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THE EFFECT OF TEACHER-CHILD INTERACTION TRAINING ON CHILDREN WHO

ARE EXHIBITING DISRUPTIVE BEHAVIORS WITHIN THE CLASSROOM SETTING

A Dissertation

Submitted to the School of Education

Duquesne University

In partial fulfillment of the requirements for

the degree of Doctor of Philosophy

By

Jaclynn Susan Stankus

August 2020

DUQUESNE UNIVERSITY

SCHOOL OF EDUCATION

Department of Counseling, Psychology, and Special Education

Dissertation

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Presented by:

Jaclynn S. Stankus

M.S.Ed., Child Psychology, Duquesne University, 2016
B.A., Psychology, West Virginia University, 2015

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THE EFFECT OF TEACHER-CHILD INTERACTION TRAINING
ON CHILDREN WHO ARE EXHIBITING DISRUPTIVE BEHAVIORS WITHIN THE CLASSROOM
SETTING

Approved by:

_____, Chair
Kara E. McGoey, Ph.D.
Professor and Director
Department of Counseling, Psychology, and Special Education
Duquesne University

_____, Member
Elizabeth McCallum, Ph.D.
Associate Professor
Department of Counseling, Psychology, and Special Education
Duquesne University

_____, Member
Susan M. Rattan, Ph.D.
Associate Professor
Department of Counseling, Psychology, and Special Education
Duquesne University

_____, Member
Kristen F. Schaffner, Ph.D.
Assistant Professor
Department of Psychology
California University of Pennsylvania
Licensed Psychologist
PCIT International Certified Level II Trainer

ABSTRACT

THE EFFECT OF TEACHER-CHILD INTERACTION TRAINING

ON CHILDREN WHO ARE EXHIBITING DISRUPTIVE BEHAVIORS WITHIN THE

CLASSROOM SETTING

By

Jaclynn Susan Stankus

August 2020

Dissertation supervised by Kara E. McGoey, PhD

Teacher-Child Interaction Training (TCIT) is an adaption of the evidenced-based treatment of Parent-Child Interaction Therapy (PCIT). The TCIT intervention is used with students, typically in a preschool setting, who are exhibiting disruptive behaviors within the classroom. Teacher-Child Interaction Training improves the teacher-child relationship, while also training teachers to use effective and consistent consequence strategies. The large research base behind PCIT and the growing empirical base for TCIT provides evidence that this model would be an effective early intervention treatment for young children exhibiting disruptive behaviors in their school settings.

The success of Teacher-Child Interaction Training (TCIT) with the general preschool population utilizing a three-tiered model approach, was examined through a single subject nonconcurrent multiple baseline design across participants. The current study investigated the

impact of TCIT on child behavior, the teacher-student relationship, and the likability and feasibility of TCIT according to teachers. Results suggest that TCIT is effective in reducing disruptive behaviors within the classroom setting, as indicated by behavioral observation and teacher report. Additionally, the relationship between teacher and student was also examined before and during the TCIT intervention. Results indicate that the TCIT intervention is effective in improving the teacher-student relationship as well as increasing teacher-skill use, when interacting with their students. Lastly, this study shows that the TCIT intervention is accepted and feasible to use by teachers.

This study shows evidence that Teacher-Child Interaction Training is effective in reducing problematic behaviors within a general preschool setting as well as improving the teacher-student relationship, particularly through a three-tiered model approach.

DEDICATION

To my parents – Early on in my career, I decided that I wanted to dedicate my research towards positive parenting and caregivers. Therefore, I have done endless amounts of reading, worked with multiple families, and taken many classes on what it means to be a positive and an effective parent. However, most of my learning has come from what you both have instilled and shown me. I can honestly say I am the most blessed daughter to have both of you as a mother and father. I cannot thank you both enough for your endless support, encouragement, strength, and love. I knew early on that I wanted to pursue this career and you both have lifted me up on this journey from the moment I began. From childhood until now, you both have truly been the backbone in my success. Mom, thank you for instilling in me the strength, courage, and Godly heart that I carry with me to this day. I have seen you go through hardships unlike any other, but yet you still always find a way to support and show me endless love on a daily basis. You are the strongest woman I know, and I am the luckiest woman in the world to have you as a model in my life. Dad, thank you for raising me to be the strong and independent woman I am today. I remember clear as day running around the coliseum at West Virginia University as you were graduating with your doctoral degree. I always knew you had your PhD and I was so proud to tell everyone I knew. It means the absolute world to me to be able to follow in your footsteps. Not only are you the best dad but your devoted support to your family and hard work ethic are values I will carry with me forever. Again, thank you both for raising me to reach for my highest potential, never settle for less than what I deserve, and to approach everything and everyone with a loving heart.

I can only pray that I will be half the parent that both of you were to me, and that I can instill the same values and love to my children. Not enough words that I write will express how thankful I am for both of you. I love you both immensely.

To my friends, family, cohort, and loved ones – I cannot thank you all enough for your endless support and love throughout this crazy journey. If there is one thing I have learned over the last couple of years, it is that it is hard to find people who truly love and care about you. I am proud to say that I have an amazing group of those people and I do not know what I would do without your constant support and encouragement. Especially to Katie, Breanna, and Lindsey – thank you for always being a listening ear, being there through the tough times, and being the most amazing friends, I could ever ask for. Lastly, Zac, you have shown me such selfless love during a turbulent year in my life. Thank you for always being there and showing me constant support. I believe God placed you in my life at the right time and I look forward to what the future holds for us.

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To my Chair, Dr. McGoey- Thank you for your support and guidance throughout my years at Duquesne. From the beginning, you have supported my interest in TCIT and my passion for implementing this model within schools. You have been an amazing mentor and none of this would have been possible if it was not for your encouragement, re-assurance, and support throughout this whole process. Thank you for believing in me and trusting in my skills to carry out this model.

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Dr. Schaffner - I will never forget in 2014 when I was applying to graduate school and I was given your phone number to seek guidance on school psychology programs. Little did I know that you had also conducted research in the same topic I was passionate about. Fast forward to now, and I never would have thought you would be on my dissertation committee and a role model for me in the PCIT world. Thank you for being a source of knowledge and support throughout this process.

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To my Alma Mater, West Virginia University, and Dr. McNeil – Thank you for igniting my passion for PCIT so early on in my career. I would not be where I am today if it was not for joining your PCIT lab as an undergraduate.

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LIST OF ABBREVIATIONS

Parent-Child Interaction Therapy (PCIT)

Teacher-Child Interaction Training (TCIT)

Praise Reflect Imitate Describe Enthusiasm (PRIDE)

Social Skills Improvement System (SSIS)

Sutter-Eyberg Student Behavior Inventory – Revised (SESBI-R)

Dyadic Parent-Child Interaction Coding System (DPICS)

Revised Edition of the School Observation Coding System (REDSOCS)

Therapy Attitude Inventory (TAT)

Chapter 1: Introduction

Introduction

Behavioral problems that interfere with teaching and learning, particularly externalizing behavior disorders, have notably worsened in preschool-aged children and teachers are finding it increasingly difficult to manage such behaviors (Schaffner, 2013). Additionally, many educators lack the necessary training to manage externalizing behaviors in young children and may find it difficult to focus on an individual child or a small group without hindering the learning of the other students in the classroom. Furthermore, research indicates that there are negative outcomes for children who display these problem behaviors in the early years. Children who exhibit behavioral problems and social-emotional deficits have difficulty forming positive relationships, are less likely to be accepted by teachers and peers and are at a greater risk for dropout in the later academic years (Raver & Knitze, 2002).

Significance of Problem

In recent years, preschool education has been seen as an essential component of a child's social-emotional development and educational readiness (Department of Education, 2016). In 2005, two-thirds of four-year-olds and more than 40% of three-year-olds were enrolled in a preschool program (Barnett & Yarosz, 2007).   From 2007 to 2012, the proportion of three to six-year-old children who attended center-based early childhood care and education programs increased from 55% to 61% (Child Trends Data Bank, 2014). This increase in preschool enrollment has been seen across all groups, including varying socioeconomic and ethnic groups. According to the Child Trends Data Bank (2014), the participation in high-quality early childhood care and education programs may have positive effects on children's cognitive,

language, and social-emotional development, and particularly among children who are at risk for poorer outcomes.

The study of preschool mental health is a developing field in early childhood psychology (Vanderzee, 2015). There has been a great deal of research on the benefits of comprehensive classrooms, such as Head Start, for children with mental health risks (Luby, 2006). Comprehensive classrooms are programs that promote school readiness for children from birth to five from low income families by supporting their development (U.S. Department of Health & Human Services, 2017). These programs emphasize early learning, health, and family well-being, and have been found to be successful in reducing young children's behavior problems (Luby, 2006). However, there is little research on the general topic of preschool mental health. This is unfortunate, because the preschool structure tends to differ from most K-12 classrooms, where the environment is less structured and focuses more on social-emotional development instead of academics (U.S. Department of Health & Human Services, 2017).

In addition to the rise of mental disorders being diagnosed in preschoolers, evidence also suggests unfortunate outcomes for children exhibiting behavioral problems and social-emotional deficits. First, young children who engage in problematic social behaviors participate less in classroom activities than non-behaviorally disordered peers and are less likely to be accepted by classmates and teachers (Raver & Knitze, 2002). In preschool classrooms in particular, teachers with challenging students provide such children with fewer learning opportunities and positive feedback. Additionally, children who show signs of negative social interactions or aggressive behavior are more likely to perform poorly on academic tasks and to be held back in their early school years. As these children age, they are at greater risk for dropping out of school and engaging in delinquent activities (Raver & Knitze, 2002).

For preschool-aged children who exhibit behavioral problems, research supports the use of interventions that target both parents and caregivers/teachers (Rockhill et al., 2006). However, research in this area is limited, particularly regarding teacher-child interventions. Although there are likely many behavioral and mental health needs exhibited in the preschool classroom, teachers may not be sufficiently prepared to handle these needs. One such reason is the inconsistencies in training from teacher education programs. There is a large mismatch between the preparation of the average childhood professional and the wide variety of needs preschool-aged children can present (Bowman, Donovan, & Burns, 2000). Other reasons are classroom size and time. In general, it is difficult to manage classrooms. Furthermore, it may be difficult for teachers to manage students who have specific behavioral needs while there are numerous other students in the classroom.

In order to address young children's behavioral problems within the classroom, an adaptation of the empirically-supported intervention, Parent-Child Interaction Therapy, was implemented by some researchers (Filcheck, McNeil, Greco, & Bernard, 2004; Tiano & McNel, 2006; Lyon et al., 2009; McIntosh, Rizza, & Bliss, 2000; Schaffner, McGoey, & Venesky, 2016). This adaptation is known as Teacher-Child Interaction Training (TCIT); like its predecessor, PCIT, TCIT encompasses positive reinforcement through praise, teacher modeling, and various classroom management strategies to decrease undesirable attention-seeking and disruptive behaviors (Garbacz, Zychinkski, Feuer, Carter, & Budd, 2014). Additionally, some models of TCIT contain a timeout component. Similar to PCIT, teachers learn to interact with children by using play therapy techniques that are drawn directly from PCIT (Garbacz et al., 2014).

Theoretical Basis

In order to fully understand TCIT, it is essential to acknowledge the theoretical basis behind PCIT. Strongly rooted in operant methods and traditional play therapy techniques, PCIT combines a number of theoretical perspectives. However, PCIT stems principally from Baumrind's parenting styles theory (Florence, Kaslow, Terrence, & Patterson, 2002); specifically, the authoritative parenting style. The authoritative parenting style emphasizes a warm but direct approach to parenting, which PCIT mimics within treatment. These two perspectives are then paired with attachment theory, social-learning theory, and operant conditioning.

Baumrind's Theory of Parenting and Development

Parenting styles are typically based upon Baumrind's two dimensions of parenting: authority and affection. Stemming from these dimensions, three distinct parenting styles were developed: permissive, authoritarian, and authoritative. The main focus of PCIT is to bring parents towards the authoritative parenting style, which is a balance of warmth and clear limit setting (Levin, 2011). Consequently, the first phase of PCIT focuses upon building a warm and affectionate relationship between the parent and child, whereas the second phase focuses on setting developmentally-appropriate boundaries (McNeil & Hembree-Kigin, 2011).

Attachment Theory

In addition to Baumrind's parenting styles theory, PCIT is also rooted in attachment theory developed by Bowlby in the 1960s. Attachment theorists posit that parental warmth and responsiveness underlie the development of a secure parent-child relationship (Bowlby, 1944). By having a secure attachment between child and parent, the child will likely have greater social-emotional regulation skills and a better understanding of relationships. The attachment theory

emphasizes the importance of warm parenting to establish a stable attachment and the child's belief that the parent will attend to her needs. Parent-Child Interaction Therapy emphasizes a secure attachment during the first phase of treatment. The first phase teaches parents to use specific language and interactions to build a warm and trustworthy relationship between them and their child. By building a secure attachment in the first phase of treatment, the groundwork is laid for the second phase, which incorporates behaviorism principles.

Social-Learning Theory

In addition to Baumrind's parenting styles and Bowlby's attachment theory, specific behavioral techniques within PCIT are derived from Bandura's social-learning theory. The first aspect of social-learning theory that is emphasized within PCIT is the idea of modeling. Specifically, people learn through observations and modeling. Social learning is defined by Bandura as "new patterns of behavior that can be acquired through direct experience or by observing the behavior of others" (Bandura, 1971, p. 3). Bandura emphasized the important role of "modeling" within social learning theory. He believed that most behaviors people display are learned, either deliberately or inadvertently, through the influence of another person. Models provide instruction for adults and children regarding how to behave in certain situations, how to problem solve, and how to properly perform certain tasks. Additionally, social-learning theorists state that some complex behaviors can only be learned through modeling (Bandura, 1971). Secondly, operant behavior components are utilized within PCIT. Operant behavior is the changing of behavior by the use of reinforcement, which is given after a desired response (Skinner, 1938). When considering the interaction between stimulus, response, and reinforcement, it is important to note that reinforcement strengthens a response and punishment

decreases a response (Skinner, 1963). Therefore, PCIT theorists aim to adopt these principles in the hopes of shaping a child's behavior.

Literature Review

Since the development of PCIT in the 1970s, there have been numerous studies conducted to demonstrate the success and effectiveness of PCIT. These studies have shown that PCIT is effective with different populations and disorders. For example, PCIT was just as effective with children who had been diagnosed with ADHD as it was with those diagnosed with a disruptive behavior disorder. PCIT has been successfully used with children diagnosed with Autism and developmental delays (Lesack, Bearss, Celano, & Sharp, 2014), and depression (Luby, Lenze, & Tillman, 2012), as well as adopted children (Allen, Timmer, & Urquiza, 2014). Moreover, the impact of PCIT in reducing problem behaviors has been shown in different cultural populations, including Chinese families (Leung, Tsang, Heung, & Yiu, 2009), Mexican American families (McCabe & Yeh, 2009), and Australian families (Phillips, Morgan, Cawthorne, & Barnett, 2008). Furthermore, PCIT has been generalized to numerous settings, including classrooms.

In addition to the parent-child relationship, the teacher-child relationship is just as imperative to a child's overall wellbeing (Schaffner, 2013). The quality of children's relationships with their early education teachers is increasingly being recognized as a contributor to school adaptation and social-emotional growth (Pianta & Stuhlman, 2004). Therefore, these relationships have the potential to exert a positive or negative influence on a child's ability to succeed academically and behaviorally in school. Secure and improved teacher-child relationships are associated with competent child behavior, whereas dependent-teacher child relationships have been associated with deficits in prosocial behaviors and an increase in

disruptive behaviors in children (Pianta & Nimetz, 1991). Furthermore, given the strong association between teacher-child relationships and children's social-emotional and behavioral growth, an intervention that not only focuses on child behavior change but also teacher-child relationships is warranted.

McIntosh, Rizza, and Bliss (2000) are credited with the first empirical research study on TCIT (Schaffner, 2013). The authors employed a case study approach to the implementation of TCIT within a preschool setting. The goals of their study were to improve the quality of the teacher-child relationship and to provide teachers with training in problem-solving. This allowed them to acquire the strategies and skills to manage the disruptive behaviors presented in their classrooms (McIntosh et al., 2000). As with PCIT, TCIT uses direct coaching by the psychologist to aid teachers in modifying aggressive, disruptive, and non-compliant behavior in their students (McIntosh et al., 2000).

In 2006 and 2009, some researchers began to implement TCIT at a school-wide level. Tiano and McNeil (2006) and Lyon and colleagues (2009) implemented TCIT across multiple classrooms in general preschool populations. The investigators in both studies hypothesized that teachers would increase their use of positive interactions and decrease criticism throughout the training, improving their quality of instructing and managing classrooms. Additionally, Lyon and colleagues (2009) explored teacher acceptability of the intervention, while Tiano and McNeil (2006) aimed to examine child behavior change. Tiano and McNeil (2006) included teachers and students from eight Head Start classrooms in southwestern Pennsylvania, in which classrooms were randomly assigned to either the control or experimental group.

In order to measure teacher and child interactions, researchers from both studies used the *Dyadic Parent Interaction Coding System – Third Edition* (DPICS; Eyberg, Nelson, Duke, &

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Boggs, 2004). However, Tiano and McNeil (2006) used the Revised Edition of the School

Observation Coding System (REDSOCS; Jacobs, Boggs, & Eyberg, 2000) as an additional

measurement to record both teacher and student classroom behavior. Additionally, both studies

included a scale to assess teacher likability of the TCIT intervention, and timeout procedures.

However, each researcher introduced the time-out procedure differently. Tiano and McNeil

(2006) used a procedure called the "Thinking Chair". Since Head Start classrooms utilize

timeout as a last resort strategy for less-intrusive behavior management techniques, the phrase,

"Thinking Chair," emphasizes a positive aspect of timeout, providing the child with

opportunities to think about his or her actions and consequences without receiving attention for

his or her behavior (Tiano & McNeil, 2006). In contrast, Lyon and colleagues (2009) called

their timeout procedure, "Sit and Watch". During the planning process, teachers decided which

behaviors would constitute a student to be sent to the "Sit and Watch" chair. Behaviors

measured and the length of time a student was in the "Sit and Watch" chair varied across

classrooms.

Following the implementation of these research studies, different results were found.

Tiano and McNeil (2006) found that children's inappropriate behavior improved throughout the

study regardless of the group. This is particularly important because prior to treatment, teachers

were not reporting high levels of problem behavior. Therefore, conclusions about the effects of

TCIT could not be made from this data (Tiano & McNeil, 2006). Child behavior may have also

improved due to children's developmental progression across treatment. In regard to teacher

behavior, teachers in the treatment group used more labeled praises and fewer criticisms when

compared to teachers in the control group. Similarly, Lyon and colleagues (2009) found that

teachers increased their positive behaviors throughout treatment and decreased their use of

criticisms. Additionally, teacher acceptance of the TCIT intervention was found to be at a high level. Satisfaction was high for both the CDI and TDI phases, which is consistent with the findings of Filicheck et al. (2004).

Previously-discussed research has shown positive outcomes for children and teachers following the implementation of TCIT. However, previous research included students who either were not exhibiting behavior problems within the classroom setting or if they were, were not clinically diagnosed with a disruptive behavior disorder. Therefore, Schaffner, McGoey, and Venseky (2016) examined the effects of TCIT within an urban clinical preschool population. In contrast with previous studies, their study only included the CDI phase of treatment and a maintenance phase due to time constraints. Results indicate a decrease in the mean percentage of disruptive behaviors across participants from the baseline to intervention phase. Additionally, from the intervention phase into the maintenance phase, behaviors that were considered disruptive occurred less often. Regarding prosocial behaviors, results indicate that some participants engaged in more prosocial behaviors than others, but all participants made clinically meaningful gains (Schaffner et al., 2016). Additionally, teachers reduced their use of criticisms, commands, and questions to a more desirable amount. Although none of the teachers met mastery criteria of the PRIDE skills, there was an overall increase in the frequency of skill use throughout the TCIT intervention. The PRIDE skills are a set of skills utilized in PCIT that are meant to increase the parent-child relationship. These skills are further described below.

