2006; Garza & Bratton, 2005; Kot et al., 1998; Ray, 2008; Ray et al., 2009; Tyndall-Lind et al., 2001). The results of parent-completed rating scales may indicate that the effects of CCPT generalized to the home environment. It is possible that the therapeutic nature of CCPT allowed for participants to work out conflicts related to their environment and relationships with family members, resulting in an improvement in behavior. However, this evidence needs to be strengthened by supplementing the data with direct observations in the home environment.

Limitations of the Study

Although results of this study indicate promising results about the effects of CCPT, there were several limitations. First, as mentioned previously, this study was conducted during the last half of the school year, during which there were several periods of unforeseen inclement winter weather. The days the school was closed during two separate weeks caused a break in data collection for all participants and a break in intervention for Melissa and Alex. These breaks helped to create time constraints in finishing the study by the end of the school year. During the last 3 weeks of the school year (May 2014), the students were engaged in many fun-filled activities that were not part of the typical school day, such as field trips, assemblies, field days,

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and visits by people in the community. These activities caused changes in the typical classroom schedule, which resulted in some data collection that was either at a different day or time, or during a different activity than what was observed throughout the majority of the study. These factors may have contributed to some variable or inconsistent data and may have affected teacher ratings.

Another limitation is that although CCPT was intended to be implemented for 30 minutes once per week over an eight-week period, this could not be done. As mentioned in the Method section, the video-recorded play therapy sessions on average were 23 minutes for Melissa and Alex, and 21 minutes for Carmen. Melissa received CCPT over the eight week period; however, Alex and Carmen's eight CCPT sessions had to be squeezed into a six-week period. In addition, CCPT sessions did not always occur once per week. There were some weeks during which a participant did not engage in treatment at all and some weeks during which a participant engaged in two CCPT sessions. Part of the reason for this inconsistency is due to the nature of conducting research in an applied setting, such as a school. The school counselor conducting the CCPT sessions is the only counselor in the building and had many responsibilities that competed with implementing CCPT. In addition, as mentioned previously, there were many days in which the school was closed due to inclement weather, which decreased the amount of time for the counselor to address all the tasks and requirements in her workload.

Future Directions for Research

Researchers conducting future CCPT studies should continue to utilize strong research designs, ensure fidelity to treatment, and use direct observation to measure the outcome. This will help build the CCPT research base with high quality studies to provide the evidence needed to demonstrate the effectiveness of play therapy. Researchers should consider replicating this

study with several changes. First, the study should start at the beginning of the school year to allow for plenty of time for data collection and implementing the intervention. Second, it also may be beneficial to increase the number of CCPT sessions either over a longer period of time or increasing the number of sessions per week.

Although the results of this study demonstrated promising effects for CCPT on classroom behaviors with eight sessions, CCPT has shown to be more effective with increased sessions (Muro et al., 2006). Many CCPT researchers have conducted studies that have implemented 16 sessions and found significant results for improving challenging behaviors; however, many of these studies used pre-experimental designs (Muro et al., 2006; Ray, 2008) or did not assess for treatment integrity (Kot et al., 1998; Tyndall-Lind et al., 2001). In addition, rating scales have been utilized as the only measures of the outcome, even in studies using strong research designs and methodology (Bratton et al., 2013). Therefore, it would be interesting to investigate if similar results would be obtained using a multiple baseline single-case design with a higher frequency of CCPT sessions and direct observation to measure the outcome.

CCPT researchers also need to take other steps to improve the research base. First, instruments for assessing treatment integrity need to be developed and researched and validated. To date, the majority of researchers who have assessed treatment integrity have utilized the Play Therapy Skills Checklist (PTSC; Ray, 2011). Although the PTSC provides the essential skills of CCPT, it is fairly vague and subjective and may create validity issues. The researcher in this study expanded on the PTSC to create a treatment integrity form that included more concrete and objective items. CCPT researchers should continue to modify existing treatment integrity forms or create new forms that follow Ray's CCPT treatment manual and specific CCPT skills (Ray, 2011). Researchers should focus specifically on the development of a CCPT treatment integrity

form that demonstrates strong psychometric properties to be used in future studies to ensure that CCPT is being implemented as intended.