The Problem Statement

Given the strong effects of PCIT, it is presumed that the positive outcomes would translate to the classroom. However, there has been minimal research on TCIT and the effects of behavior change and teacher-child relationships. Current research on TCIT has been conducted

as a class wide intervention or as a case study involving a more tier 3 approach. Furthermore, there has been little to no research on TCIT as a tier 2 intervention. PCIT, the predecessor to TCIT, has a large evidence base on the effects for the treatment. Given that TCIT is based in the same theoretical roots as PCIT, further research is warranted to explore its effects. Similar to PCIT, TCIT is delineated into two phases. The first phase of treatment focuses on building the teacher-child relationship, whereas the second phase focuses on applying operant principles, whereby the teacher begins to place demands on the student and provides predictive and consistent contingencies. Furthermore, the existing literature on TCIT has shown that it is effective in reducing behaviors within the classroom but has not yet examined which behaviors it was most effective in reducing.

Although previous implementations of TCIT have been implemented in general preschool populations, most research has been conducted in specialized preschool settings such as Head Start or therapeutic preschools. Therefore, there is a need for the generalization of TCIT within the general education preschool population. Additionally, given the need for early childhood behavior management strategies and the reduction of disruptive behaviors in the classroom, it is practical to explore the effects of TCIT on behavior change within the classroom and explore the effects on the teacher-child relationship.

Research Question and Hypothesis

In the current empirical study, I will attempt to address the limitations in the extant literature base regarding TCIT:

Research Question 1: Does TCIT significantly reduce problem behaviors within a general preschool population using a three-tiered approach model, as measured by the Sutter-Eyberg Behavior Inventory – Revised (SESBI-R)?

Hypothesis 1: TCIT will effectively reduce problem behaviors within the general preschool population.

Research Question 2: Does the implementation of TCIT increase positive teacher-child relationships and reduce teacher-child negative interactions as measured by the Dyadic Parent-Child Interaction Coding System – III (DPICS-III)?

Hypothesis 2: Following the implementation of TCIT, positive teacher-child relationships will increase while negative teacher-child interactions will decrease.

Research Question 3: Will the effects of TCIT translate to the general preschool population as measured by the Dyadic Parent Interaction Coding System and the Sutter-Eyberg Student Inventory - Revised?

Hypothesis 3: Positive outcomes of TCIT will translate to the general preschool population.

Summary

Previous research has shown that behavioral problems within the classroom have notably worsened in preschool–aged children (Schaffner, 2013). Educators lack the necessary tools to effectively intervene with children exhibiting these behaviors while managing the other students in the classroom. This deficit in behavior management techniques leaves students less likely to form positive relationships and be viewed positively by teachers (Raver & Knitze, 2002). Furthermore, these children have a greater risk for dropout in later academic years (Raver & Knitze, 2002). TCIT is an adaptation from Parent-Child Interaction Therapy that focuses on the teacher-child relationship. TCIT incorporates the core principles and goals of PCIT, while accommodating to the unique characteristics of the classroom (Garbacz et al., 2014). In the current study, I aim to investigate the use of TCIT within a general preschool population, and further investigate which specific problem behaviors TCIT is most effective in reducing. This

study will add to the TCIT literature base and potentially demonstrate strong effects of TCIT

within a general preschool population.

Chapter II

Literature Review

History

Preschool education is an essential intervention opportunity in promoting a child's social-emotional development and educational readiness (Department of Education, 2016). Today, most children are enrolled in a preschool program where the greatest impact on learning and social-emotional growth can be made. In 2005, two-thirds of four-year-olds and more than 40 percent of three-year-olds were enrolled in a pre

school program (Barnett & Yarosz, 2007). From 2007 to 2012, the proportion of three to six-year-old children who attended center-based early childhood care and education programs increased from 55% to 61% (Child Trends Data Bank, 2014). This increase in preschool enrollment has been seen across all groups, including children from varying socioeconomic statuses and ethnicities. According to the Child Trends Data Bank (2014), the participation in high-quality early childhood care and education programs can have positive effects on children's cognitive, language, and social-emotional development, and specifically, among children who are at risk for poorer outcomes.

As more children are attending preschool, the number of students being identified with disabilities is growing; therefore, presenting teachers with more challenges in the classroom. According to the Centers for Disease Control and Prevention, parent-reported information from the 2011-2012 National Survey of Children's Health showed that one out of seven U.S. children aged two to eight years had a diagnosed mental, behavioral, or developmental disorder. With the growing number of children with disabilities and challenging behaviors in preschools, it is

essential for early childhood teachers to have the necessary skills to help these children (Warash, et al., 2008).

Commonly Used Treatments

The study of preschool mental health is a developing field in early childhood psychology (Vanderzee, 2015). There has been a great deal of research on the benefits of comprehensive classrooms, such as Head Start, for children with mental health risks (Luby, 2006). Comprehensive classrooms are programs that promote the school readiness of children birth to five from low income families by supporting their development (U.S. Department of Health & Human Services, 2017). These programs emphasize early learning, health, and family well-being, and have been successful in reducing children's behavior problems (Luby, 2006). However, there is little research on preschool mental health. This is unfortunate, because the preschool structure, in which the environment is less structured and focuses more on social-emotional development instead of academics, tends to differ from most K-12 classrooms (U.S. Department of Health & Human Services, 2017).

There are a variety of different child-focused therapies that have been used to treat early childhood mental health disorders (Luby, 2006). These include play therapy, psychotherapy, and cognitive-behavioral therapy. However, the effects of these treatments with preschoolers is limited and there is some question as to whether children at the preschool age can benefit from such therapies (Rockhill, Collett, McClellan, & Speltz, 2006).

Social-Emotional Curriculums

As mentioned above, numerous treatments have been shown to reduce symptoms of mental and behavioral disorders, but there is little research on whether these treatments are effective for preschool aged children. However, preschools are slowly beginning to introduce

social-emotional curriculums within the existing academics (Domitrovich, Cortes, & Greenberg, 2007). For example, Head Start is a large provider for preschool aged children who have been identified with a disability, including emotional and behavioral disorders. However, components of the program need to be strengthened (Piortrowski, Collins, Knitzer, & Robinson, 1994). Competent interventions not only need to focus on reducing aggressive and disruptive behaviors but increasing pro-social and social-emotional behaviors as well. The need for more evidence-based social-emotional curriculums within preschool classrooms is evident due to the lack of treatment for preschool aged children exhibiting emotional and behavioral disorders.

Treatment Outcomes

In addition to the rise of mental disorders being diagnosed in preschoolers, evidence also suggests unfortunate outcomes for children exhibiting behavioral problems and social-emotional deficits (Schaffner, 2013). First, young children who behave in negatively in their social behavior participate less in classroom activities and are less likely to be accepted by classmates and teachers (Raver & Knitze, 2002). In preschool classrooms in particular, teachers with challenging students provide such children with less learning and less positive feedback. Additionally, children who show signs of negative social interactions or aggressive behavior are more likely to perform poorly on academic tasks and to be grade retained in their early school years. As these children age, they are at greater risk for dropping out of school and engaging in delinquent activities (Raver & Knitze, 2002).

For preschool-aged children who exhibit behavioral problems, research supports the use of interventions that target both parents and caregivers/teachers (Rockhill et al., 2006). However, research in this area is limited, particularly with teacher and child.

Barriers to Treatment

Despite the increase in behavioral problems and mental health needs exhibited in the preschool classroom, teachers may not be sufficiently prepared to handle these needs, for a variety of reasons (Schaffner, 2013). One reason is the inconsistencies in training in post-secondary educational programs. There is a large mismatch between the preparation of the average childhood professional and the wide variety of needs preschool-aged children can present (Bowman et al., 2000). Another reason is classroom size and time. In general, it is difficult to manage classrooms with multiple students. When a specific student is exhibiting behavior problems, it is more difficult for the teacher to give that child the time and attention he/she needs without sacrificing the learning time dedicated to the other students.

Need for Treatment

With the combination of the increase in children attending preschool and the growing need for the treatment of mental health within the early childhood population, teachers need the tools to be more equipped to handle such students. Specifically, TCIT, an adaptation of the empirically supported PCIT, focuses on improving teacher-child relationships while reducing behavioral problems in the classroom (Eyberg & Boggs, 1998). The goals of TCIT are to enhance the quality of teacher-child relationships by utilizing behavior therapy skills, and to provide teachers with problem-solving techniques that they can use when dealing with children who exhibit problem behaviors (McIntosh & Rizza, 2000). Given the strong empirical base of PCIT, it is practical to assume that the same positive effects would translate into the classroom.

Parent-Child Interaction Therapy

PCIT is a treatment for behavioral problems in young children that integrates relationship enhancement and behavior approaches (Querido, Bearss, & Eyberg, 2004). This form of

behavioral-parent training was developed by Sheila Eyberg in the 1970s for children ages two to seven and their caregivers. PCIT is an evidence-based treatment (EBT) for young children with behavioral and emotional disorders. The treatment places an emphasis on improving the quality of the parent-child relationship and changing parent-child interaction patterns. PCIT has two distinct phases: The Child-Directed Interaction phase (CDI) and the Parent-Directed Interaction phase (PDI), which are used to enhance the parent-child relationship and set necessary boundaries.

Adaptations have been made to accommodate older children, younger children, children with ADHD, Autism, intellectual disabilities, among others in PCIT. Additionally, PCIT has been used with multiple parent-child dyads, such as foster parents, divorced parents, parents with marital problems, etc. (McNeil & Hembree-King, 2011).

Theoretical Basis for PCIT

Strongly rooted in operant methods and traditional play therapy techniques, PCIT represents a synthesis of different theoretical perspectives. The core of PCIT is derived from Baumrind's research on associating parenting styles with child outcomes (Florence, Kaslow, Terrence, & Patterson, 2002). Stemming from Baumrind's theory, the authoritative parenting style is also emphasized within PCIT, which brings a warm, but direct parenting approach. These two perspectives are then paired with attachment theory, social-learning theory, and operant conditioning.

Baumrind's Parenting Styles Theory

Baumrind hypothesized two dimensions of parenting: authority and affection, which then can be categorized into three distinct parenting styles: permissive, authoritarian, and authoritative. The permissive parenting style is characterized by few parental demands for

responsibility or appropriate behavior and allowing the child to regulate her own actions.

Parents typically allow their children to make independent decisions at an age at which they are

not yet ready to do so (Johnson & Kelley, 2011). These parents are seen to be highly involved

with their children, but do not place demands upon them, which can be seen as being overly-

affectionate with not enough limit setting. There is little training in teaching their children to be

independent and parents are often uninvolved (Johnson & Kelly, 2011).

An authoritarian parent is strict and attempts to shape and control a child's behaviors

through an absolute standard of conduct. Authoritarian parents have high expectations for their

children and set rules that they expect them to follow unconditionally. According to Baumrind,

these parents are obedience and status-oriented, and expect their orders to be followed

(Baumrind, 1971). These rules are often not explained or are "unwritten", but the child,

regardless of age, is still expected to comply. This type of parenting often results in low

responsiveness from the child.

Lastly, the authoritative parent is a balance between the permissive and authoritarian

parent. This style of parent sets limits for his or her child, but is also warm and nurturing

(Baumrind, 1967). These parents have high expectations for their children, but also provide

them with the tools and resources they need to succeed. Additionally, they set reasonable

demands with a nurturing approach, which results in high responsiveness from the child

(Baumrind, 1971).

Specifically, PCIT emphasizes the authoritative parenting style (McNeil & Hembree-

Kigin, 2011). Parents who bring their children in for PCIT commonly exhibit either permissive

or authoritarian parenting styles. Therefore, one of the goals of PCIT is to draw their existing

style to a more nurturing, communicative, and firmly controlled parenting style. Compared to

the other parenting styles, the authoritative style has been linked to fewer child behavioral problems and better long-term mental health across many populations (Baumrind, 1966).

Attachment Theory

In addition to Baumrind's parenting styles theory, PCIT is also rooted in attachment theory developed by Bowlby in the 1960s. Attachment theory states that parental warmth and responsiveness underlie the development of a secure parent-child relationship (Bowlby, 1944). Bowlby recognized that attachment requires more than recognizing the existence of other people. Specifically, it requires the development of mental representations of the self and the object they are attaching to (Pressley & McCormick, 2007). The more responsive the parent is to the child, the more likely the child will develop a valuable and self-reliant representation of herself (Bowlby, 1973, 1980). If the adult is less responsive to the child, she may begin to view herself as not worthy or incompetent. Unresponsive parenting can lead to insecure attachment, which may lead to aggression and poor peer relations (PCIT International, 2011).

By having a secure attachment between child and parent, the child will likely have greater social-emotional regulation skills and a better understanding of relationships. The attachment theory emphasizes the importance of warm parenting to establish a stable attachment and the child's belief that the parent will attend to her needs. PCIT emphasizes a secure attachment during the first phase of treatment. The first phase teaches parents to use specific language and interactions to build a warm and trustworthy relationship between the parents and their child. By building a secure attachment in the first phase of treatment, the groundwork is laid for the second phase, which incorporates behavioristic principles.

Social-Learning Theory

In addition to Baumrind's parenting styles and Bowlby's attachment theory, specific behavioral techniques within PCIT are extracted from Bandura's social-learning theory. Bandura believed that reinforcement could not account for all types of learning. Instead, he believed that people learn new behaviors by watching other people (Bandura, 1977). Specifically, people learn through observations and modeling. Social learning was defined by Bandura as "new patterns of behavior that can be acquired through direct experience or by observing the behavior of others" (Bandura, 1971, p. 3). Bandura emphasized the strong role of "modeling" within social learning theory. He believed that most behaviors people display are learned, either deliberately or inadvertently through the influence of another person. Models provide instruction for adults and children for how to behave in certain situations, how to problem solve, and how to properly perform certain tasks. Additionally, social-learning theorists state that some complex behaviors can only be learned through modeling (Bandura, 1971). For example, if children had no opportunity to learn speech, it would be virtually impossible to teach them the skills that constitute a language (Bandura, 1971). According to Bandura (1971), "a good example is therefore a much better teacher than the consequences of unguided actions" (p.3).

Another main concept of social-learning theory that is adopted through PCIT is operant behavior contingencies and how they shape dysfunctional interactions between disruptive children and their parents (Bandura, 1971). Operant behavior is the changing of behavior through reinforcement, which is given after a desired response (Skinner, 1938). According to Skinner (1963), behavior is understood as stimulus, response, and reinforcement or punishment (Schaffner, 2013). When considering the interaction between stimulus, response, and

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reinforcement, it is important to note that reinforcement strengthens a response and punishment decreases a response (Skinner, 1963). Therefore, PCIT theorists aim to adopt these principles in the hopes of shaping a child's behavior. During PCIT, the child is continuously being reinforced and/or punished. Caregivers are instructed to give their child excited and overarching praise when they behave in a positive and social way; specifically, during the first phase of PCIT when caregivers are meant to be building a warm relationship with their child, they are instructed to provide positive feedback using specific skills that are taught throughout the session (e.g., PRIDE skills). Providing positive reinforcement for their child's actions reinforces the child's behavior.

During the second phase of PCIT, caregivers use specific punishment procedures when their child behaves in a way that is deemed inappropriate during the therapy session. Examples of punishment procedures that are used are a time-out chair and a time-out room if necessary. The second phase of PCIT builds upon Patterson's coercion theory (1982). According to Patterson (1982), disruptive child behavior is maintained through reinforcement such as providing negative attention and allowing children to escape demands. In order to avoid providing negative attention and the escape from demands, parents are instructed on specific techniques on how to interact with their child. Additionally, a time-out component is utilized in the second phase of PCIT in order to prevent the escape of instruction.

In addition to the theoretical basis, components of play therapy have a role within the framework of PCIT. Since the early 1900s, mental health professionals have embraced the value of play in child therapy (Bratton, Purswell, & Jayne, 2015). Play is a fundamental feature of childhood and is essential to children's brain development and holistic functioning (Perry & Szalavitz, 2006). When children play, they explore relationships, build mastery, develop coping

strategies, and develop socially (Gil & Drewes, 2005; Landreth, 2012; Ray, 2011). Given the positive outcomes of childhood play, PCIT is a play-based therapy.

Composition of PCIT

Understanding the theoretical components behind PCIT establishes the framework for understanding the structure of the PCIT process. Before every PCIT session begins, assessment and rating scales are utilized to gain a better understanding of the parent and child dyad. Additionally, these informants are used to operationally define the child's behavior (Eyberg & Bussing, 2010).

In order for the therapist to gather more specific information about the child's behavior, rating scales are used prior to assessment. Eyberg and Bussing (2010) recommend the *Eyberg Child Behavior Inventory (ECBI*; Eyeberg & Pincus, 1999). The ECBI is a 36-item questionnaire that contains two scales: a 7-point intensity scale that measures the frequency of child behaviors from never (1) to always (7), and a yes-no problem scale that measures the degree to which parents experience their child's behavior as troublesome to manage (Eyberg & Bussing, 2010). Assessing parental distress using the problem scale identifies the distress that is originating from the child's disruptive behaviors.

In addition to assessment and rating scales, PCIT is a data-driven process. Therefore, direct observation is used prior, during, and after treatment to progress monitor the use of parent skills. The *Dyadic Parent-Child Interaction Coding System – Third Edition (DPICS*; Eyberg, Nelson, Duke, & Boggs, 2004) is a behavioral coding system that includes categories of parent verbalization and child responses to parent commands. Prior to treatment, baseline data are collected using the DPICS. In addition, before every PCIT session, the DPICS is used to progress monitor parent-child interactions by coding the parent-child verbalizations for 5

minutes. This process provides guidance to the therapist as to whether the parent and child are making progress within treatment and what areas the therapist needs to focus on during sessions. Furthermore, the DPICS is a tool used to determine whether a parent is ready to move from the first phase of treatment to the second.

Once baseline data is collected and assessment/rating scales are completed, the parent and child move on to the Child-Directed Interaction (CDI) portion of PCIT. Similar to the initial phase of PCIT, CDI and PDI have specific structures, as well. During these phases, parents are coached on building positive and warm relationships with their child as well as providing effective commands (McNeil & Hembree-Kigin, 2011). Each phase is continued until the parent meets mastery of certain skills and the therapist feels he or she is ready to progress to the next phase. As mentioned previously, the observations at the beginning of each session are used to determine this mastery.

Phases of PCIT

PCIT consists of two phases, CDI and PDI. The CDI phase, which is rooted in Baumrind's authoritative parenting style and Bowlby's attachment theory, is focused on enhancing the parent-child relationship. The second phase, PDI, focuses on improving child compliance stemming from Bandura's social-learning theory and behavioral techniques (Uriquiza & Timmer, 2012). Both treatment phases are done through a "bug-in-the-ear" system that the parent wears while being coached from a therapist who is sitting behind a one-way mirror observing the session (Uriquiza & Timmer, 2012). Parents are taught specific skills of communication and behavior management. By using the bug-in-the-ear system, the therapist can provide immediate feedback to the parent.

Child-Directed Interaction (CDI)

CDI is the first phase of PCIT. As aforementioned, the CDI phase is intended to enhance the relationship between parent and child and build positive interactions (Uriquiza & Timmer, 2012). The goals of CDI set the framework for the firm discipline procedures within the PDI phase (McNeil & Hembree-Kigin, 2011). The goals of CDI are more specific and should be based on each family's individual needs. It has been found that the CDI phase often improves children's attendance in activities, reduces anger in children with oppositional tendencies, and improves frustration (McNeil & Hembree-Kigin, 2011).