A second area that is limited in the research base is defining the actual process of play therapy and which components or behaviors contribute to change. CCPT is based on Rogers' theories of client-centered therapy, in which change occurs through the unconditional positive regard and nondirectivity of the therapist along with feeling supported in a safe, therapeutic environment (Ray, 2011; Rogers 1940; 1951). These components or agents of change may be difficult to investigate. For example, in this study Melissa and Carmen both had personal challenges that may have led to significant internalizing issues, such as depression or anxiety. These possible issues may or may not have been assessed by measures in this study. Melissa lived with her father and had limited visitation with her mother at her mother's request. Carmen's brother passed away several months before the study due to a terminal illness. It is possible that she was still dealing with grief throughout the study. Although some of these issues may have manifested in off-task or challenging behaviors, these students' internalizing issues may help to explain some inconsistency in the data. It would be interesting to analyze Melissa and Carmen's themes in play over time, specific therapist-child interactions, and how these may relate to change in their behaviors. Through qualitative studies, some researchers have begun to investigate the process of CCPT, including therapeutic stages, play therapist skills, and play themes, and their effects on outcomes (Cochran, Cochran, Cholette, & Nordling, 2011; Cochran, Cochran, Fuss, & Nordling, 2010; Cochran, Cochran, Nordling, McAdam, & Miller, 2010; Ryan & Edge, 2012; Schottelkorb, Swan, Garcia, Gale, & Bradley, 2014). Future research studies should continue to look at the various processes of CCPT using strong research designs with mixed methods approaches to investigate the relationship between effectiveness and process.

Practical Implications

This study indicated promising results for an intervention that can be used in the school-setting to improve classroom behavior in as few as eight sessions. Other researchers that have investigated the effects of CCPT on challenging behaviors within a school-setting have found statistically significant results after 14 sessions (Ray et al., 2009), 15 sessions (Garza & Bratton, 2005), 17 - 21 sessions (Bratton et al., 2013), and 32 sessions (Muro et al., 2006). Therefore, this study has practical significance in demonstrating that eight sessions may be enough to help struggling students at school in need of a behavioral intervention. This is especially important when considering that high-stakes academic testing has led to reluctance to remove students from the classroom for counseling or any type of mental health intervention (Brown, Galassi, & Akos, 2004; Dollarhide & Lemberger, 2006; Landreth, Ray, & Bratton, 2009). In addition, the school district in which the current study took place generally restricted counseling interventions to eight to 10 sessions, which appears to be reflective of the challenges that practitioners face across school settings (Landreth et al., 2009).

Results of this study also suggest the need for teacher consultation along with CCPT sessions. Based on previous studies indicating difficulty in changing teachers' perceptions about students with challenging behavior (Lewin et al., 1983; Poulou & Norwich, 2002; Safran & Safran, 1985), it has been recommended that school psychologists or school counselors practicing CCPT conduct teacher consultations on a monthly basis (Landreth et al., 2009; Ray, 2007; 2011). Consultation sessions are encouraged to support teachers, strengthen the relationship between the teacher and practitioner, listen to concerns, check in about changes in behaviors, help teachers understand the CCPT process, share the student's progress in CCPT, and reduce the stress related to the student's behaviors (Ray, 2007). In addition, Landreth and

colleagues (2009) recommended compiling a yearly evaluation report with visual graphs charting the behavioral progress of their student(s).

Conclusion

This study made valuable contributions to the literature by utilizing a strong research design and demonstrating promising findings for CCPT. The results yielded practical significance for implementing CCPT in the school setting for children with challenging behaviors in as few as eight sessions, and indicate the need for ongoing teacher consultation to supplement CCPT. Researchers conducting future studies should continue to utilize strong designs and methodological components and consider the use of mixed methods approaches to investigate the effectiveness and process of CCPT.

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APPENDICES

Appendix A: Parent Cover Letter

Dear <Names of Parent(s)>

<Name of child> has been invited to be a potential participant in a research study. The study will take place at <his or her> school. <Name of child> has been selected because <he or she> has been having some difficulty with behaviors in <his or her> classroom. This study may help improve those behaviors so that <Name of child> can be more successful at school.

If your child has your permission to participate and is chosen to be one of four students in the study, he or she will be told about the study. Your child then will be asked if he or she would like to be in it (child assent). If your child agrees, he or she will participate in 10 30-minute play therapy sessions with the school counselor, <Name of school counselor>. These will take place

over 10 weeks at your child's school. Play therapy sessions will not take place during important times, such as during Reading or Math.

I will be going into your child's classroom three days a week to see if play therapy is helping his or her behaviors. After the study is over, I will meet with your child to ask him or her several questions (student survey) to see how he or she thought and felt about play therapy sessions.

Play therapy is different from regular play because the counselor helps children as they are playing. Play is the natural way that children learn about themselves and their relationships in the world. It allows them to express thoughts and feelings in a way that is appropriate for their age. Children may learn to better communicate with others and express their feelings. They may also help their self-control, behavior, and academic performance.

This packet includes a parental permission form, student assent forms, and student survey form. The parental permission form will explain the study in more detail. It also includes mine and my faculty advisor's contact information if you have any questions. **If you wish to allow your child to participate, please read through the parental permission form, sign the bottom, and send it back by <deadline>.** You can return the signed form with your child to give to his or her teacher. You can also mail it in the provided envelope. The student assent and student survey forms are included so you can see what we will be asking your child. They are yours to keep.

I will let you know in writing whether or not your child is chosen to participate in the study. If he or she is chosen, I will be sending home a rating scale for you to complete and return at the beginning and end of the study. If your child is not chosen, the school counselor and other team members will find some ways to help with his or her behaviors. This may or may not include play therapy sessions.

Thank you,

Cori Wixson, Ed.S.

Doctoral Student in School Psychology

Georgia State University

Appendix B: Parental Permission Form

**Georgia State University
Department of Counseling and Psychological Services
Parental Permission Form**

Title: The Effectiveness of Child-Centered Play Therapy on the Challenging Behaviors of Early Elementary School Students

Principal Investigator (PI): Joel Meyers, Ph.D. (Faculty PI)
Cori Wixson, Ed.S. (Student PI)

I. Purpose:

Your child is invited to participate in a research study. The purpose of the study is to investigate the effectiveness of child-centered play therapy (CCPT) on the challenging behaviors of young

students at school. CCPT is used by school counselors to allow a child to express their feelings and thoughts through play. Your child is invited to participate because he or she has shown some behaviors in the classroom that may affect his or her ability to learn and be successful at school. A total of four participants will be recruited in this study. Participation will require 30 minutes a week of your child's time over a 10-week period.

II. Procedures:

If you decide to allow your child to participate, his or her classroom teacher will complete a rating scale and a short questionnaire to get more information about your child's behaviors. This information will be used to determine whether or not your child will actually be a participant in the study and receive CCPT sessions. You will be notified in writing to let you know whether or not your child was chosen to participate. If your child is chosen to participate, a rating scale will be sent home for you to complete on his or her behaviors at home. This should take approximately 10-15 minutes to complete. If your child was not chosen to participate, the school team will develop appropriate interventions for his or her behaviors. This may or may not include CCPT sessions.

If your child has your permission and is chosen to be a participant in this study, he or she will be told about the study by the student PI and asked if he or she would like to participate. If your child chooses to participate, he or she will engage in 10 CCPT sessions for 30 minutes per week for 10 weeks. These will be conducted at your child's school by the school counselor, who is trained in play therapy. Your child will not be involved in play therapy sessions during critical academic segments of the day (such as during Reading and Math).

For each CCPT session, the school counselor will use skills, such as empathy and genuineness, to develop a safe and supportive relationship with your child while he or she plays with the toys. This will help your child to feel comfortable in expressing his or her emotions and thoughts through play. This allows for personal growth in many areas. The CCPT sessions will be visually recorded for clinical supervision and to make sure that the school counselor is using important CCPT skills. Videotapes only will be viewed by the student principal investigator (PI), school counselor, and the school counselor's clinical supervisor. They will be locked in a cabinet in the school counselor's office and destroyed at the end of the study.