The most fundamental rule of the CDI phase is to let the child lead the activity (McNeil & Hembree-Kigin, 2011). It is explained to parents that children are at their best when they get to choose the activity and clinicians want them to get a large amount of attention for behaving appropriately. Parents achieve this by being taught specific communication skills called the "do skills." Therapists also teach parents communication skills that should be avoided, also known as the "don't skills" (Eyberg & Bussing, 2010). These communication techniques are modeled on Baumrind's authoritative parenting style. In addition to teaching these skills to parents, therapists also utilize handouts for parents to have as resources to better learn these skills. The therapist-parent relationship is meant to be interactive. In other words, parents are encouraged to ask questions, use role-play, and use the therapist as a tool to master these skills (McNeil & Hembree-Kigin, 2011). Furthermore, parents are also provided with homework sheets that they are expected to complete at home and to bring with them to every session. Because PCIT is a parent-child focused therapy, parents are also praised for bringing in completed homework. If they do not bring back the homework, the therapist is instructed to pull out a new sheet for the parent to complete before the next session begins.

The skills presented during the teaching phase of CDI are to be used by parents in a 5-minute "special playtime" at home (McNeil & Hembree-Kigin, 2010). It should be noted that although 5 minutes does not appear to be a lot of time to practice these skills, it will seem like a long time by parents are who are concentrating on using their newly-learned skills correctly. These sessions should be no shorter or longer than 5 minutes. If the sessions are longer than 5 minutes, the child may feel fatigued. Especially if the child consistently exhibits behavior problems, the good behavior may not last longer than the 5-minute window.

Following the teaching phase, therapists use coaching sessions to help parents master the skills of CDI (Schaffner, 2013). During these sessions, therapists provide suggestions and direction to build and maintain rapport (Eyberg & Bussing, 2010).

Do Skills

The "do skills" are an essential component of the CDI phase, also known as the PRIDE skills. These communication components help parents let the child lead play and provide positive feedback for prosocial behaviors.

Praise. Praise is an essential element for increasing positive behaviors. During CDI, parents are expected to provide frequent praise to their children. Some parents struggle to praise their child, while others have no difficulties (McNeil & Hembree-Kigin, 2010). In PCIT, the master criterion for providing praise is delivering one labeled praise every 30 seconds (Schaffner, 2013). Praises can be understood in two categories: labeled and unlabeled praises. Labeled praises are when the child understands completely why she is being praised. For example, a parent may say, "I love the way you put down that block so nicely." The child knows that the parent was praising her for playing appropriately with the block. In contrast, an unlabeled praise is when the child does not know why she is being praised. For example, a

parent may say "good job" to their child. The phrase "good job" is considered a positive praise, but it does not indicate to the child why she is being praised. Labeled praises are preferred over unlabeled praises because they are more specific and indicate to the child what she is being praised for (McNeil & Hembree-Kigin, 2010).

   Reflect. The second pride skill is the reflection. By reflections, it simply means to reflect or repeat what the child is saying. For example, if a child says, "I built a house," the parent would repeat, "you built a house" (McNeil & Hembree-Kigin, 2011, p. 62). To most parents, this may seem unnatural and odd at first. However, as sessions continue, parents become more comfortable and may use certain adaptations to the reflections, such as, correcting grammar mistakes made by the child or elaborating more on what they said. Reflections allow for communication, acceptance, understanding, and let the child know that her parent is listening (McNeil & Hembree-Kigin, 2011). Caregivers get into patterns of responding or acknowledging children with a head nod or simple responses such as "uh-huh," indicating that their attention is elsewhere. Reflective statements also keep the child in lead during conversations because it allows for the child to elaborate on what she is saying or doing. By reflecting what the child is saying, the parent is providing an immediate reinforcement (McNeil & Hembree-Kigin, 2011).

   Imitate. The third "do skill," is to imitate. It is imperative that parents be active participants with their children and not passive while playing. By imitating the child's play, it lets the child know that the parent is engaged in what she is doing. Imitation of the child in return enhances the child's imitation of the parent (Roberts, 1979). However, it is important to note that any behavior imitated by the parent is likely to be repeated by the child. Therefore, parents need to be cautious in which behaviors they choose to imitate, preferably choosing positive pro-social behaviors and not problematic behaviors (McNeil & Hembree-Kigin, 2011).

Imitations do not have to be solely verbal but can be actions as well. For example, a parent may pick up a similar toy that the child is using. Imitation is meant to be a form of "parallel" play in which the parent resembles the child's activity, always a few steps behind him or her but keeping the focus on the child's play (McNeil & Hembree-Kigin, 2010). Imitation is particularly helpful for parents who are not used to playing in developmentally appropriate ways. The process of imitation removes the burden of thinking how to interact and it lets the child lead the play.

    Describe. During CDI, parents are encouraged to watch their child's play closely and comment on the appropriate play (Eyberg, 1999). Specifically, Eyberg, Nelson, Duke, and Boggs (2005) developed the term "behavioral description" to refer to the ongoing commentary of a child's play. To be determined as a behavioral description, the description must refer to what exactly the child is doing, typically involving the word "you". For example, a parent would say "you are playing with the blocks" or "you are building a tower" as the child is actively performing these activities (McNeil & Hembree-Kigin, 2011). Eyberg also describes different forms of descriptions as information descriptions or neutral talk. These terms refer to when a parent introduces new information to play but is not directly describing what the child is doing. For example, a parent may say "the baby is sleeping." This does not describe what the child is doing, but what the baby doll is doing. Parents may also describe their own behavior, which is also coded as neutral talk. Numerous behavior descriptions are encouraged throughout the CDI phase because they allow for parental interaction while letting the child lead play sessions (McNeil & Hembree-Kigin, 2011).

    Additionally, behavioral descriptions allow for the child to brainstorm and problem-solve, while working at her own pace, without having to keep up with the parent. They also are a precursor to early elementary school concepts. While describing behavior, parents can make

comments about shapes and sizes or other pre-academic skills. Also, this provides opportunities for parents to make corrections for phonological processing or grammar. It is believed that over time, behavioral descriptions allow for children to organize their thoughts and become more concentrated on the tasks at hand. As time goes on, children begin to internalize these behavioral descriptions and internalize them as private speech, which is beneficial in later social-emotional development when entering the school-age years (McNeil & Hembree-Kigin, 2011).

Enthusiasm. The last "do skill" is to be enthusiastic. Parents need to be enthusiastic during play to make this special time exciting and engaging. In order to be enthusiastic, parents need to use certain tones that are warm and expressive. Being enthusiastic not only makes the interactions enjoyable for the child, but for the parent, as well. Some parents may struggle with this, especially if they are depressed or anxious, while others may find it easy to be animated and expressive. If parents do struggle, therapists are encouraged to model enthusiastic tones and to inform parents to select toys that they find enjoyable, so the enthusiasm comes more naturally (McNeil & Hembree-Kigin, 2011).

Selective Attention and Ignoring

When a child is exhibiting negative behaviors, there is often a negative cycle of attention that is developed between the parent and child. Parents with children who consistently exhibit problem behaviors are exhausted and overwhelmed. When their child eventually does exhibit positive behavior, the parents often overlook it or miss it completely because the parent will obtain the opportunity to have a break from the misbehaving child (McNeil & Hembree-Kigin, 2011). This results in the child manifesting problem behaviors to gain the parents' attention. However, this cycle can be broken by teaching parents to use selective attention and the CDI "do skills." Parents are taught to overly praise their child for positive behaviors and ignore the

negative ones. The first step in teaching parents to use selective attention is having them identify the positive behaviors they would like to see from their child. Sometimes, this can be hard if their child is often defiant. However, it is important to tell parents that there are positive pro-social behaviors that are not often recognized; for example, eye contact, being gentle with a toy, smiling, sharing, playing quietly while adults talk, etc. (McNeil & Hembree-Kigin, 2011). Secondly, parents are taught to be on the lookout for these behaviors. As soon as the child shows a pro-social behavior, he or she should be praised immediately and with excitement. Therapists also encourage parents to use this strategy throughout the day and not just during the PCIT session.

As aforementioned, in addition to praising positive behaviors, parents are taught to ignore the negative behaviors. This technique is called "selective ignoring" (McNeil & Hembree-Kigin, 2011). Like selective attention, parents should identify problem behaviors they wish to diminish and be aware of them occurring, so they can utilize this technique. However, it should be noted that this skill only works on behaviors that are meant to elicit a reaction from the parents (McNeil & Hembree-Kigin, 2011).

An important principle about selective ignoring is that the behavior will get worse before it gets better (McNeil & Hembree-Kigin, 2011). Children who are accustomed to having their parents react to a specific problem behavior will often escalate their behavior in an attempt to elicit a response. Some parents may be wearied in using selective ignoring, especially if the parents are highly stressed or have a high level of anxiety and have difficulty handling their child's behavior worsening. In these situations, it is important for the parent to be open with the therapist so they can talk through these challenges. Lastly, selective ignoring does not work if the child does not exhibit positive behaviors. When a parent chooses to use selective ignoring,

he or she must ignore the problem behavior completely until the behavior stops or a pro-social behavior is shown (McNeil & Hembree-Kigin, 2011). If parents give into the disruptive behavior before it has ended, this will teach the child that she will be rewarded for escalating her negative behaviors.

Avoid Skills

Similar to the "do skills" of PCIT, there are also behaviors that parents are taught to avoid. These are referred to as the "don't behaviors." As mentioned previously, the goal of CDI is to have the child lead play. However, there are numerous naturally-occurring situations where the child is prevented from leading play. Therefore, parents are instructed to avoid certain skills throughout the CDI phase. The first skill that parents are taught to avoid are commands. According to McNeil and Hembree-Kigin (2011), commands take the lead away from the child. Commands can be differentiated into two categories: direct and indirect commands. Direct commands are obvious to the child; for example, "give me the crayon" (McNeil & Hembree-Kigin, 2011, p. 56). Indirect commands are less obvious, and many caregivers use them without realizing. For example, "How about using the pink crayon now?"

The second skill that parents are told to avoid are questions. For many parents, this is the most difficult skill to avoid. However, questions tend to lead the conversation and when used by parents, this takes away the lead from the child (McNeil & Hembree-Kigin, 2011). Questions could begin with "who", "what", "when", "why", "where", and "how." Also, statements may be turned into questions depending on the parents' inflection of voice. For example, "you want to put that there?" (p. 56) or "that is pretty, isn't it?" Additionally, "question tags" are common mistakes within the CDI phase. Question tags are questions, but are shorter and much more common. Examples of question tags are "alright?", "isn't it?", "huh?", "okay?", etc. (p. 56). It

should be noted that parents may use questions outside of special playtime, but the use of rapid fire questions during PCIT sessions should be avoided (McNeil & Hembree-Kigin, 2011).

Lastly, the final avoid skill is sarcasm and criticism. There are several reasons why criticism and sarcasm should be reduced during the CDI phase. First, criticism is not effective in decreasing problem behaviors. In contrast, criticism actually increases negative behaviors (McNeil & Hembree-Kigin, 2011). This is because when a child exhibits a problem behavior and a parent responds critically, this is still providing the child with attention for his or her negative behaviors. Secondly, the CDI sessions or "special play time" should be pleasant for the child.

Parent-Directed Interaction (PDI)

Once parents/caregivers reach mastery during the CDI phase (10 labeled praises, reflection, and behavior descriptions, and fewer than three questions, commands and criticisms in a 5-minute observation as described in the PCIT manual), they move on to the Parent-Directed Interaction (PDI) phase. Unlike the CDI phase, the goal of the PDI phase is to set clear limits with the child. Preschoolers who do not learn how to accept limit setting by their caregivers are at risk for poor adjustment in kindergarten and may be retained due to lack of behavioral readiness (McNeil & Hembree-Kigin, 2011). Once children have learned to respond to consistent external limits, they begin to internalize rules for conduct and generate rule governed behavior which, in return, facilitates positive classroom adjustment (McNeil & Hembree-Kigin, 2011).

Consistency, Predictability, and Follow Through

Children who exhibit problem behaviors need structure. Structure is defined "in terms of consistency, predictability, and follow through" (McNeil & Hembree-Kigin, 2011, p. 105).

Consistency suggests that parents use the same discipline skills every time. Predictability refers to the neutral reaction that parents are instructed to give when their child misbehaves. When parents have the same consistent and neutral reaction, children know what to expect and do not get the thrill of a parent's unpredictable reaction. The first rule of PDI is that children must comply with a command. Once a command is given to the child, the parent must determine whether the child complied or not. If the child complied, then positive, excited reinforcement is given. If the child does not comply, then a sequence of discipline procedures should be followed. It is important to iterate to the parent that a discipline procedure must be followed so the child learns that noncompliance results in consequences.

Effective Instruction/Commands

Another rule of the PDI phase is for parents to give effective commands. Children who exhibit behavior problems typically respond to commands differently than typical children (McNeil & Hembree-Kigin, 2011). However, noncompliance behavior can be corrected with simply making the instructions more understandable. According to the PCIT treatment, commands need to be direct, specific, stated positively in a neutral tone, and be given one at a time (Schaffner, 2013).

Timeout

Sometimes when parents present a child with an effective command during the PDI phase, children still will not comply. When noncompliance occurs, a timeout procedure is utilized. According to the treatment, some reasons for using time-out are: a) it allows noncompliant children to avoid receiving attention from others, b) boredom is an effective consequence, c) it is immediate, d) it allows for consistent follow through, and e) time-out is a commonly used discipline strategy in classrooms (McNeil & Hembree-Kigin, 2011). Therefore,

a timeout procedure increases across setting compliance by using consistent strategies within the home environment, these discipline procedures are also translated to the school environment.

Evidence-Base for PCIT

Since the development of PCIT in the 1970s, there have been numerous studies conducted to demonstrate PCIT's success and effectiveness. The majority of studies to date have implemented randomized control trials (Ward, Theule, & Cheung, 2016). Early research on PCIT began by demonstrating changes in disruptive behavior post-treatment when compared to children with no treatment (McNeil, Capage, Bahl, & Blanc, 1999; Schuhmann, Foote, Eyeberg, Boggs, & Aligina, 1998). Extensive research has been conducted on PCIT that provides evidence for its effects in treating children. For example, Parent-Child Interaction Therapy International (2017) provides a thorough list of research studies that have been conducted over the past decade. Additionally, Thomas and Zimmer-Gembeck (2007) provide a comprehensive meta-analytic overview of PCIT. Their meta-analysis included thirteen studies that aimed to determine the influence of PCIT on children with behavioral disorders. Furthermore, Ward, Theule and Cheung (2016) conducted another meta-analysis based on Thomas and Zimmer-Gembeck's (2007) study; Ward, Theule, and Cheung (2016) included updated literature and relevant research published since 2004. Both meta-analyses conducted provided evidence that PCIT is effective in reducing externalizing behavior problems in children with disruptive behavior disorders (DBD).

In addition to PCIT's effectiveness in reducing externalizing behaviors, it has also been found to be effective in reducing parental stress and increasing parental skill acquisition when working with their children (Niec, Barnett, Prewett, & Chatham, 2016). Findings have also included more positive parent-child interactions, more internal locus of control for parents, and a

higher parental tolerance for their child's disruptive behaviors (Boggs et al., 2004; Eisenstadt et al., 1993; Schaffner, 2013; Schuhmann et al., 1998). Ward, Theule, and Cheung (2016) also discovered that clinical diagnosis was not a determining factor as to whether PCIT would be effective. For example, PCIT was just as effective with children who had been diagnosed with ADHD as it was with children diagnosed with a DBD. For example, PCIT has been used with children diagnosed with Autism and developmental delays (Lesack, Bearss, Celano, & Sharp, 2014), adopted children (Allen, Timmer, & Urquiza, 2014), foster children (Timmer, Urquiza, & Zebell, 2006), physically-abused children (Filcheck, McNeil, & Herschell, 2005), children with separation anxiety disorder (Pincus, Eyberg, & Choate, 2005), and children with depression (Luby, Lenze, & Tillman, 2012). Moreover, the impact of PCIT in reducing problem behaviors has been shown in different cultural populations, including Chinese families (Leung, Tsang, Heung, & Yiu, 2009), Mexican American families (McCabe & Yeh, 2009), and Australian families (Phillips, Morgan, Cawthorne, & Barnett, 2008). Furthermore, PCIT has been generalized to numerous settings, including classrooms.

Teacher-Child Relationships

In addition to the parent-child relationship, the teacher-child relationship is just as imperative (Schaffner, 2013). The quality of children's relationships with their early education teachers is increasingly being recognized as a contributor to school adaptation and social-emotional growth (Pianta & Stuhlman, 2004). Therefore, these relationships also have the potential to exert a positive or negative influence on a child's ability to succeed academically and behaviorally in school. In fact, the development of children's early abilities in numerous domains has been linked to the quality of teacher-child relationships (Pianta & Stuhlman, 2004). According to Pianta, Steinberg, and Rollins (1995), kindergarten children who have highly

negative relationships with their teachers have been found to demonstrate higher levels of behavior problems and lower levels of behavioral competencies two years later as compared to peers who have highly positive relationships with their kindergarten teachers.

Secure and improved teacher-child relationships are associated with competent behavior, whereas dependent-teacher child relationships have been associated with deficits in prosocial behaviors and an increase in disruptive behaviors (Pianta & Nimetz, 1991). This concept is particularly important because it implies that attachment theory principles and PCIT techniques can be applied within the school setting. Additionally, given the associations between teacher-child relationships and children's behavioral adjustment and social-emotional growth, it is not surprising that children who have poor relationships with their teachers will have a harder time forming positive pro-social relationships with their peers. As indicated by previous research, the need for an intervention that not only reduces disruptive behaviors within the classroom but also improves the quality of teacher-child relationships is warranted.

Teacher-Child Interaction Training

TCIT is an adaption of PCIT that is utilized within the classroom with teachers and students. TCIT, like its predecessor, PCIT, encompasses positive reinforcement through praise, teacher modeling, and various classroom management strategies to decrease undesirable attention-seeking and disruptive behaviors (Garbacz, Zychinkski, Feuer, Carter, & Budd, 2014). Additionally, some models of TCIT contain a timeout component. Similar to PCIT, teachers learn to interact with children by using play therapy techniques that are drawn directly from PCIT (Garbacz et al., 2014). The treatment is comprised of two phases: The Child-Directed Interaction phase (CDI) and the Teacher-Directed Interaction phase (TDI). Given the strong effects of PCIT and the need for evidence-based interventions within the preschool setting, it is

not shocking that the same techniques are being explored within the preschool setting (McIntosh, Rizza, & Bliss, 2000). Although the interest in TCIT is beginning to grow, it remains a new area of research. However, since McIntosh and colleagues explored the first research study with TCIT in 2000, there have been several journal articles, dissertations, presentations, and workshops focusing on TCIT within the last decade (Schaffner, 2013).

In contrast to PCIT, TCIT does not have a manual for service providers to follow (McIntosh, 2010; Schaffner, 2013). However, TCIT is a guide for behavior management within the classroom and has been adapted to the various needs of different educational environments.

Evidence Base for TCIT

McIntosh, Rizza, and Bliss (2000) are credited with the first empirical research study on TCIT (Schaffner, 2013). The authors employed a case study approach to the implementation of TCIT within a preschool setting. The goals of their study were to improve the quality of the teacher-child relationship and to provide teachers with training in problem-solving. This allowed them to acquire the strategies and skills to manage the disruptive behaviors presented in their classrooms (McIntosh et al., 2000). As with PCIT, TCIT uses direct coaching by the psychologist to aid teachers in modifying aggressive, disruptive, and non-compliance in their students (McIntosh et al., 2000).

McIntosh and colleagues (2000) used the Dyadic Parent Interaction Coding System (DPICS; Eyberg & Robinson, 1083) to measure the behaviors of both teachers and children. However, it should be noted that the DPICS was changed to the Dyadic Teacher-Child Interaction Coding System (DTICS) to accommodate for the need to use the system with teachers. As previously mentioned, TCIT consists of two phases: CDI and TDI. As seen in PCIT, the CDI phase is meant to enhance the teacher-child relationship (McNeil et al., 1991).

During the TDI phase, the goal is to decrease the child's problem behaviors and increase the occurrence of positive prosocial behaviors (McNeil et al., 1991). Throughout the study, teachers' use of positive interactions increased while the student's problem behaviors decreased. Additionally, the amount of critical statements used by teachers decreased.

In 2010, McIntosh implemented a second case study that was meant to mimic the first study conducted in 2000. Similar to the first study, there were 12 sessions with both the CDI and TDI phases. Additionally, the Dyadic Teacher Interaction Coding System (DTICS) was used to measure teacher-child behavior. Similar to the first case study, positive teacher-child interactions increased; specifically, the number of praises, behavior descriptions, and reflections increased across the course of treatment. In contrast, the number of criticisms, commands, and questions used by the teachers decreased. Additionally, the student's disruptive behaviors decreased. By the last two sessions, the number of commands presented by the teacher matched the number of compliances seen in the student.

Following these studies, numerous considerations arose for the implementation of TCIT. First, finding coverage for teachers who were participating in the TCIT treatment was difficult. Preschools are presumably chaotic in nature; therefore, finding the time and resources to accommodate the other students within the classroom while the teachers were working with a single student was challenging. However, this was counteracted by scheduling TCIT sessions during nap time and lunch. Additionally, teachers expressed concerns with the timeout procedure utilized within TCIT. However, after role-playing with the school psychologist and reaffirming consistency with punishment procedures, the teachers became more comfortable with utilizing this technique. Furthermore, the DTICS used to measure child and teacher behavior was not an accurate tool to measure lasting behavior change because it only codes for

parental interactions and not the change of child behavior. Future research should include a standardized measure of behavioral change where inter-rater reliability should be calculated and reported. Lastly, the results of both studies provided the need to increase TCIT's research base.

In 2004, Filicheck, McNeil, Greco, and Bernard implemented TCIT in one preschool classroom with one teacher and 17 children. Teachers who participated in this study received 1 hour of CDI training and 1.5 hours of TDI training. Once training was completed, teachers were coached for 2 hours on the skills during each phase of treatment. During the TDI phase, the timeout procedure was rehearsed with the students to ensure understanding of the discipline protocol. Results indicated that student problem behavior decreased with the CDI phase alone and then continued to decrease throughout the TDI phase of treatment. Additionally, teacher behavior improved with the increase of labeled praises and the decrease of criticisms.

Following Filicheck and colleagues' (2004) study, some researchers implemented TCIT at the first-tier level. Tiano and McNeil (2006) and Lyon and colleagues (2009) implemented TCIT across multiple classrooms in general preschool populations. Researchers in both studies hypothesized that teachers would increase their use of positive interactions and decrease criticisms throughout the training, improving their quality of instructing and managing classrooms. Additionally, Lyon and colleagues (2009) explored teacher acceptability of the intervention while Tiano and McNeil (2006) aimed to examine child behavior change.

Tiano and McNeil (2006) included teachers and students from eight Head Start classrooms in southwestern Pennsylvania. Classrooms were randomly assigned to either the control or experimental group, and data were collected pre-and post-treatment. Similarly, Lyon et al. (2009) included four preschool classrooms in an urban, religious, affiliated day center in

Chicago. A total of 78 children between the ages of 3 and 5 years old, with a distribution of 19-21 students per classroom, received the intervention.

In order to measure teacher and child interactions, both studies used the Dyadic Parent Interaction Coding System (DPICS). However, Tiano and McNeil (2006) used the Revised Edition of the School Observation Coding System (REDSOCS; Jacobs, Boggs, & Eyberg, 2000) as an additional measurement to record both teacher and student classroom behavior. Additionally, both studies included a scale to ensure teacher likability of the TCIT intervention. Both studies included training sessions before the implementation of TCIT. However, Lyons (2009) spent 1.5 hours training the teachers compared to Tiano and McNeil (2006), who spent two hours training their teachers per session. Both studies adapted their TCIT protocol from the PCIT manual with adaptations to accommodate each individual classroom. Additionally, the timeout procedure was used in both studies. However, each researcher introduced the timeout procedure differently. Tiano and McNeil (2006) used a procedure called the "Thinking Chair," whereas Head Start classrooms utilize timeout as a last resort strategy for less-intrusive behavior management techniques. The phrase, "Thinking Chair," emphasizes a positive aspect of timeout, providing the child opportunities to think about his or her actions and consequences without receiving attention for his or her behavior (Tiano & McNeil, 2006). In contrast, Lyon and colleagues (2009) called their timeout procedure "Sit and Watch." During the planning process, teachers decided which behaviors would constitute a student to be sent to the "Sit and Watch" chair. Behaviors measured and the length of time a student was in the "Sit and Watch" chair varied across classrooms.

Following the research studies, different results were found. Tiano and McNeil (2006) found that child inappropriate behavior improved throughout the study regardless of the group.

This is particularly important because prior to treatment, teachers were not reporting high levels of problem behavior. Therefore, conclusions about the effects of TCIT could not be made from this data (Tiano & McNeil, 2006). Child behavior may have also improved due to developmental progression across treatment. In regard to teacher behavior, teachers in the treatment group used more labeled praises and less criticisms when compared to teachers in the control group. Similarly, Lyon and collegues (2009) found that teachers increased their positive behaviors throughout treatment and decreased their use of criticisms. Additionally, teacher acceptance of the TCIT intervention was found to be at a high level. Satisfaction was high for both the CDI and TDI phases, which is consistent with the findings of Filicheck et al. (2004).

Tiano and McNeil (2006) also noted several limitations within their study. First, child inappropriate behavior was notably low prior to the implementation of TCIT. Therefore, this could affect the teacher ratings of class manageability, number of timeouts, and teacher skill use in the classroom. Second, classrooms in this study were located in one large school, possibly indicating that teachers in the treatment group could discuss learned TCIT skills with the control group teachers. Lastly, generalizability from this study should be taken with caution. The sample consisted of teachers and children from rural areas that were mostly Caucasian. Lyons and colleagues (2009) discussed the lack of resources as a barrier to implementing TCIT. Consistent with Tiano and McNeil (2006), there was also discussion of caution for generalizability of settings and populations because the study was implemented within the same preschool in an urban setting.

In 2014, Garbacz and colleagues implemented another class-wide intervention that addressed some limitations in the Lyon et al. (2009) study. Garbacz and colleagues (2014) aimed to identify child behavior change through a strength-based teacher-rating measure, the

Devereux Early Childhood Assessment (LeBuffe & Naglieri, 1999). Classroom observations of teacher skill use were conducted with teachers throughout the intervention to track teacher skill change. In addition, teacher ratings provided an idea of engagement and feasibility for the intervention (Garbacz, Zychinski, Feuer, Carter, & Budd, 2014). The TCIT intervention took place in an urban, private childcare center, which was a similar setting to the initial study (Lyon et al., 2009). Children (i.e., 51 children aged 2-3) and teachers (i.e., 3 teachers from each classroom) from four daycare classrooms participated in the TCIT intervention. The study consisted of a CDI phase, TDI phase, and a follow-up phase. Similar to previous class-wide TCIT research, the PCIT manual was adapted to meet the needs for protocol throughout the intervention. Additionally, Garbacz and colleagues (2014) implemented the same "Sit and Watch" timeout procedure as Lyon et al. (2009) used.

Consistent with Lyon et al. (2009), teachers demonstrated improvement in their use of PRIDE skills throughout the TCIT intervention. Also, teacher engagement and satisfaction data supports that teachers felt positively about TCIT. In contrast to Lyon et al. (2009), Garbacz and colleagues (2014) investigated child behavior change. Results indicated a large decrease in problem behavior for the whole-group and for at-risk children, as identified by the teachers. However, consistent with Tiano and McNeil's study (2006), there were lesser changes in behavior for students who were not previously identified for disruptive behaviors in the classroom. Consistent with Lyons et al. (2009), there was a lack of generalizability. The TCIT intervention was implemented with non-clinical students who came from similar backgrounds. Additionally, it was found that observations of teachers and training of coders needs to be better standardized in future TCIT research studies. For example, observations in the current study took place over a range of classroom activities; however, the activity type was not systematically

controlled for and the effects on activity type on teacher skills could not be analyzed (Garbacz et al., 2014). Despite the limitations of the aforementioned class-wide TCIT studies, there are encouraging findings that support this model. Consistent findings indicate that teacher skill use improves with child behavior and social-emotional change. The importance of teacher-child relationships is also emphasized within TCIT, which has significant impacts on the quality of classrooms in early childhood educational settings (Garbacz et al., 2014).

In 2015, research continued on the implementation of TCIT as a universal prevention program serving Tier 1 students. Fernandez and colleagues (2015) examined TCIT in more classrooms than previously reported in the literature, with older children, and using a random assignment of classrooms to TCIT or to a non-TCIT control. Participants included 11 kindergartens and first grade classroom teachers and their 118 students from an urban public school in Manhattan. Observations of student behavior and teacher skill acquisition were conducted before and after implementation. Results indicated that after receiving TCIT, teachers increased their positive attention to students' appropriate behavior, decreased their rates of negative attention, reported less stress, and demonstrated a higher satisfaction with the training program (Fernandez et al., 2015). Additionally, Budd and colleagues (2015) implemented TCIT as a pilot test for the feasibility of having local school staff independently implement TCIT following training provided by their research team. This study indicated that following the implementation of TCIT, teacher ratings of children's total protective factors increased, while their ratings of behavior concerns decreased. Additionally, teachers and staff showed an increase in positive attention skills (Budd, Garbacz, & Carter, 2015). These two studies add to the literature indicating that TCIT can be effective as a universal prevention program within general classroom populations.

Previously discussed research has shown positive outcomes for children and teachers following the implementation of TCIT. However, previous research included students who either were not exhibiting behavior problems within the classroom setting or if they were, they were not clinically diagnosed with a disruptive behavior disorder. Therefore, Schaffner, McGoey, and Venseky (2016) examined the effects of TCIT within an urban clinical preschool population. In contrast with previous studies, their study only included the CDI phase of treatment and a maintenance phase due to time constraints. They aimed to investigate if TCIT would significantly reduce disruptive behaviors, increase prosocial behaviors, and increase teachers' use of positive attention skills within the classroom. What makes their study unique is that TCIT was implemented in a therapeutic classroom where all participants were diagnosed with a disruptive behavior disorder by the Diagnostic and Statistical Manual of Mental Disorders (4th ed. Text rev.; American Psychiatric Association, 2000). Participants included four males between the ages of four and five. Similar to previous studies, the Dyadic Parent-Child Interaction Coding System was used to code teachers' use of positive attention skills used during the Child-Directed Interaction phase. Additionally, the Preschool Observation Code (Bramlett, 1993) was used. This direct observation coding system was designed to assess and monitor behavior of preschool children and record for both state and event behaviors. Schaffner et al. (2016) used four different coding categories for child behavior: (1) Negative Verbal Interaction (i.e., negative statements towards another individual, including verbally abusive statements, aggressive remarks, verbal refusal to comply with teacher directives), (2) Negative Motor Interaction (i.e., behavior associated with aggressive acts, such as hitting, kicking, biting, pinching, pushing), (3) Disruptive Behavior (i.e., includes yelling, throwing objects, standing on furniture, temper tantrums, destruction of peers' property/materials), and (4) Play Engagement

(i.e., engaged with play materials or toys in purposeful activity; Schaffner et al., 2016, p. 4). This study utilized a single-subject A-B across participants design. The design included a baseline phase, an intervention phase (i.e., CDI coaching), and a maintenance phase for each child.

Results indicate a decrease in the mean percentage of disruptive behaviors across participants from the baseline to intervention phase. Additionally, from the intervention phase into the maintenance phase, behaviors that were considered disruptive occurred less often. In regard to prosocial behaviors, results indicate that some participants engaged in more prosocial behaviors than others, but all participants made clinically meaningful gains (Schaffner et al., 2016). Additionally, teachers reduced their use of criticisms, commands, and questions to a more desirable amount. Although none of the teachers met mastery of the PRIDE skills, there was an overall increase in the frequency of skill use throughout the TCIT intervention. These results support the initial findings of the positive impacts of the Child-Directed Interaction phase of TCIT with a clinical population. However, this study presents certain limitations. First, the study utilized a single subject A-B across participants design to examine the effects of the TCIT intervention. However, incorporating additional design components would strengthen the design, such as a multiple baseline design (Schaffner et al., 2016). Second, the TCIT intervention occurred over several months, presenting concerns for maturation and attrition effects of the participants. This possibly indicates that the children's natural development of skills could have contributed to increased behavioral self-control. Additionally, one participant dropped out of the preschool program, resulting in attrition. Replication of this study would further reinforce the results of this study. These results provide support for the focus on high-quality teacher-child interactions, especially with a clinical population. Additionally, this

research suggests that the use of PRIDE skills alone may improve child behavior within the classroom and improve teachers' skill use.

Summary

PCIT is an evidence-based treatment designed to be used with individual families to address behavioral problems of children 2 to 7 years of age (Eyberg & Funderburk, 2011). Additionally, it is intended to improve the quality of parent-child relationships. Two phases comprise PCIT: CDI and PDI. TCIT is an adaptation from PCIT that focuses on the teacher-child relationship. TCIT incorporates the core principles and goals of PCIT, while accommodating to the unique characteristics of the classroom (Garbacz et al., 2014). It involves many features of other universal early childhood prevention programs, including positive reinforcement through praise, teacher modeling, and various classroom management strategies to decrease disruptive behaviors (Garbacz et al., 2014). Similar to PCIT, TCIT is composed of two phases: CDI and TDI. Both phases have the same purposes as the CDI and PDI phases in PCIT. McIntosh and colleagues (2000) presented the first research study on TCIT, which showed significant results in the reduction of disruptive behaviors and decreasing the need for the teacher to issue commands. Since this study, additional studies have provided similar results (Filcheck, McNeil, Greco, & Bernard, 2004; Garbacz, Zychinksi, Feuer, Carter, & Budd, 2014; Lyon, Gershenson, Farahnaz, Thaxter, Behling, & Budd, 2009; Tiano & McNeil, 2006; Schaffner, McGoey, & Venesky, 2016). However, additional research is needed to provide evidence for the effects of TCIT. In the next chapter I will discuss the specific methods for implementing TCIT in a preschool setting at an intensive level utilizing a three-tiered approach.

Chapter III: Methods

In order to assess the effects of TCIT, a single-subject research design was utilized in this study. Single-subject research is considered experimental rather than correlational or descriptive, and its purpose is to document functional relationships between independent and dependent variables (Horner et al., 2005); specifically, between an individual and their own behavior change. This allows for researchers to study behavioral processes at the individual level and in settings that may not be applicable for experimental control. Furthermore, Single-subject design provides expedient methods for evidence-based practice, therefore leading to greater acceptance by the public (Satake, Jagaroo, & Maxwell, 2008).

Single-subject designs provide an appropriate alternative to group designs or laboratory research when external validity is considered to be of paramount importance. In single-subject research studies a participant's behavior is repeatedly measured under at least two conditions, baseline and intervention, using direct observation procedures (Gast, 2010). To ensure the fidelity of these measures, it is important that observers operationally define the behaviors being measured and use a standardized measuring procedure. In regard to internal validity, specifically in multiple-baseline designs, once the intervention is introduced there should be an immediate and abrupt change in behavior while other conditions remain unchanged due to no intervention implementation (Gast, 2010). However, internal validity can be problematic if there are history and maturation effects. Therefore, validity may be more of a concern in comparison to traditional experimental design where there is more stringent control. However, unlike traditional experimental designs, single-subject research designs are undergirded by the assumptions of behaviorism, comparing behavior change to the individual himself or herself (Haegele & Hodge, 2015).

Participants

Three preschool children were included in the current study from two preschool classrooms. All participants attended an urban private preschool in Southwestern Pennsylvania. Additionally, three teachers participated in the TCIT intervention. All participants were exposed to the PRIDE skills and a previously implemented social-emotional curriculum prior to the TCIT intervention. These participants were chosen because they were not responding to existing interventions put into place as evidenced by the Social Skills Improvement Rating Scale. Additionally, these students were chosen from a team-based decision.

Participant one. Sally, age 5, was a Biracial female who participated in the TCIT intervention with Teacher 1. Sally had no IEP, behavioral, or mental health diagnoses at the time of the intervention. Teacher 1 was a Caucasian female and was one of the lead teachers for the preschool room. She had her B.S. in Education and was working on her master's degree during the TCIT intervention.

Participant two. Griffin, age 4, was a Biracial male who participated in the TCIT intervention with Teacher 2. Griffin had an IEP during the time of the intervention for speech. Teacher 2 was a Caucasian female who was one of the lead teachers for her preschool room. She had B.S. in Leadership and Ministry and was in the process of completing her Child Development Program during the TCIT intervention.

Participant three. Billy, age 4, was a Caucasian male who participated in the TCIT intervention with Teacher 3. Billy had an IEP during the time of the intervention for speech and other developmental delays. Teacher 3 was a Caucasian female who was a co-lead teacher with Teacher 1 in the same preschool classroom. Teacher 3 had a B.S. in Education.

One advanced doctoral student participated as an observer and a coder and one emerging advanced doctoral student participated as an observer. The advanced doctoral student, a Caucasian female, had an M.S.Ed. in Child Psychology. Although, not certified in PCIT, she had extensive PCIT training from a Masters Level trainer throughout her undergraduate career. Additionally, she had continuous consultation with certified PCIT providers and practiced her PCIT skills with ongoing cases at a different clinical setting. The emerging advanced doctoral student was a first-year doctoral school psychology student with his B.A. in Psychology.

Measures

Social Skills Improvement System (SSIS)

The Social Skills Improvement System (SSIS) is a norm-referenced measure for screening and classifying student social behaviors that are imperative for school success. The rating scales include four components: The Social Skills Scale, the Behavior Problems Scale, the Autism Spectrum Subscale, and the Academic Competence Scale. For the purposes of this study, only the Social Skills Scale and Behavior Problems Scale were completed using the Teacher rating scale form. The SSIS was given to teachers three times throughout the 2018-2019 school year, during the fall, winter, and spring to monitor student behavior throughout the tiered intervention process. Additionally, the SSIS helped inform the team as to which students would be referred for the TCIT intervention. The SSIS will be used as a global measure of behavior change pre and post intervention.

Sutter-Eyberg Student Behavior Inventory – Revised (SESBI-R)

The Sutter-Eyberg Student Behavior Inventory - Revised (Eyberg & Pincus, 1999; Funderbunk & Eyberg, 1989) measures behavior in the classroom setting and is completed by teachers. The SESBI–R measure was developed in the 1980's to measure behavioral problems in

children ages 2-16 years within the academic setting. It is easy to complete (5 minutes) and is well-adapted to the preschool classroom and quantifies problem behaviors that are occurring (McNeil & Hembree-Kigin, 2011). It contains 38 items that are rated on both intensity and problem scales, which allows teachers to indicate the current frequency of child's behavior problems and decide the extent to which the behaviors are problematic (Eyberg & Pincus, 1999). The SESBI-R was given weekly to each students' teacher during the individual TCIT intervention sessions.

Dyadic Parent-Child Interaction Coding System (DPICS)

The Dyadic Parent-Child Interaction Coding System (Eyberg & Pincus, 1999; Schaffner, McGoey, & Venesky, 2016) was used throughout this study to code teacher-child interactions, and teachers' use of positive skills, commands, questions, and criticisms. For all observation measures, one coder (an advanced doctoral student) completed the DPICS. Additionally, the DPICS was used throughout the Tier 1 and Tier 2 phases of the TCIT intervention to code teacher use of PRIDE skills. The same advanced doctoral student and another staff member of the preschool were used as coders throughout. It should be noted that coders were required to reach mastery in use of PRIDE skills before coding teachers within their general classroom setting.