In order to figure out if CCPT is helping improve behaviors for each participant, the student PI will observe each of the participants in their classrooms doing normal activities. Your child will not know that he or she is the one being observed. Classroom activities will not be interrupted. These observations will take place for 30 minutes three days per week before, during, and after the 10-week CCPT intervention period. The CCPT intervention period will start and end at different points in time for each participant. The CCPT sessions will start for the first participant in January 2014 and will end for the last/fourth participant in April 2014. Observations will end for the last participant in May 2014.

After the CCPT sessions and observations have ended, the student PI will meet with your child for approximately 5 minutes and ask several questions to get a sense of his or her experiences with CCPT. Before asking any questions, the student PI will again ask your child if he or she is willing to complete the survey. In addition, the student PI will send home another rating scale

like the one you completed at the beginning of the study. This will help see if any of your child's behaviors have changed at home. This will take approximately 10-15 minutes to complete.

III. Risks:

In this study, your child will not have any more risks than he or she would have in a normal day of school; however, the student PI and school counselor will remain aware of concerns that may affect your child's welfare and will take needed action, such as taking breaks or discontinuing treatment if he or she shows signs of fatigue or stress due to CCPT sessions.

IV. Benefits:

Participation in this study may benefit your child personally by potentially improving his or her classroom behaviors and helping your child to be more successful at school. CCPT may also help enhance your child's overall mental health and development, including improved self-esteem, self-control, and social skills. Overall, we hope to gain information about finding a more effective way to help young children with challenging behaviors at school.

V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. Your child does not have to be in this study. If you allow your child to participate in this study and change your mind, you have the right to withdraw your child at any time without penalty of any kind. Your child also has the right to skip CCPT sessions or withdraw at any time. Whatever you and your child decide, your child will not lose any benefits to which he or she is otherwise entitled and will not affect his or her standing at school, including grades or placement decisions.

VI. Confidentiality:

We will keep your child's records private to the extent allowed by law. All participants will remain anonymous and any information related to your child, including teacher-completed questionnaires, observation forms, and videotapes of CCPT sessions, will be replaced with participant ID numbers to conceal the real identity of your child. Videotapes of sessions will be kept in a locked cabinet in the school counselor's office. Only the school counselor will have a key to the cabinet, which he or she will unlock for the student PI when videotapes need to be viewed. The videotapes only will be viewed by the student PI, the school counselor, and the school counselor's supervisor, Trudy Sprunk, M.Ed, when necessary.

Anything said or done by your child during CCPT sessions will remain confidential and will not be shared with anyone else unless there are reasons to believe that he or she is in danger of hurting himself/herself or others, or is being abused or neglected by someone else. Confidentiality may also be broken if you or a court requests release of information.

All other information that is related to this study will be stored in a locked cabinet at Georgia State University. Only the student PI will have the key to the cabinet and access to the data. Any electronic data will be stored on a password-protected computer of which only the student PI knows the password. Observation forms (without identifying information) may be shared with the PI, Dr. Joel Meyers and another faculty member, Dr. Laura Fredrick, for the purposes of data

analyses. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP)).

After the data has been collected and analyzed, any confidential information, including videotapes, will be destroyed. Any confidential or identifying information will not be disclosed in any publication or discussion of this study. Your name, your child's name, and other facts that might point to you or your child will not appear when we present this study or publish its results.

VII. Contact Persons:

Contact Dr. Joel Meyers (Faculty PI) at 404-413-8192 or jpmeyers@gsu.edu, or Cori Wixson (Student PI) at 770-826-5057 or cwixson1@student.gsu.edu if you have questions, concerns, or complaints about this study. If you are interested in learning more about the results of this study, contact either the PI or the student PI and a summary of the results will be made available to you at the end of the study. You can also call if you think you or your child have/has been harmed by the study. Call Susan Vogtner in the Georgia State University Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu if you want to talk to someone who is not part of the study team. You can talk about questions, concerns, offer input, obtain information, or suggestions about the study. You can also call Susan Vogtner if you have questions or concerns about your rights.

VIII. Copy of Consent Form to Subject:

We will give you a copy of this consent form to keep.