Revised Edition of the School Observation Coding System (REDSOCS)

The REDSOCS is an interval coding system designed to assess the disruptive behaviors of preschool and elementary school age children. The recording system contains 3 behavioral categories, Inappropriate Behavior, Noncompliant Behavior, and Off-Task behavior, which is specifically assessed within the classroom setting. Each child was observed at least once a week

by either two coders. To assess for reliability, both coders coded together for 25% of the

observation sessions. Each observation session lasted 10 minutes.

Therapy Attitude Inventory (TAI)

The Therapy Attitude Inventory (TAI) is a 10-item scale of satisfaction with the process

and outcome of treatment or therapy (Brestan, Jacobs, Rayfield, Eyberg, 1999). This scale is

typically completed by parents; however, it was used by teachers within this study. Overall, the

questions on the TAT related to the TCIT intervention and only a few adaptions were made to

better fit the teachers' perspectives. Additionally, this measure was chosen because it is endorsed

by PCIT International (PCIT.org).

Research Design

A nonconcurrent multiple-baseline design across participants was used to assess the

effects of the TCIT intervention. The design included a baseline phase, an intervention phase,

and a maintenance phase. A multiple-baseline design staggers the intervention changes across

various entities (Harvey, May, & Kennedy, 2004). Therefore, the baseline and intervention

phases are not co-occurring across each of the participants. A multiple-baseline design was

chosen because the skills built throughout TCIT are not intended to be reversed. Additionally, a

multiple-baseline design includes numerous baselines, which represent a more powerful research

design than a single-subject A-B design which only has one baseline phase. The baseline phase

included a varying amount of 10-minute observations of each child's behavior within the

classroom setting using the REDSOCS recording system to monitor disruptive behavior of the

students participating in the study. Additionally, teachers were observed for 5-minutes using the

DPICS across phases to measure teacher-child interactions and PRIDE skill use. These 5-minute

coding sessions were pull out sessions with the teacher and child dyads. Following the baseline phase, the TCIT intervention was introduced to the teachers.

Procedures

Prior to the beginning of this study, teachers at the preschool were trained in the PRIDE skills that are utilized within the TCIT intervention along with a social-emotional curriculum (i.e., Bucket Fillers Curriculum) at a whole-school level or Tier 1. The training was conducted by a licensed psychologist, an advanced doctoral student, and an emerging advanced doctoral student. Following the instruction on the PRIDE skills, teachers returned to teaching with the knowledge to utilize the PRIDE skills and the Bucket Fillers Curriculum. Data was then collected weekly on each teacher's use of the PRIDE skills within their classroom setting using the DPICS coding system. Data was collected by an advanced doctoral student and a staff member of the preschool. Both coders had previously met mastery in PRIDE skill use and had experience in DPICS coding. Teachers were coded for 5 minutes weekly during "special play time." Teachers were not required to meet mastery prior to the individual TCIT intervention. However, it was hypothesized that teachers would reach mastery of PRIDE skills in the first phase of TCIT rather quickly in order to move onto the second phase of the intervention. Furthermore, Teachers completed SSIS's on all of their students throughout the Tier 1 level which provided data on which students were or were not responding to the Tier 1 interventions.

If data from the SSIS indicated that the use of PRIDE skills at a whole-classroom level had no behavioral change for students, they were then referred to a Tier 2 level of intervention. Tier 2 consisted of more intentional use of the PRIDE skills by adding selective attention and ignoring components. Additionally, more individual coaching was provided by the advanced doctoral student within the classroom using an in-vivo coaching model.

Following the implementation of Tier 2, if students were not showing behavioral change, they were then referred for Tier III or intensive intervention. The SSIS rating scales, observation, and team input was used to inform these treatment decisions. Tier III consisted of individual coaching with the teacher and student during the TCIT intervention in both the CDI and TDI phases. Individual TCIT sessions took place during pull out sessions with the teacher and child while an advanced doctoral student coached the teacher throughout the TCIT intervention through in-vivo coaching. The advanced doctoral student who conducted the TCIT sessions had extensive prior experience with PCIT and was considered reliable to implement the intervention.

Baseline

The SESBI- R and DPICS were used to collect baseline data. The teachers who participated in the study were asked to complete SESBI – R prior to the intervention. Additionally, an advanced graduate student who had been trained in the DPIC's coding system coded teacher-child interactions for 5 minutes prior to the TCIT intervention. At the beginning of the individual TCIT coaching sessions, teachers were already trained in PRIDE skills and were using them within their classrooms. Therefore, teachers were required to reach mastery in PRIDE skill use before moving onto the TDI phase of treatment. As mentioned previously, teachers were implementing the Bucket Fillers social-emotional curriculum within their classrooms prior to the beginning of the individual TCIT intervention.

Intervention Phase

During the intervention phase, teachers and students received individualized TCIT once a week for approximately 30 minutes. Each teacher was coached through both the child-directed interaction (CDI) and teacher-directed interaction (TDI) phases of the intervention by an advanced doctoral student who had extensive knowledge in PCIT prior to implementation. In

order to coach the teachers throughout the TCIT intervention, an advanced doctoral student used an in-vivo coaching method instead of the traditional bug-in-the-ear system. Although teachers were already trained and utilized PRIDE skills throughout the school year, the needed amount of CDI sessions for each teacher to meet mastery of the PRIDE skills were conducted in order to establish a more individualized teacher-child attachment prior to the TDI phase. Additionally, since teachers were already familiar with PRIDE skills, mastery was required to be reached before moving onto the TDI phase. Once the teacher met mastery, the second phase of the TCIT intervention, TDI, began.

During the TDI phase, an advanced doctoral student coached the teachers to place consistent and predictable demands on the student while following through with consequences. During this phase, a "broken record" or a "swoop and ignore" punishment procedure was used instead of the traditional time-out protocol that is seen in the PCIT model. A broken record method is when the teacher will repeatedly repeat the command with a neutral tone and expression (with a 5 second pause in between commands) until the child complies. Additionally, teachers were taught to implement a "swoop and ignore" procedure where the teacher "swoops" the toys the child is playing with into a bin and takes them with him/her while ignoring the child's behavior and using the broken record procedure when appropriate. If the "broken record" and "swoop and ignore" procedures did not end up effective, an "if-then" statement was implemented using a preferred item within the classroom. For example, a teacher would be coached to say, "if you do not put the toy in the box, then you do not get to play with the toy kitchen tomorrow." All consequence procedures used within the TDI phase were chosen to minimize attention.

In order for teachers to complete the TDI phase, teachers must provide at least four commands during the 5-minute coding phase prior to the intervention session. Seventy-five percent of these commands must qualify as "effective" commands. Additionally, the teacher must demonstrate at least 75% of follow-through with the command sequence. For example, if the student complied with a command the teacher must respond with praise. Once the student complied with 100% of commands within the intervention, it was then a collaboration between the teacher and advanced doctoral student to clinically decide whether the intervention was appropriate to stop. It should be noted that the data collected within the TDI phase was for clinical and practical purposes and not for the purposes of this research study. All three participants were deemed appropriate to "graduate" from the intervention. Although, the implementation of the TDI phase within this study allows for future directions for research later discussed in Chapter 5.

Maintenance Phase

Following the completion of the TCIT intervention, teachers were observed during their classrooms three separate times to collect maintenance and follow up data. Students were observed using the REDSOCS system for disruptive behaviors. Additionally, once the students and teachers graduated from the TCIT intervention, the teachers were asked to complete the Therapy Attitude Inventory (TAT) in order to assess whether the teachers approved of the TCIT intervention and found it effective.

Reliability

In order to account for reliability, two observers were present for at least 33% of the data collection during the intervention phase. Reliability was not needed to be met for the DPICS because one coder was used throughout the study. This coder had been trained in DPICS coding

by a master's level PCIT trainer prior to beginning the study. Reliability was met using the REDSOCS behavioral recording system between two observers. Both coders conducted observations together for 33% of observation sessions across all participants. Reliability was calculated using the REDSOCS reliability forms. The reliability between observers was 98%.

<div align="center">**Data Analysis**</div>

Visual Analysis

In single-subject research, visual analysis is the common method of data analysis. Data is graphed for each participant during a study with the number of data points within a phase, variability in performance, level of behavior, and trend level (Lane & Gast, 2013). Visual analysis is a useful tool when analyzing data if continuous numerical data are gathered, data can be graphically depicted, and formative and summative analyses are desired.

When considering the number of data points, it is important to have a sufficient amount within a phase that would make a reasonable determination as to whether the data path accurately represents a change in behavior. When considering how many data points are needed per phase, it is also important to consider the behavior that is being targeted. If the behavior is more likely to fluctuate across phases, more data points would be needed. In contrast, if a behavior is less likely to change across phases, less data points would be needed (Lane & Gast, 2013). Additionally, variability in performance is another component of visual analysis. The variability in a graph is the degree to which the data path indicates variability across behavior change. The more variable the data within each phase, the more difficult the visual analysis. The more variable performance usually requires more data points. However, sometimes it is not ethically sound to gather more data and analyses should continue with what data points are

available. A third component of visual analysis is the level of behavior. The performance of the target behavior is along the y-axis and show where the data points fall within a graph. This is depicted as a "jump" in the data path, either upward or downward. When the level changes within phases, variability is created and mean, median, or range lines may be needed to assist in the visual analysis. Lastly, when analyzing data visually, it is important to analyze the trend line. The trend line is determined by examining the direction of the data path. A trend line is generally upward, downward, flat, variable, or stable. When data paths depict a clear and steady direction, the overall trend may be relatively obvious. However, when data points are variable, the overall trend may not be as apparent (Lane & Gast, 2013).

Research Questions and Hypothesis

In the current empirical study, I will attempt to address the limitations in the extant literature base regarding TCIT:

Research Question

1a: Does TCIT significantly reduce problem behaviors within a general preschool population using an intensive TCIT intervention within a three-tiered approach model through behavior observation, as measured by the Revised Edition of the School Observation System (REDSOCS)?

1b: Does TCIT significantly reduce problem behaviors within a general preschool population using an intensive TCIT intervention within a three-tiered approach model through teacher report, as measured by the Sutter-Eyberg Behavior Inventory – Revised (SESBI-R)?

Hypothesis 1: TCIT will effectively reduce problem behaviors within the general preschool population.

Research Question 2: Does the implementation of TCIT increase positive teacher-child relationships and reduce teacher-child negative interactions as measured by the Dyadic Parent-Child Interaction Coding System – III (DPICS-III)?

Hypothesis 2: Following the implementation of TCIT, positive teacher-child relationships will increase while negative teacher-child interactions will decrease.

Research Question 3: Will teachers approve of the intervention and find the intervention effective in reducing student disruptive behaviors following the TCIT intervention as measured by the Therapy Attitudes Inventory (TAI)?

Hypothesis 3: Teachers will approve of the TCIT intervention and find it beneficial in reducing student disruptive behavior.

Chapter IV: Results

Visual and statistical analyses were used to analyze the results of the current study. As mentioned above, student behavioral data was collected using the Revised Edition of the School Observation Coding System (REDSOCS) throughout the baseline, intervention, and maintenance phases of this study. The REDSOCS allows the observer to record three categories of behavior: 1) Appropriate vs. Inappropriate behaviors, 2) Compliance vs. Noncompliance, and 3) On Task vs. Off Task. For the purposes of this study, only "inappropriate behaviors, "noncompliance", and "off-task" behaviors were graphed. However, it should be noted that the positive opposite behaviors were recorded when collecting data. Visual and statistical analyses were used to analyze the results of the REDSOCS. By utilizing Visual analysis, it allows the researcher to demonstrate any variability in performance, level, and trend within and across phases (Lane & Gast 2013).

In addition to the REDSOCS, the Sutter-Eyberg Student Behavior Inventory (SESBI-R) was also used to track student behavior throughout baseline and the TCIT intervention. The SESBI-R was completed by each teacher who participated in the TCIT study weekly prior to each TCIT session. Therefore, the SESBI-R provides data on student behavior change from the teacher's perspective. In order to analyze the data from the SESBI-R, statistical analyses were used.

Research Question 1

Research Question 1a: Does TCIT significantly reduce problem behaviors within a general preschool population using an intensive TCIT intervention within a three-tiered approach model through behavior observation, as measured by the Revised Edition of the School Observation Coding System (REDSOCS)?

Hypothesis 1a: TCIT will effectively reduce problem behaviors within the general preschool

population through behavior observation.

Mean percentages and visual analyses of graphed data from three behavioral categories of

the REDSOCS are reported. The three categories are Inappropriate Behaviors, Non-Compliance,

and Off-Task Behaviors.

Table 1

Mean percentages of Sally's REDSOCS behavioral domains

	Baseline	Intervention	Maintenance
Inappropriate Behaviors	17.7%	11.1%	3.7%
Noncompliant Behaviors	4.1%	2.5%	0.0%
Off-Task Behaviors	14.4%	7.6%	1.6%

Sally. ***Baseline.*** Sally's mean percentage of Inappropriate Behaviors observed in the

classroom during the baseline was 17.7%. Sally's mean percentage of Noncompliance behaviors

was 4.1%. Sally's mean percentage of Off-Task behaviors was 14.4%. Overall, Sally's baseline

data was variable across baseline phases. Baseline data did not show a specific trend. Overall,

Sally exhibited the most disruptive behaviors throughout the study.

Intervention. A review of data in Figure's 1, 2, and 3 reveal a variable pattern in Sally's

behavioral observation data. A total of 13 data points was collected during the n intervention

phase. Following the intervention phase, there continued to be a variable trend in regard to

Sally's Inappropriate behaviors. Additionally, once Sally entered the TDI phase of the

intervention there was a significant increase in Inappropriate behaviors observed but then continued on a downward trend throughout the remainder of the intervention phase. In terms of Sally's Noncompliance behaviors within the classroom, a similar pattern was observed. Once the intervention began, there was a variable pattern in behavior with a significant increase during the TDI phase but then began to show a downward trend during the maintenance phase. Similar to previous data, Sally's Off-Task behaviors showed a variable trend throughout most of the intervention but then began a downward trend towards the end of the TDI phase.

Maintenance. Following the removal of the intervention, Sally's behavioral gains were generally made across domains. This is evident in the overall decrease in all behavioral categories, especially in the area of Noncompliance. Although, there was a slight increase in both Off-Task behaviors and Inappropriate behaviors during the maintenance phase, both domains did not reach baseline level.

Table 2

Mean percentages of Griffin's REDSOCS behavioral domains

	Baseline	Intervention	Maintenance
Inappropriate Behaviors	11%	15.6%	14.3%
Noncompliant Behaviors	5.8%	7.7%	3.3%
Off-Task Behaviors	7.5%	11.6%	16%

Griffin. *Baseline.* Griffin's mean percentage of Inappropriate behaviors within the classroom during baseline was 11%. Griffin's mean percentage of Noncompliant behaviors within the classroom during baseline was 5.8%. Griffin's mean percentage of Off-Task behaviors within the classroom during baseline was 7.5%. In all behavioral categories during baseline, Griffin showed an upward trend.

Intervention. Observation data for Griffin also reveals an overall downward trend during intervention phases, except for Off-Task behaviors within the classroom which showed an upward trend. There is a total of 15 data points during the intervention phase for Griffin. Despite Griffin's increase in compliant behaviors within the classroom during the intervention phase, he was the most compliant throughout the TCIT intervention. When Griffin entered the TDI phase, he complied to all commands.

Maintenance. Overall, there was a downward trend in Griffin's behavioral data during the maintenance phase except with Noncompliant behaviors which showed a variable trend.

Table 3
Mean percentages of Billy's REDSOCS behavioral domains

	Baseline	Intervention	Maintenance
Inappropriate Behaviors	12.25%	14.6%	1%
Noncompliant Behaviors	0.75%	3.7%	0.67%
Off-Task Behaviors	8.75%	14.9%	0.6%

Billy. *Baseline.* Billy's mean percentage of Inappropriate behaviors within the classroom was 12.25%. Billy's mean percentage of Noncompliance behaviors within the classroom during baseline was 0.75%. Billy's mean percentage of Off-Task behaviors within the classroom during baseline was 8.75%. Overall, Billy was the most compliant participant in the classroom setting prior to entering the study.

Intervention. Visual analysis of Billy's graphs indicates a variable trend in the behavioral categories of Off-Task behaviors and Inappropriate behaviors, whereas the Noncompliant behaviors category showed an upward trend once the intervention began. Billy had the shortest amount of intervention sessions due to late entry into the study, therefore time constraints were

placed on the amount of time he could spend within the TDI phase. Across all behavioral categories, there was a rapid increase in behaviors once the TDI phase began.