If you are willing to give permission for your child to participate in this research and be video recorded, please sign below:

Name of Student: _____

Signature of Parent or Legal Guardian

Date

Corinne S. Wixson, Student PI

Date

Appendix C: Child Assent Form/Script

**Georgia State University
Department of Counseling and Psychological Services
Child/Student Assent Form**

(The following script will be read by the student PI to students to see if they want to participate in the study. Students are allowed to ask questions before, during, or after the following information is read to them. The student PI will respond to any questions immediately after they are asked.)

"Hi _____:
Child's Name

My name is Ms. Cori. I am working with <Name of Counselor> who is a counselor for children. This means she spends time with children in the playroom and helps them with their problems. I am learning about some better ways to help children who might have a hard time paying attention in class, getting along with other students or teachers, or following directions.

I would like to see if you want to help me in finding better ways to help children. I have talked to your parent and was told that it would be okay to ask you to help me with this study. Now I want to see if it is okay with you. If you agree, you will visit the playroom with <Name of Counselor> 10 times this school year for 30 minutes each time. In the playroom, you can play with the toys, draw pictures, talk to the counselor, and do things that you like to do. What you say or do in the play room is private. <Name of Counselor> will not tell your mother or other people about what you say or do during that time. She only will break this rule if she think that you are not safe and need to be protected. But if you like, you can tell your mother or other people about what you do during your time in the playroom.

You get to choose if you want to go to the playroom 10 times or you do not want to go to the playroom. Tell me what you choose to do. Do you want to go to the playroom with <Name of Counselor>?" (Allow the child to respond and record his or response verbatim along with the date below:)

Child's Response (verbal assent)

Date of Response

"I would also like you to know that you can change your mind any time if you decide you do not want to go with <Name of Counselor> to the playroom. You can tell <Name of Counselor>, me, or your parent that you do not want to go with <Name of Counselor> for this study anymore if you change your mind. Thank you for your help."

Corinne S. Wixson, Student PI

Date

Appendix D: Brief Additional Child Assent Form/Script

**Georgia State University
Department of Counseling and Psychological Services
Brief Additional Child/Student Assent Form**

(The following script will be read by the student PI to students to see if they are willing to participate in the social validity survey at the end of the study. Students are allowed to ask questions before, during, or after the following information is read to them. The student PI will respond to any questions immediately after they are asked.)

"Hi _____:
Child's Name

In case you don't remember, my name is Ms. Cori. I am working with <Name of Counselor> who is a counselor for children. You went with her many times to play in the playroom. Now I would like to see how much you did or didn't like playing in the playroom. I would also like to see how you felt while playing in the playroom and how you feel now that you have played in the playroom many times. You get to choose if you will or will not answer these questions. It will take about five minutes. Tell me what you choose to do. Will you answer a few questions for me?" (Allow the child to respond and record his or response verbatim along with the date below:)

Child's Response (verbal assent)

Date of Response

Corinne S. Wixson, Student PI

Date

(who read this form and was a witness to this verbal child assent)

"I will start asking some questions now. Just answer the best you can. There are no right or wrong answers. If there are any questions you do not want to answer, that's okay. You do not have to answer any questions you do not want to. It's also okay if you are not sure how to answer a question. You can just say 'I don't know'. Thank you for your help."

Appendix E: Social Validity Form/Student SurveyQuestions:

- | | | | |
|---|-------|----------------|-------|
| 1. Did you like going to the playroom with Ms. Johnson?
Comments: | Yes | Maybe | No |
| 2. a.) How did you feel when you were in the playroom?

b.) What do you think made you feel this way? | Happy | Sad
Worried | Angry |
| 3. Before you started going to the playroom with Ms. Johnson, did you ever get in trouble in your classroom or have a hard time doing your work?
Comments: | Yes | Maybe | No |
| 4. After you started going to the playroom with Ms. Johnson, did you start getting in trouble less or have an easier time doing your work? | Yes | Maybe | No |
| 5. How did you feel when you were in your classroom before you started going into the playroom? | Happy | Sad
Worried | Angry |
| 6. How did you feel in your classroom after you were done playing in the playroom? | Happy | Sad
Worried | Angry |
| 7. Do you feel like you were doing better in school before you started going to the playroom or at the end of the school year? | | | |
| 8. What did you like best about being in the playroom? | | | |
| 9. If you were in charge, what would you change about going to the playroom? | | | |
| 10. Is there anything else you want to say about the program of going to the playroom? | | | |