Maintenance. Once the intervention was removed, Billy made behavioral gains throughout the maintenance phase. Overall, his behaviors showed a consistent downward trend with a significant decrease in Inappropriate and Off-Task behaviors. Although, Billy's Noncompliant behaviors also showed an overall decrease, there was still some variability during maintenance within this behavioral category; however, his mean percentage was lower than his mean percentage at baseline.
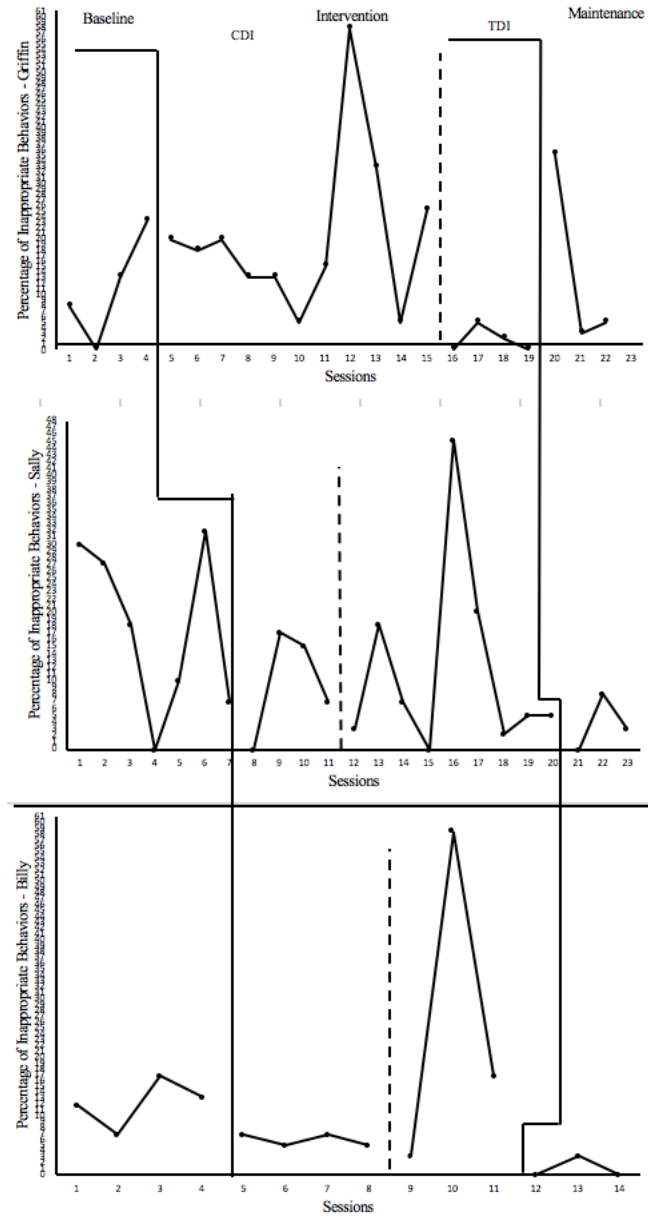
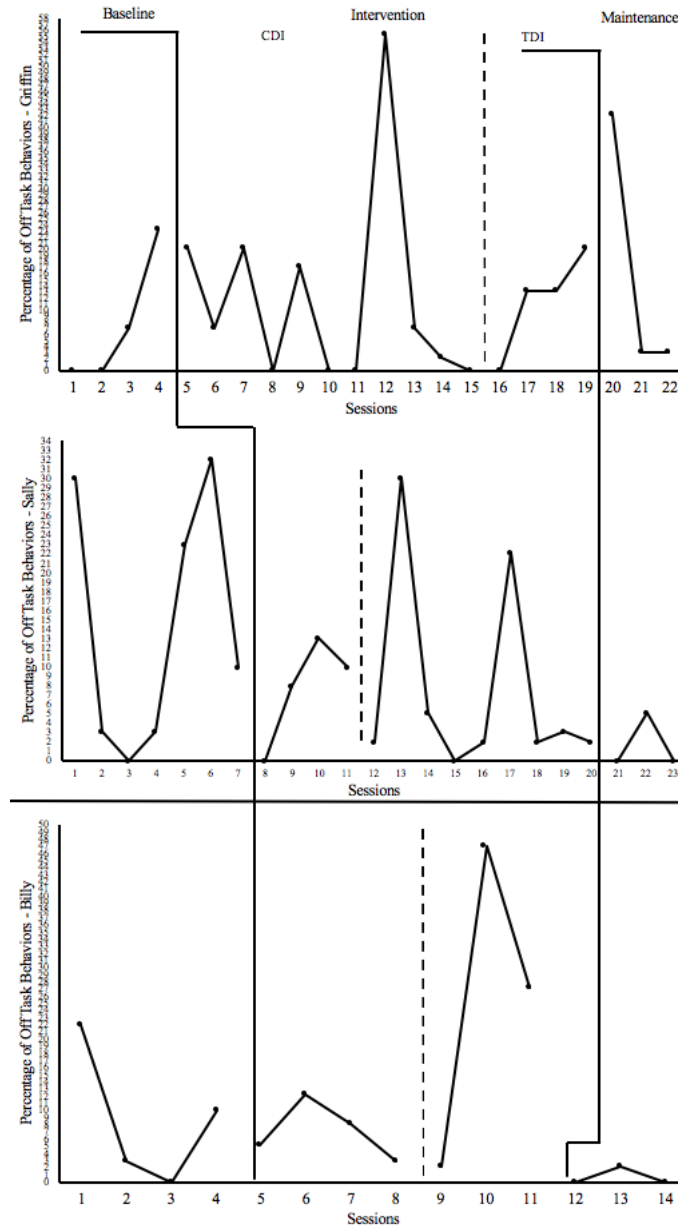*Figure 1. Mean percentages of Inappropriate Behavior*
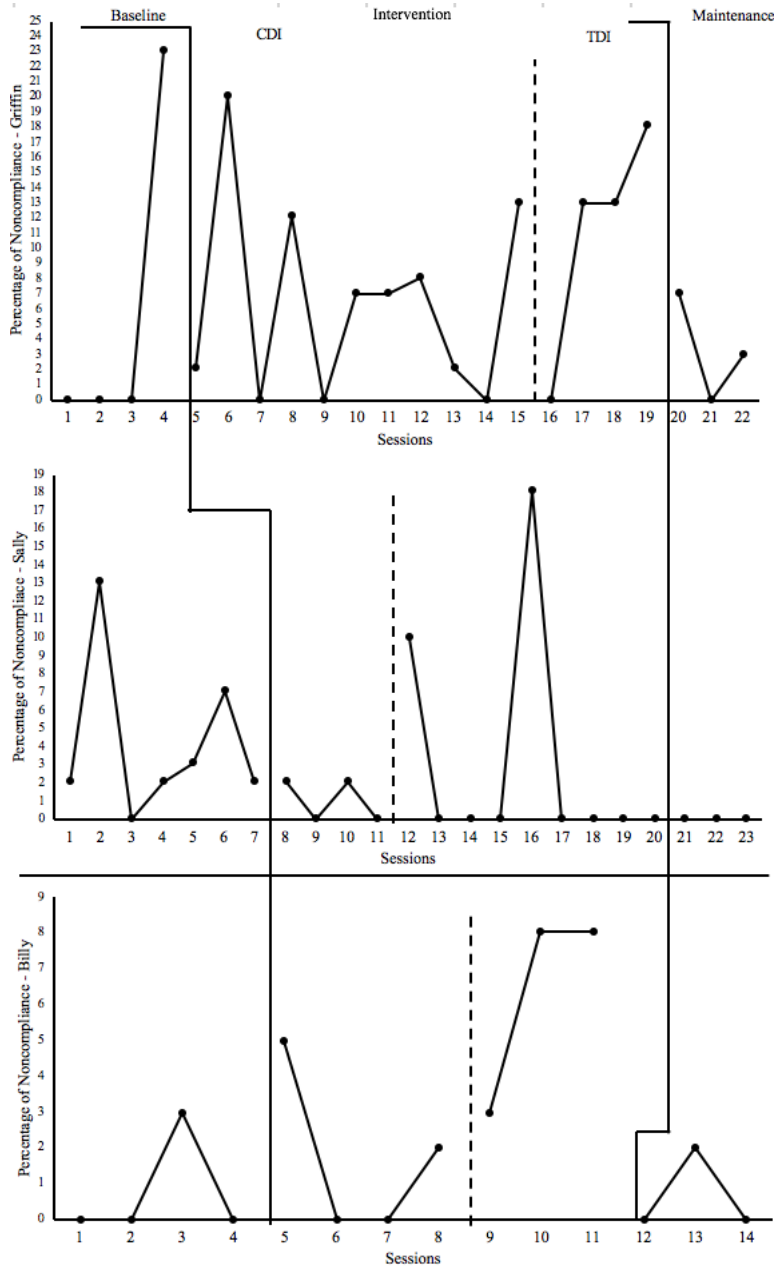
Figure 2. Mean percentages of Noncompliance Behaviors

Figure 3. Mean percentages of Off-Task Behaviors

1b: Does TCIT significantly reduce problem behaviors within a general preschool population using an intensive TCIT intervention within a three-tiered approach model through teacher report, as measured by the Sutter-Eyberg Behavior Inventory – Revised (SESBI-R)?

Hypothesis 1b: TCIT will significantly reduce problem behaviors within a general preschool population.

In order to analyze data from the SESBI-R rating scales, the SESBI-R Intensity scores were graphed to better show a visual analysis of the decrease in problematic behaviors. Scores were also reported at baseline, midway through the intervention, and at the last intervention session. All raw scores were converted to *T*-Scores with a mean of 50 and a standard deviation of 10. On the SESBI-R, a score 60 or above is considered to exceed the clinical cutoff, meaning that a score above 60 is clinically significant. In the traditional PCIT model, it is recommended that *T*-Scores are at 55 for graduation.

Sally. *Baseline.* Sally's Intensity baseline score according to the SESBI-R was a 66, midway through intervention she had a score of 67, and at the end of the intervention her Intensity score was a 58.

Intervention. As previously discussed, the intervention consisted of in-vivo coaching with each individual student-teacher dyad weekly pull out sessions. The intervention consisted of two phases throughout treatment: 1) the Child Directed Interaction phase 2) Teacher Directed Interaction phase. During the intervention, Sally's SESBI-R scores showed a consistent increasing trend in regard to her classroom behaviors according to her teacher. At the 11th session, however, and until the end of treatment there was a drastic trend change in Sally's behavior. Sally's intensity score decreased from a baseline score of 66 to a 58.
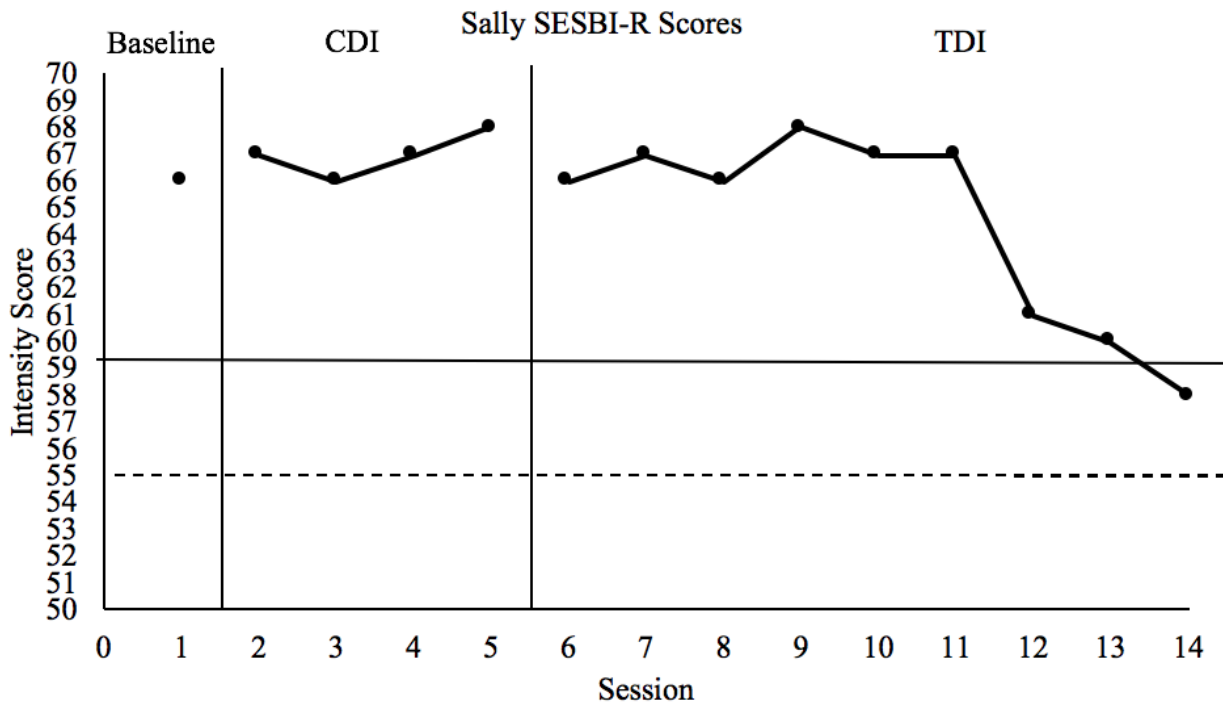
Figure 4. Sally's SESBI-R scores across baseline and intervention

Griffin. *Baseline.* Griffin's Intensity baseline score according to the SESBI-R is 64, midway through the intervention his score was a 67, and at the end of the intervention his Intensity score was a 57.

Intervention. Visual analyses of Griffin's data suggest a stable trend of behaviors according to the Intensity SESBI-R scale, however, after the fifth session a change in level and trend is shown. Overall, the level of his teacher reported SESBI-R reduced as evidenced by a visual analysis of figure 5. Although, the comparison of baseline score to the mean intensity SESBI-R score shows that behaviors remained the same.
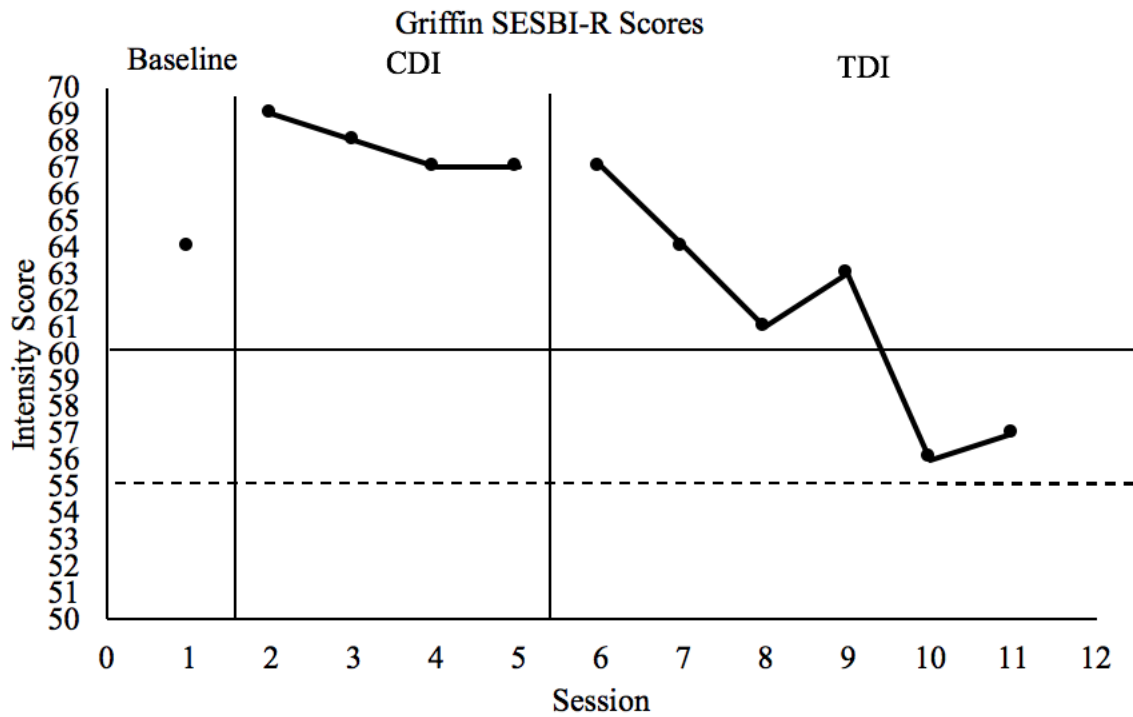
Figure 5. Griffin's SESBI-R scores across baseline and intervention

Billy. *Baseline.* Billy's Intensity baseline score according to the SESBI-R was a 71, at midway through the intervention he had a score of 62, and at the end of the intervention he had a score of 64.

Intervention. A review of data presented in table 3 and figure 3 show a slightly different pattern of Billy's behaviors. It should be noted that Billy entered the study late due to previous participants' attrition. Therefore, Billy did not have the opportunity to have as many coached intervention sessions as the other two participants. There was an immediate change in trend level data at the beginning of the intervention, then there was a trend increase that became more stable. According to figure 6, there is a decrease in problem behaviors according to the SESBI-R but due to the limited amount of coached sessions, it is unclear whether this decrease would have been a consistent trend.
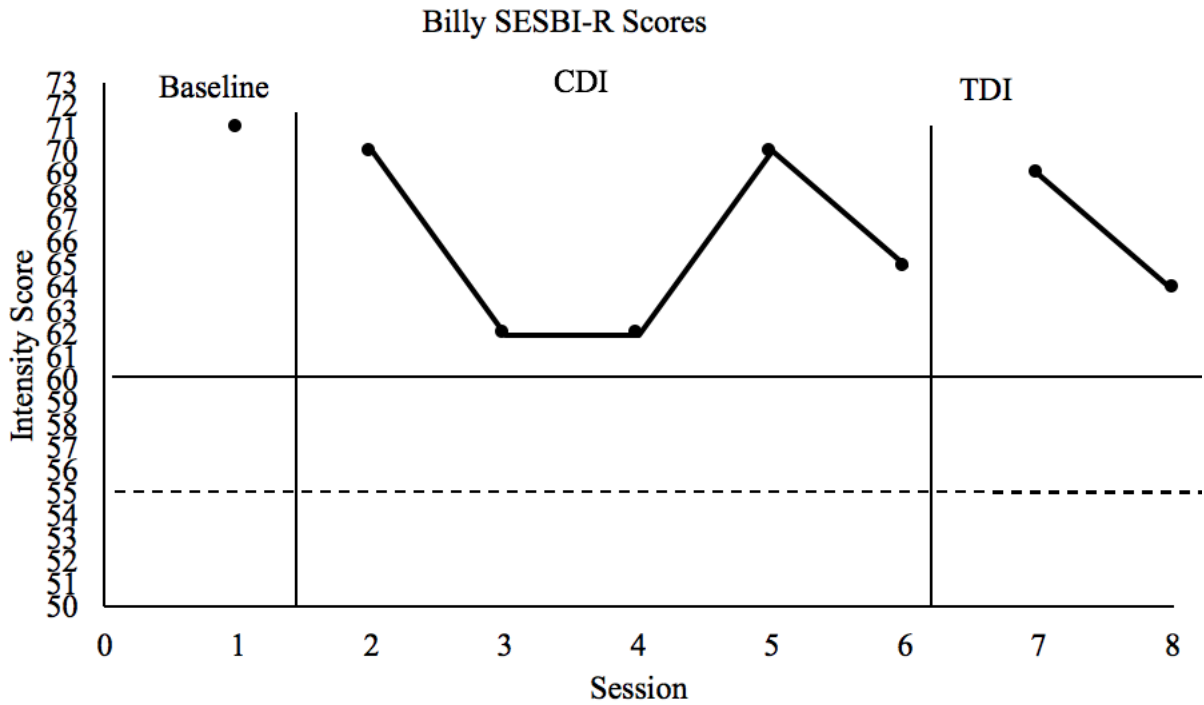
Figure 6. Billy's SESBI-R scores across baseline and intervention

Research Question 2

Research Question 2: Does the implementation of TCIT increase positive teacher-child relationships and reduce teacher-child negative interactions as measured by the Dyadic Parent-Child Interaction Coding System – III (DPICS-III)?

Hypothesis 2: Following the implementation of TCIT, positive teacher-child relationships will increase while negative teacher-child interactions will decrease.

In order to evaluate whether there was an increase in positive teacher-child relationships and a reduction in teacher-child negative interactions, the Dyadic Parent-Child Interaction Coding System (DPICS) was used. All three teacher and child dyads were coded for 5 minutes for three baseline sessions and before every TCIT intervention sessions for 5 minutes. The

DPICS codes for teacher's use of positive interaction skills such as labeled praise, reflections, and behavior descriptions, known as the "PRIDE Skills". As previously discussed, these specific interchanges have been shown to increase positive interactions between both parents and children, as well as teachers and students. Additionally, by using these skills when interacting with children it improves the adult-child relationship. Furthermore, the DPICS also codes for negative interactions between adult and child, known as the "Avoid Skills". These negative interactions include questions, negative talk, and commands.

In the baseline phase, teachers were instructed to interact with their students as they normally would without any coaching. At the time of baseline, the only exposure teachers had with the PRIDE skills was during the school-wide PRIDE skill training earlier in the school year. The total use of all three teachers' individual "PRIDE Skills" is shown in Table 4 and the "Avoid Skills" is shown in Table 5 as evidenced by the DPICS. During the TCIT intervention, teachers were coached to increase their use of the "PRIDE Skills" and to minimize their use of "Avoid Skills". All three teachers were able to reach mastery of PRIDE skill use which allowed them to progress to the second phase of the TCIT Intervention, the Teacher-Directed Interaction (TDI) phase. Overall, teachers showed an increase in PRIDE skill use once coaching began during the CDI phase of the intervention. Once teachers progressed to the TDI phase of the intervention, the overall use of PRIDE skills made a slight increase but overall maintained its frequency. In regard to the "Avoid Skills", teachers showed a decrease in both Questions and Commands once intervention coaching began. However, there was a slight increase in Negative Talk. Once teachers reached the TDI phase of the intervention, there continued to be a decrease in both Commands and Questions. In regard to Negative Talk, there was a decrease from the CDI phase to the TDI phase. It should be noted that in the traditional model of PCIT, there are two

categories of Commands: Direct and Indirect Commands. In the TDI phase in both PCIT and

TCIT, Direct Commands are encouraged to be used to increase compliance. For the purposes of

this research study, both Indirect and Direct commands were totaled together as just

"Commands." Although, teachers were encouraged to use Direct Commands in the TDI phase.

The coaching within the TDI phase in regard to commands was used for practical and clinical

use rather than research purposes.

Table 4
Mean Frequency Count of PRIDE Skill Use during 5-minute DPICS Coding

	Baseline	Child-Directed Interaction (CDI)	Teacher-Directed Interaction (TDI)
Labeled Praise	3	8.75	8.89
Unlabeled Praise	2.4	1.5	1.52
Reflection	13.4	18.9	17.1
Behavior Description	4.8	11.4	11.7

Table 5
Mean Frequency Count of Avoid Skills during 5-minute DPICS Coding

	Baseline	Child-Directed Interaction (CDI)	Teacher-Directed Interaction (TDI)
Questions	5.9	2.1	0.79
Negative Talk	0.1	0.4	0.05
Commands	6.1	2.75	0.47

In order to further analyze teacher-student relationship improvement, all three teachers' use of PRIDE skills and Avoid Skills were analyzed per each teacher. Figure 7 shows Teacher 1's use frequency use of each PRIDE skill across each session. In the baseline phase, Teacher 1 used a minimal amount of labeled praises, behavior descriptions, and unlabeled praises; however, her use of reflections were considered to be at mastery during baseline. During the CDI phase, Teacher 1 had a rapid increase in reflections ad behavior descriptions. In terms of labeled praise, this skill required the most coaching; however, teacher 1 was able to reach mastery in the 4th session in the CDI phase. In regard to unlabeled praises, they are considered a "neutral" form of interactions. During CDI, teachers are encouraged to shy away from using unlabeled praises in order to increase their labeled praise use. Although, if teachers did use unlabeled praises, they were not discouraged or penalized. Therefore, Teacher 1's use of unlabeled praises decreased in the CDI phase. In the TDI phase, Teacher 1's use of reflections, behavior descriptions, and labeled praises were consistent with a slight increase. Additionally, unlabeled praises continued to remain at a minimal.
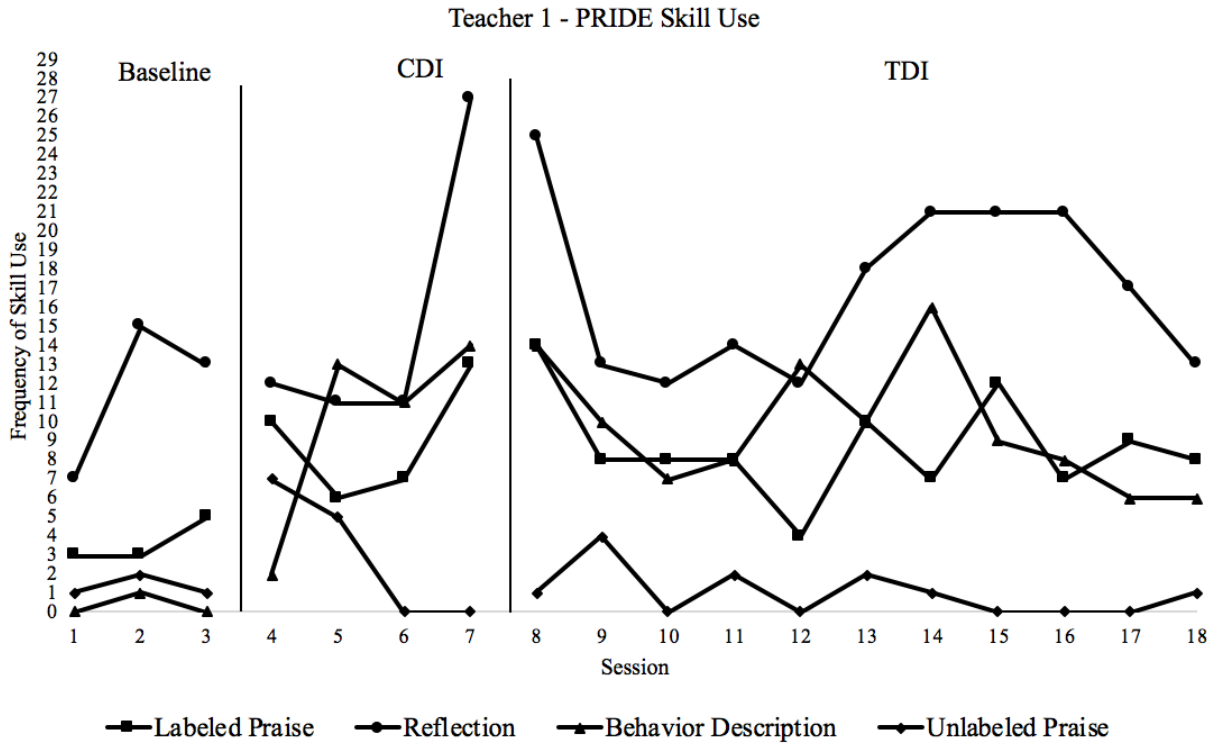
Figure 7. Teacher one PRIDE Skill Use

Figure 8 shows Teacher 1's use of the Avoid skills throughout the intervention. At baseline,

Teacher 1 used frequent questions with some commands but used no negative talk. During the

CDI phase, Teacher 1 showed a consistent decrease in questions, commands, and negative talk.

Furthermore, in the TDI phase, Teacher 1 continued to minimally utilize the Avoid skills.
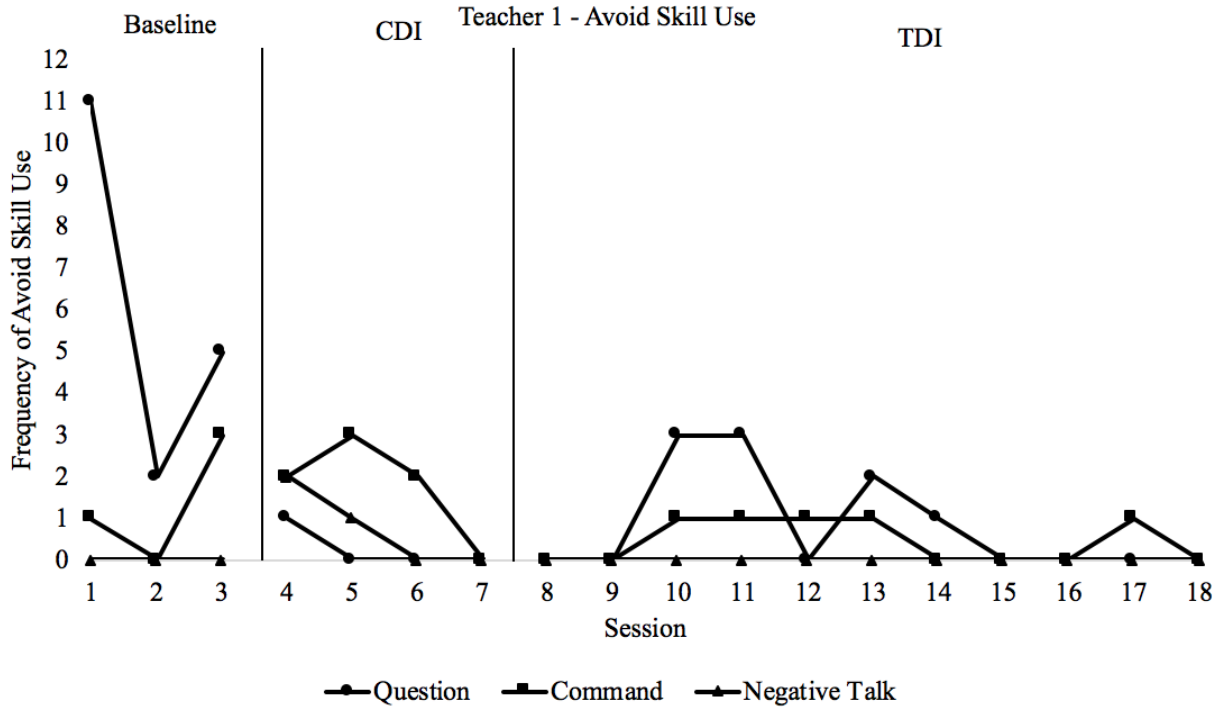
Figure 8. Teacher 1 Avoid Skill Use

Figure 9 displays Teacher 2's use of PRIDE skills. At baseline, Teacher 2's strongest PRIDE skill was her use of reflections; however, she utilized labeled praises and behavior descriptions at a minimal. Additionally, her use of unlabeled praises was low. During CDI, Teacher 2 showed an increase in reflections, labeled praises, and behavior descriptions. Similar to baseline, Teacher 2's unlabeled praise use remained low. During the TDI phase, Teacher 2 continued to use reflections, labeled praises, and behavior descriptions with a slight increase in skills. Furthermore, her unlabeled praises remained low.
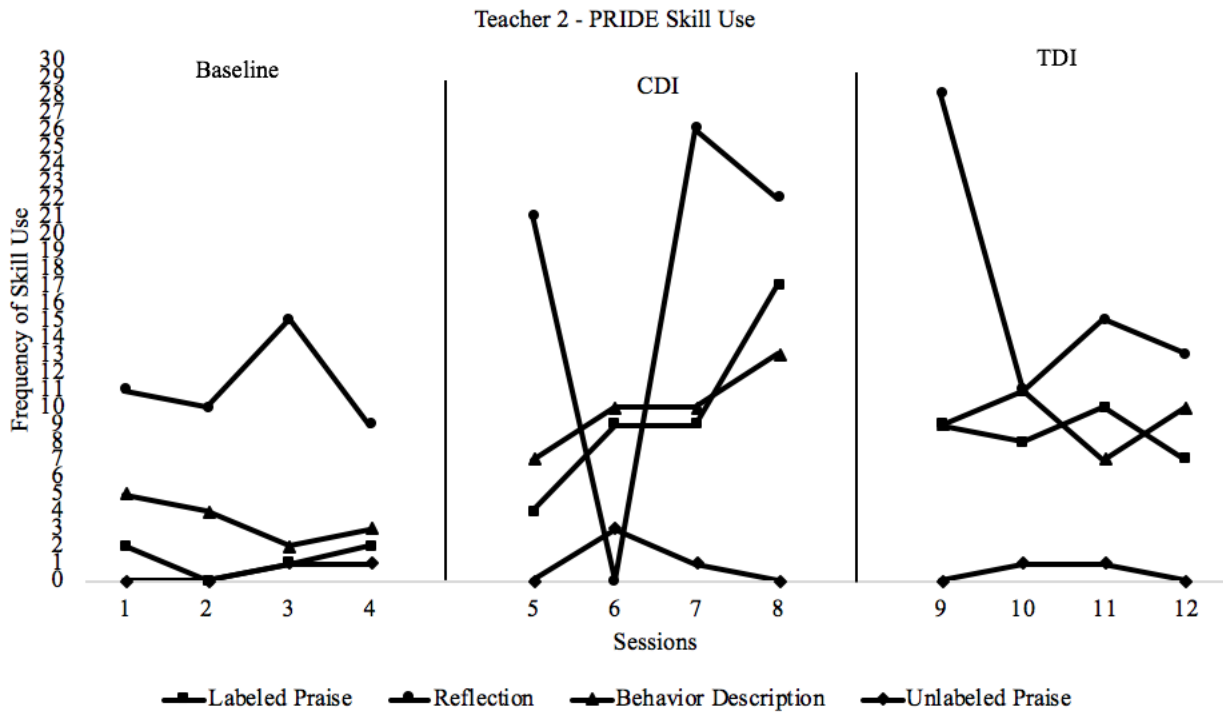
Figure 9. Teacher 2 PRIDE Skill Use

Figure 10 shows Teacher 2's use of Avoid skills. During baseline, Teacher 2 used a frequent

amount of questions and commands with zero negative talk. Once CDI began, Teacher 2

displayed a significant decrease in questions and commands with no use of negative talk.

Additionally, this pattern skill use continued into the TDI phase of treatment.
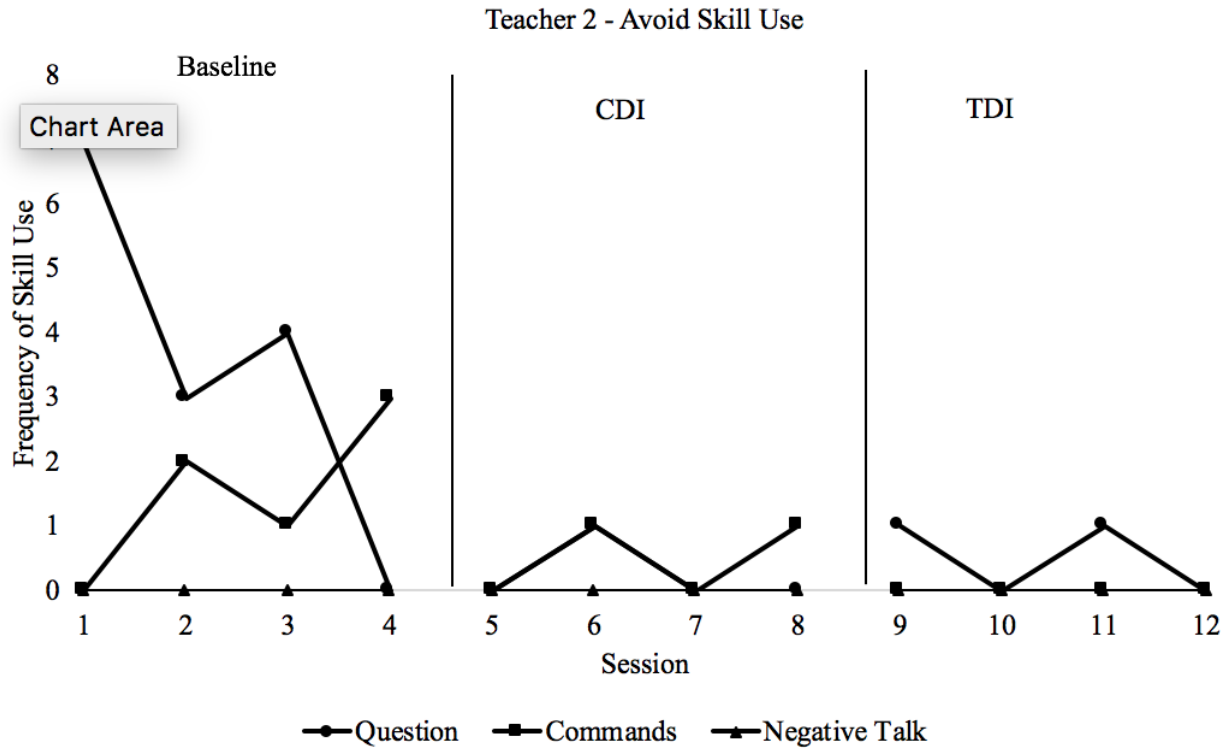
Figure 10. Teacher 2 Avoid Skill Use

In regard to Teacher 3's PRIDE skill use, during baseline Teacher 3 displayed a frequent use of

behavior descriptions and reflections. Her least utilized skill at baseline was labeled and

unlabeled praises. During the CDI phase of the intervention, Teacher 3 showed an increase in

labeled praises and behavior descriptions; however, she displayed a decrease in reflections and

unlabeled praises. Although, as mentioned previously, unlabeled praises are not typically

encouraged throughout the TCIT intervention. Additionally, even though Teacher 3 showed a

decrease in reflections, she still utilized them in frequent enough to be considered mastery. In the

TDI phase, there was consistency in her use of behavior descriptions, labeled praises, and
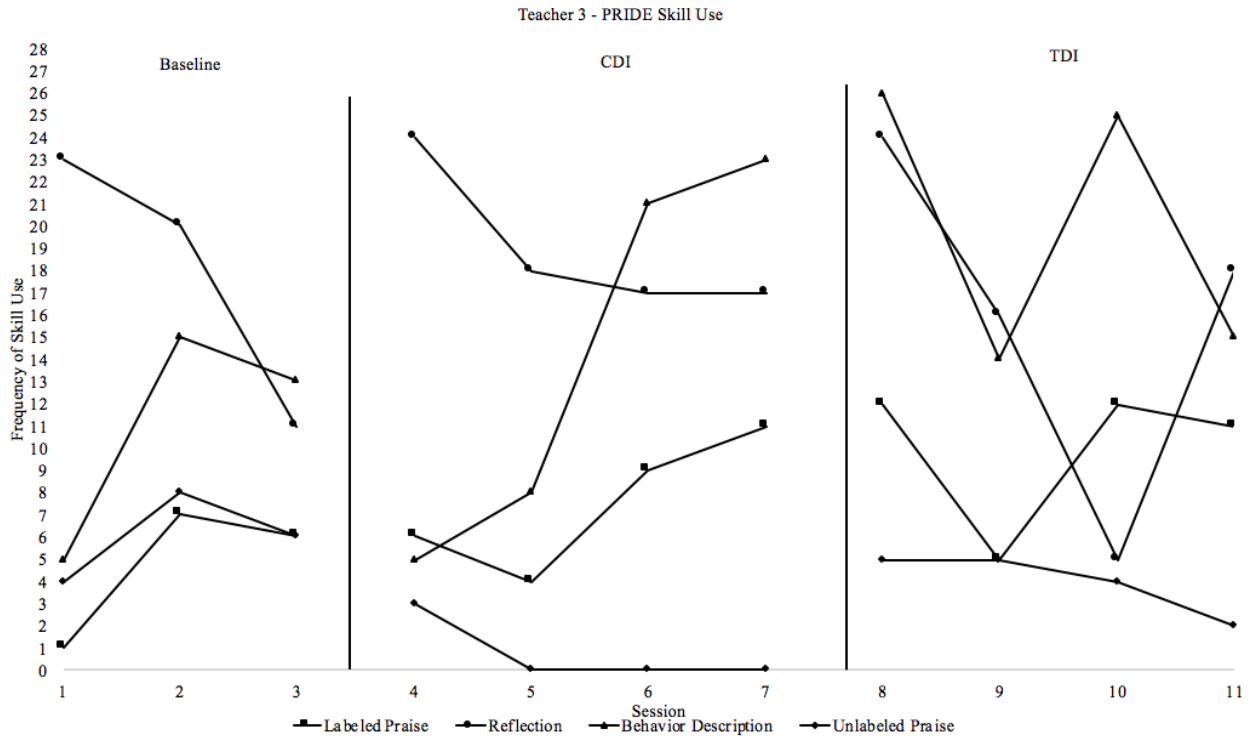
unlabeled praises with an increase in reflections.

Figure 11. Teacher 3 PRIDE Skill Use

In terms of Avoid skills, Teacher 3 utilized a significant amount of questions and commands at baseline; however, her use of negative talk was minimal. Once the coaching in CDI began, there was a significant decrease in all Avoid skills. In TDI, this minimal usage of avoid skills remained consistent.
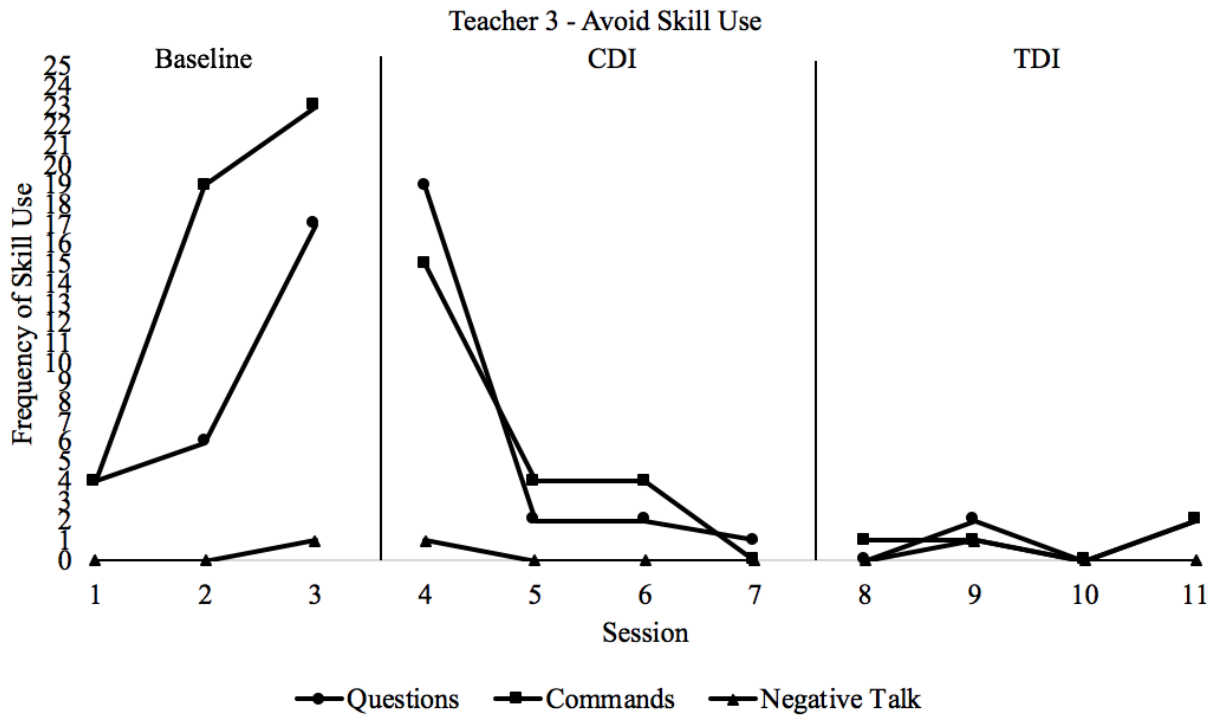
Figure 12. Teacher 3 Avoid Skill Use

Research Question 3: Will teachers be in approval and find the intervention effective in reducing student disruptive behaviors following the TCIT intervention as measured by the Therapy Attitudes Inventory (TAI)?