Appendix F: Teacher Informed Consent

**Georgia State University
Department of Counseling and Psychological Services
Informed Consent (Teacher)**

Title: The Effectiveness of Child-Centered Play Therapy on the Challenging Behaviors of Early Elementary School Students

Principal Investigator (PI): Joel Meyers, Ph.D. (Faculty PI)
Cori Wixson, Ed.S. (Student PI)

I. Purpose:

You are invited to participate in a research study. The purpose of the study is to investigate the effectiveness of child-centered play therapy (CCPT) on the challenging behaviors of young students at school. The study will examine if CCPT helps children improve their behaviors at school. You are invited to participate because you have one or more students in your classroom that have been referred because of having challenging behaviors. Four student participants will be chosen for this study. The study will begin in January 2014 and end in April or May 2014.

II. Procedures:

If you decide to participate, you will be asked to encourage each referred student to take a packet home to their parent(s) or legal guardian(s). Parents will be instructed to return the signed parental permission by either mailing it in the provided envelope or sending it back to the school with their child. You will be asked to collect any signed parental permission forms for referred students in your class until they are collected by the student PI. For each referred student that has parental permission to participate, you will be asked to complete a rating scale and a short questionnaire to provide information about their behaviors, including how often and when they are occurring. This should take approximately 15-20 minutes to complete for each referred student and **may NOT be completed during the work day**. This information will be used by the student PI to determine which four students will be eligible for the study and determine the best days and times to set up observations for data collection.

After student assent is obtained, the school counselor will engage each of the four student participants in a total of 10 30-minute CCPT sessions that will occur once per week. Students will not be involved in play therapy during critical academic segments of the day (such as during Reading and Math). In order to figure out if CCPT is helping improve behaviors for each participant, the student PI will collect data by doing classroom observations for each of the participants. During the observations, you will be asked to engage in your classroom activities as you would normally. The student participant(s) in your classroom should not know they are the one(s) being observed. The student PI will sit quietly in the back of the room and act as if she is observing the whole class. These observations will take place for 30 minutes three days per week before, during, and after the 10-week CCPT intervention period.

The 10-week intervention period will be staggered across participants, which means that the CCPT intervention will start and end at different points in time for each participant. The CCPT

sessions will start for the first participant in January 2014 and will end for the last/fourth participant in April 2014. Observations will end for the last participant in May 2014. After the CCPT sessions and observations have ended, the student PI will meet with each of the student participants individually for approximately 5 minutes and ask them several questions to get a sense of their thoughts about their experiences with CCPT. This will not take place during critical academic segments, such as Reading or Math. In addition, you will be asked to complete a post-intervention measure of the same rating scale you completed at the beginning of the study. This should take approximately 10-15 minutes for each participant and **may NOT be completed during school hours.**

III. Risks:

In this study, you will not have any more risks than you would have in a normal day of school.

IV. Benefits:

By participating in this study, you will be helping with research to find a more effective way to intervene with young children with challenging behaviors at school. CCPT may benefit student participants by potentially improving their classroom behaviors and helping them to be more successful at school. CCPT may also help enhance their overall mental health and development, including improved self-esteem, self-control, and social skills. As a result of potential benefits for the student participants because of CCPT, you, other students, and other school staff may benefit as well. These benefits may include increased academic performance for other students and decreased stress and anxiety for you and anyone dealing with less challenging behaviors and classroom disruptions.

V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to stop participating at any time without penalty of any kind. Whatever you decide, you will not lose any benefits to which you are otherwise entitled. Your relationship with the staff of the Cobb County School District, your employment status, or annual evaluations will not be affected in any way whether you decide to participate or not.

VI. Confidentiality:

We will keep all records private to the extent allowed by law. You and all other participants will remain anonymous. All information related to student participants will be replaced with participant ID numbers to conceal their real identity. Information that you have completed on any student participants and data collected from observations will be stored in a locked cabinet at Georgia State University, to which only the student PI has the key. Any electronic data will be stored on a password-protected computer of which only the student PI knows the password. Observation forms (without identifying information) may be shared with the PI, Dr. Joel Meyers and another faculty member, Dr. Laura Fredrick, for the purposes of data analyses. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP)).

After the data has been collected and analyzed, any confidential information will be destroyed. Any confidential or identifying information will not be disclosed in any publication or discussion of this study. Your name, and any other participants' names will not appear when we present this study or publish its results. The findings will be summarized and reported with fake names and numerical data so that no participants will be identified.

VII. Contact Persons:

Contact Dr. Joel Meyers (Faculty PI) at 404-413-8192 or jpmeyers@gsu.edu, or Cori Wixson (Student PI) at 770-826-5057 or cwixson1@student.gsu.edu if you have questions, concerns, or complaints about this study. If you are interested in learning more about the results of this study, contact either the PI or the student PI and a summary of the results will be made available to you at the end of the study. You can also call if you think you have been harmed by the study. Call Susan Vogtner in the Georgia State University Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu if you want to talk to someone who is not part of the study team. You can talk about questions, concerns, offer input, obtain information, or suggestions about the study. You can also call Susan Vogtner if you have questions or concerns about your rights in this study.

VIII. Copy of Consent Form to Subject:

We will give you a copy of this consent form to keep.

If you are willing to participate in this research, please sign below:

Printed Name of Teacher

Signature of Teacher

Date

Corinne S. Wixson, Student PI

Date

Appendix G: Modified Version of the Brief Behavior Questionnaire and Intervention Plan (BBQuIP)

1. What behavior(s) are of concern for this student? Circle all that apply:

	Hurts others	<i>If yes, how?</i> Scratches/ Pinches / Bites / Slaps /Pulls hair / Hits /Kicks		
	Cries easily	Has temper tantrums	Takes things	Teases / provokes
1.	Breaks/destroys things	Throws things	Uses inappropriate language	Isolates self from others
2.	Off-task	Doesn't follow directions	Leaves seat or room without permission	Doesn't follow directions
3.	Calls out	Distracts other students	Does not work well with others	Refuses to comply with requests
Other (please describe):				

2. Rank the top 3 behaviors that you circled above that are creating the most problems in the classroom with 1 being the most important/critical:

3. On an average day, how often does this behavior occur? Please report this as a rate, by circling *one* number and *one* unit of time. For example, the answer might read "6-10 per day."

1.	1	2	3	4	5	6-10	11-25	26-50	PER	Minute	Hour	Day	Week	Month
2.	1	2	3	4	5	6-10	11-25	26-50	PER	Minute	Hour	Day	Week	Month
3.	1	2	3	4	5	6-10	11-25	26-50	PER	Minute	Hour	Day	Week	Month

4. When/where is each behavior most likely to occur? Circle all that apply and put the time frame if applicable:

1.	M T W Th F	Morning or Afternoon	Independent Work Time:	Hallway/Restroom Time:
	Large group activities Time:	Small group activities Time:	Transitions Time:	Lunch Time:
2.	M T W Th F	Morning or Afternoon	Independent Work Time:	Hallway/Restroom Time:
	Large group activities Time:	Small group activities Time:	Transitions Time:	Lunch Time:
3.	M T W Th F	Morning or Afternoon	Independent Work Time:	Hallway/Restroom Time:
	Large group activities Time:	Small group activities Time:	Transitions Time:	Lunch Time:

Appendix H: Direct Observation Form - Behavioral Observation of Students in Schools (BOSS; Shapiro, 2011)

Form 6
BEHAVIORAL OBSERVATION OF STUDENTS IN SCHOOLS (BOSS)

Child Observed: _____ Academic Subject: _____
 Date: _____ Setting: ISW:TPsnt SmGp:TPsnt
 Observer: _____ ISW:TsmGp LgGp:TPsnt
 Time of Observation: _____ Interval Length: _____ Other: _____

Moment	1	2	3	4	5*	6	7	8	9	10*	11	12	13	14	15*	S	P	T
AET																		
PET																		
Partial																		
OFT-M																		
OFT-V																		
OFT-P																		
TDI																		
Moment	16	17	18	19	20*	21	22	23	24	25*	26	27	28	29	30*	S	P	T
AET																		
PET																		
Partial																		
OFT-M																		
OFT-V																		
OFT-P																		
TDI																		
Moment	31	32	33	34	35*	36	37	38	39	40*	41	42	43	44	45*	S	P	T
AET																		
PET																		
Partial																		
OFT-M																		
OFT-V																		
OFT-P																		
TDI																		
Moment	46	47	48	49	50*	51	52	53	54	55*	56	57	58	59	60*	S	P	T
AET																		
PET																		
Partial																		
OFT-M																		
OFT-V																		
OFT-P																		
TDI																		

Target Student

S AET _____ % AET _____

S PET _____ % PET _____

S OFT-M _____ % OFT-M _____

S OFT-V _____ % OFT-V _____

S OFT-P _____ % OFT-P _____

***Peer Comparison**

S AET _____ % AET _____

S PET _____ % PET _____

S OFT-M _____ % OFT-M _____

S OFT-V _____ % OFT-V _____

S OFT-P _____ % OFT-P _____

Teacher

S TDI _____

% TDI _____

Total Intervals _____

Observed _____

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Appendix I: Treatment Integrity Form - Modified Version of the Play Therapy Skills Checklist

CCPT Setting/Skills		0 = Never 1 = Sometimes 2=Mostly 3=Always	NOTES
1	Therapist <u>introduces</u> child to playroom (initial session only)	0 3 N/A	
2	Playroom: <ul style="list-style-type: none"> • is orderly/ toys are put up in their correct places • has ample space in a location without distractions • provides spaces to maintain distance from therapist • has toys that allow for creative expression, emotional expression, and/or exploratory play 	0 1 2 3	
3	Therapist <u>shifts position</u> in chair so knees/toes face child throughout session (unless child asks therapist to participate in play sitting/standing in a different manner)	0 1 2 3	
4	Therapist <u>remains nondirective</u> throughout the session: <ul style="list-style-type: none"> • <u>Lets the child lead the play</u> unless limits need to be set due to child in danger, hurting the therapist, or destroying property • <u>Questions</u> should be <u>limited</u> to clarification 	0 1 2 3	
5	<u>Empowerment/Locus of Control</u> - therapist: <ul style="list-style-type: none"> • <u>Returns responsibility/freedom</u> to child (if child asks therapist for direction, what something is, or to do something for them, therapist may say "in here, you get to decide" • <u>Uses facilitative statements</u> if the child asks questions instead of directly answering the child's questions 	0 1 2 3	
6	<u>Esteem-Building/Facilitating Creativity</u> - therapist: <ul style="list-style-type: none"> • <u>Encourages effort</u> and <u>does not use praise</u> (which makes a judgment); ex. "you worked really hard " instead of "that looks nice" 	0 1 2 3	
7	<u>Reflecting Content and Feelings</u> - therapist: <ul style="list-style-type: none"> • <u>Tracks the child's play</u> throughout the session (may vary in frequency - if child is more quiet/shy/independent, less tracking; if child is more talkative/outgoing, more tracking) • <u>Empathically reflects child's feelings</u> (ex. "you're really excited about that!") 	0 1 2 3	
8	Therapist: <u>creates an environment of acceptance, warmth, caring, safety, and genuineness</u> : <ul style="list-style-type: none"> • <u>Tone</u> should be <u>congruent</u> with child's affect and therapist's responses • Should <u>appear interested and comfortable</u> 	0 1 2 3	
9	If limits are set, the <u>ACT technique of limit-setting</u> is used	0 1 2 3 N/A	
10	Therapist gives <u>at least one warning</u> to let child know how much time is left in playroom	0 3	
TOTAL POINTS EARNED (A)			
TOTAL POSSIBLE POINTS (B)			
PERCENTAGE OF INTEGRITY TO TREATMENT (A/B)x100			