Hypothesis 3: Teachers will be in approval of the TCIT intervention and find it beneficial in reducing student disruptive behavior.

In order to assess whether the TCIT intervention was effective in reducing student disruptive behaviors and was approved by teachers, the Therapy Attitudes Inventory (TAI) was given to all three teachers who participated in the TCIT intervention. The TAI is a 10-question inventory that asks questions about progress of the child, teacher skill gain, and general thoughts about the intervention. Each question has a 5-point Likert Scale where 1 indicates the "least effective" and 5 indicates the "most effective" Table 10 shows the average of scores for each question from the three teachers who participated in the intervention. Overall, all three teachers

approved of the TCIT intervention and they found the intervention effective for reducing

disruptive behaviors.

Table 6
Mean scores of three teacher's ratings on the TAI

Items	Average of teacher scores
Regarding techniques of disciplining, I feel I have learned… 1 Nothing – 5 Very many useful techniques	4
Regarding techniques for teaching my child new skills, I feel I have learned… 1 nothing – 5 Very many useful techniques	3.3
Regarding the relationship between myself and my child, I feel we get along… 1 Much worse than before – 5 Very much better than before	4.3
Regarding my confidence in my ability to discipline my child, I feel… 1 Much less confident – 5 Much more confident	4.3
The major behavior problems that my child presented at home before the program started are at this time… 1 Considerably worse – 5 Greatly improved	4.3
I feel that my child's compliance to my commands or requests is at this time... 1 Considerably worse – 5 Greatly improved	4.3
Regarding the progress my child has made in his/her general behavior, I am… 1 Very dissatisfied – 5 Very satisfied	4.3

To what degree has the treatment program helped with other general personal or family problems not directly related to your child in the program? 1. Hindered much more than helped – 5 Helped very much	4.3
I feel the type of program that was used to help me improve the behaviors of my child was… 1 Very poor – 5 Very good	3.6
My general feeling about the program I participated in, is… 1 I disliked it very much – 5 I liked it very much	4.3

Chapter V: Discussion

Summary of Results

The current study examined the impact of Teacher-Child Interaction Training (TCIT) on child behavior, teacher-child relationships, and the likability and feasibility of the TCIT intervention. The first research question considered whether TCIT would reduce problem behaviors within the general classroom setting. It was hypothesized that the TCIT intervention would reduce problem behaviors within the general classroom setting. Across participants, there was an overall decrease in problem behaviors within the classroom.

All three participants presented with disruptive behaviors within the classroom. Two of the participants had Individualized Education Plans (IEP) for developmental delays within the area of speech. All three participants were referred for TCIT due to their disruptive and noncompliant behaviors during the school day. Teacher-Child Interaction Training is an intervention used for children who are exhibiting disruptive behaviors within the classroom setting. The TCIT intervention also improves the teacher-child relationship and provides teachers with effective behavior management strategies.

In order to measure problem behaviors, two measures were used. The first measure was the, Revised Edition of the School Observation Coding System (REDSOCS). The REDSOCS is used to record three behavioral categories: 1) Inappropriate Behaviors, 2) Off-Task Behaviors, and 3) Noncompliance to Commands. In terms of Inappropriate Behaviors, Sally's behaviors decreased throughout the intervention and maintenance phases. Sally did have a rapid increase in her Inappropriate Behaviors during session 17 which was due to the time of the observation. On this particular day, Sally was observed transitioning from snack to reading time which was a non-preferred activity for Sally.

Both Griffin and Billy showed overall decreases in Inappropriate Behaviors, but these decreases in behaviors did not occur until the maintenance phase. Griffin demonstrated a lot of passive noncompliant behaviors within the classroom, therefore his overall Inappropriate Behaviors prior to the intervention were low. Similar to Sally, Griffin and Billy exhibited an increase in their Inappropriate Behaviors during one of the observations. Griffin's was during observation 12 and during this observation period Griffin's class was engaged in circle time. Griffin was not participating with the class and was reading a book by himself. It also should be noted that prior to the TCIT intervention, Griffin had been exhibiting potential ASD symptomology. Therefore, positive attention from peers or adults may not have been as reinforcing to him which contributed to his Inappropriate Behaviors.

Billy's increase in behaviors was during observation 10 where Billy was engaged in group play. Billy's increase in Inappropriate Behaviors during this session may have been due to the unstructured time of group play where he struggled to engage with peers appropriately. Furthermore, all three participants demonstrated decreases in their Inappropriate Behaviors once the TCIT intervention began and after TCIT was completed. In summary, the TCIT intervention was successful in reducing Inappropriate Behaviors within the classroom.

In regard to Noncompliant Behaviors, similar results were observed. Sally showed a decrease in Noncompliant behaviors throughout the intervention and maintenance phases. However, similar to Inappropriate Behaviors, she exhibited an increase in her Noncompliant Behaviors during observation 16. Prior to this observation, Sally had not been observed for 3 weeks because her family was on vacation. Therefore, this observation period was completed when she had returned from her trip. Griffin and Billy showed a slight increase in the intervention phase but decreased in the maintenance phase. Griffin and Billy also demonstrated

an increase in Noncompliant Behaviors during an observation period. Griffin's was during observation 19 where Griffin engaged in free play. Free play offered less structure for Griffin and given his possible ASD symptomology, he struggled to engage appropriately with peers during free play. Billy also had an increase in behaviors during observation 11 which was related to external variables during the observation. Similar to Inappropriate Behaviors, the TCIT intervention was successful in reducing Noncompliant Behaviors and the reduction in Noncompliant Behaviors continued after the intervention was completed.

The third behavior monitored was Off-Task Behaviors. Although this category did not necessarily relate to the current research question, results were still analyzed. Sally showed a consistent pattern of Off-Task behaviors and displayed an overall decrease in Off-Task Behaviors throughout the intervention and maintenance phases.

In contrast, Griffin showed an overall increase of Off-Task behaviors throughout the intervention and maintenance phases. This could be due to teacher-skill use during the TCIT intervention. Typically, certain skills used throughout the PCIT/TCIT model are more targeted towards off-task behaviors. However, given that this behavioral domain was not part of the main research question, this was not taken into account when coaching teachers. Additionally, during this observation period the classroom was participating in circle time and Griffin was reading a book on his own, which was the same observation where his Inappropriate Behaviors demonstrated an increase.

Furthermore, similar to the previous behaviors, Billy continued the same pattern. His Off-Task Behaviors increased during the intervention phase but then showed a significant decrease in the maintenance phase. Billy also demonstrated an increase in Off-Task Behaviors during observation 10 which was during group play where Billy was not necessarily expected to be On-

Task. This pattern of behavioral change shown by Billy most likely was due to the limited amount of TCIT sessions he had compared to the other participants. His behaviors would have likely decreased during the intervention phase if he would have been able to participate in more sessions. Overall, the TCIT intervention was effective in reducing Off-Task behaviors in all three participants.

The second measure used to answer the first research question was the Sutter-Eyberg Behavior Inventory – Revised (SESBI-R). The SESBI-R gathered data on the participants behavior changes from the teachers' perspective. The SESBI-R has two categories: The "Intensity" of the behavior and whether that particular behavior is a current "Problem" for the teacher. For the purposes of this study, only the Intensity scale was analyzed, and scores were reported at baseline, midway, and at the last session. All three participants had different results. Sally's teacher rated her behaviors consistently high on the Intensity scale; however, beginning at session 11, Sally's behaviors began to decrease. Overall, Sally's Intensity score decreased throughout the TCIT intervention. These results show that the TCIT intervention was effective in reducing Sally's problematic behaviors within the classroom according to her teacher.

In terms of Griffin's SESBI-R scores, his teacher's scores of his Intensity scale show that the behaviors remained the same; however, after further looking at the scores there was a decrease in Griffin's Intensity. Lastly, Billy's teacher indicated an overall decrease in his Intensity scale. Overall, behaviors were not eliminated completely, there was a decrease in the overall frequency and intensity of behaviors. The TCIT intervention was effective in reducing problematic behaviors within the classroom for all three participants.

The second research question examined whether the TCIT intervention would increase teacher-child relationships and decrease their negative interactions as measured by the Dyadic

Parent Interaction Coding System – III (DPICS-III). I predicted that positive interactions between teacher and child would increase whereas negative interactions would decrease. Overall, all teachers improved in their use of the PRIDE skills. Additionally, teachers continued to increase their use of PRIDE skills within the TDI phase of the intervention where the PRIDE skills are not as frequently coached. The only skill that demonstrated a decrease was Unlabeled Praises; however, this is consistent with the TCIT model where Unlabeled Praises are not necessarily encouraged. Unlabeled Praises are also typically taught to be avoided during coaching sessions. In terms of the "Don't Skills", teachers showed a decrease in their use of Questions and Commands throughout both phases of the intervention. Although, teachers showed an increase in their use of Negative Talk during the CDI phase of the intervention but decreased in the TDI phase. This slight increase in Negative Talk during the CDI phase was most likely due to teachers requiring more coaching to reduce their pattern of using words such as "don't" or "no." It should be noted that Teacher 2 required more sessions to reach mastery with Griffin. This could have had potential effects on Griffin's overall reduction in behavioral domains throughout the TCIT intervention. Also, given Griffin's potential ASD behaviors, positive teacher attention may not have been as effective for him as it would for a typically developing child. These results indicate that the TCIT intervention was effective in increasing the positive relationship between all three participants and their teachers. The intervention was also effective in increasing the teacher's use of PRIDE skills and reducing negative interactions.

Lastly, in regard to the final research question, it was examined whether teachers would be in approval and find the TCIT intervention effective in reducing disruptive behaviors. I predicted that teachers would be in approval of the TCIT intervention and find it to be beneficial in reducing student disruptive behaviors. In order to measure teachers' perceptions on the TCIT

intervention, the Therapy Attitude Inventory (TAI) was used. Overall, teachers thought highly of the TCIT intervention. For example, "regarding the progress the child has made in his/her general behavior" the average rating from all three teachers was a 4.3 out of 5. Additionally, "regarding the relationship between myself and my child, I feel we get along" was also rated an average 4.3 out of 5. Overall, teachers' "general feeling about the program they participated in" was rated a 4.3 out of 5. Some of the "lower" ratings included "the relationship between myself and my child, I feel we get along" was rated a 3.3 out of 5 and "I feel the type of program that was used to help me improve the behaviors of my child was" rated a 3.6 out of 5. Furthermore, these results indicate that the TCIT intervention is well-liked and found to be feasible and effectively teachers.

Contribution to Scientific Literature

This implementation study of TCIT indicates beginning evidence for this intervention within a general preschool population presented within a tiered model of service. Teacher-Child Interaction Training's predecessor, Parent-Child Interaction Therapy (PCIT), was originally designed to treat children with clinical behavioral disorders; however, TCIT has been modeled to apply the same skills taught to parents in PCIT, to teachers and their students who exhibit disruptive behaviors within the classroom. With this increase, there also presents a need for teachers to possess effective behavioral management strategies. Research suggests that the most effective intervention to treat early childhood emotional and behavioral disorders utilize both the parent and child. Although, further research has suggested that focusing on the teacher-student relationship has also been effective in reducing problematic behaviors in early childhood as well. Typically, behavioral management strategies within early childhood often only contain the reward/consequence component (e.g., token economies). However, what makes the TCIT

model unique is it utilizes the relationship building piece prior to implementing a consequence. By developing a positive relationship between the teacher and child, it allows for a natural reward (e.g., the teacher's attention and positive regard) and motivates the child to behave appropriately. In terms of the classrooms, this natural reward may prove to be more feasible as opposed to following through with a tangible reward or completing a behavior chart which teachers may forget or have difficulty implementing due to external variables.

Results from this study indicate that TCIT presented in a tiered model was effective in reducing disruptive behaviors, improving teacher-child relationships, and was viewed as feasible and likable by teachers. Improvements in student behavior was measured by direct observation within the classroom and teacher report. All three students decreased in disruptive behaviors. Teacher-child relationships demonstrated a positive improvement as measured by the DPICS coding system, which coded for PRIDE skill use between teacher and student. All three teachers demonstrated an improvement in their PRIDE skill use, which translated to an improved relationship with their student. Lastly, once each student and teacher completed the TCIT intervention, they completed the TAT which indicated strong likability and feasibility among all three teachers.

The current study differs from existing research studies for numerous reasons. First, the current study uses a three-tiered approach to the TCIT intervention, which is commonly seen in schools. No other studies to this date have utilized a similar model when implementing the TCIT intervention. A three-tiered approach is used so that children who are struggling behaviorally in the school are exposed to minimal interventions prior to an intensive individual intervention. In this study, the first tier that students were exposed to were teachers using PRIDE skills with their whole class. The second tier was more intensive coaching within the classroom using the PRIDE

skills. Finally, the third tier, was the intensive TCIT pull-out sessions. Another reason the current study differs from existing literature is that prior to the study, teachers were trained at a whole-school level on the PRIDE skills. Previous studies traditionally taught individual teachers if they were participating in the TCIT intervention with particular students. Also, previous models worked with "groups" of teachers, whereas this study trained the entire school staff in PRIDE skill use months prior to choosing the three teachers who participated in this study. This was done with the hopes that teachers would reach mastery of the CDI phase sooner than in previous research studies. Therefore, allowing teachers to progress to the TDI phase of the intervention quicker. Third, my study implemented a hierarchy protocol in place of the time-out component. This was used instead of time-out because many early education settings do not condone time-out and time-out cannot always be applicable in certain classrooms. The hierarchy protocol consisted of a "broken record" procedure, a "swoop and ignore", and if-then statements. The if-then statement referred to a highly preferred item to be taken away within the classroom if the student did not comply to the command. These strategies were chosen due to their generalizability within the classroom. In comparison to previous models of TCIT, there was often only one consequence procedure used which was typically a version of time-out.

Implications for Practice

The current study examined the effect of Teacher-Child Interaction Training in a general preschool setting. Although research from this current study and previous research demonstrates positive results for student behavior change, there are numerous considerations when translating this intervention to the classroom. If clinicians or school psychologists would like to implement this within a school setting, they may want to consider 1) shorter sessions, 2) fewer sessions, 3) collaboration on the time-out protocol to adapt to the classroom, and 4) train the teachers in

PRIDE skills prior to the implementation of TCIT. These adaptions to the traditional TCIT model may allow for easier implementation of the intervention, given the barriers schools present. In order to make implement these considerations, a school psychologist would be an ideal person to lead this into practice. The school psychologist can work closely with teachers and school personnel to decide which consequence procedures may be best appropriate for the school. In relation to the PRIDE skills, the school psychologist should train teachers in these skills by offering trainings. Additionally, the school psychologist should offer follow-up trainings for teachers who may need a refresher in the skills.

School districts and preschools all differ from one another for various reasons. Therefore, prior to implementing the TCIT intervention clinicians must consider these different variables. These variables may include 1) time for the clinician, teacher, and child, 2) set times throughout the day for free-play, 3) staff coverage to cover for teachers who may participate in pull out sessions, 4) space and equipment to conduct the TCIT intervention, and 5) time-out considerations. Considering these different variables is crucial to the implementation of TCIT because if these are not considered then the intervention will not be successful. By considering these different variables it will allow for an easier implementation of the intervention and be feasible for teachers to add to their already busy agendas. When considering these concerns prior to the intervention, the clinician or school psychologist should collaborate closely with school personnel to overcome these barriers. Schools should consider implementing a "behavioral health" team that meets consistently to overcome obstacles, discuss at-risk students, and problem-solve.

Furthermore, this study suggests that schools could utilize the PRIDE skills alone to improve the classroom climate. Additionally, clinicians can help teachers use more intensive

PRIDE skill use with students during free-play periods which can also help foster better relationships among the students and the teacher. While teachers are exhibiting more intensive PRIDE skill use, they could potentially be coached within the classroom while teachers are directly interacting with their students. Previous studies have demonstrated difficulty with teachers reaching mastery in PRIDE skill use during TCIT (Schaffner, 2013). Therefore, the current study held a whole-school training in PRIDE skill use prior to the school year. This training allowed for teachers to become more familiar with utilizing PRIDE skills prior to the intervention, which then led to reaching mastery quicker. It also may be beneficial for schools to implement reminders, such as posters throughout the school to promote PRIDE skill use by all teachers and staff. Additionally, follow-up trainings on PRIDE skill use would be a good refresher in skill use.

As mentioned previously, it is not uncommon for schools to forbid time-out use. Therefore, utilizing different strategies as a consequence within the classroom is another consideration when implementing this model. Previous literature has used "thinking chairs" or "sit and watch chairs" but this can be viewed as isolating or as a glorified time-out. The strategies utilized in this study were the "broken record", "swoop and ignore", and if-then statements. All three of these strategies are easily accessible and considered acceptable within the classroom. When considering the TCIT model, it is important to consider generalizability. Therefore, by aiding teachers in learning effective consequence strategies it is important to allow these strategies to be easily translated to the classroom. All of these consequence strategies have the ability to implement predictable and consistent consequence strategies which align with the PCIT/TCIT model. Clinicians can aide teachers in the implementation of these strategies by individual consultation and in classroom coaching. Pull-out sessions, as used in the current study,

may also be beneficial for teachers when implementing these strategies. By using pull-out sessions, it takes away the stress of the other students within the classroom while the teacher is using these consequences.

In order to implement the intensive coaching, the TCIT model requires, it is preferred to be certified in Parent-Child Interaction Therapy (PCIT). However, understanding the principles of TCIT can also be beneficial for School Psychologists in intervention planning or school consultation. For example, consultation on the PRIDE skills and how they can be used within the classroom would be beneficial for consultative purposes. This consultative process can be done by holding school-wide trainings, focus groups, or consulting with individual teachers. This can be done by the school psychologist, a licensed psychologist, or even a school counselor who is trained in PCIT or who is certified.

Limitations

Although the implementation of a three-tiered model of TCIT within a general preschool population has shown promising effects, there are also limitations. The intensity and consistency of the TCIT intervention is a significant strength; however, it is time consuming. This model of TCIT was implemented across several months which indicates threats to the internal validity of the model. Additionally, there are concerns with maturation within the participants. There may have been a natural development of skills in terms of development within the participants.

Furthermore, in order to replicate this model within schools, staffing becomes a concern. For the current study, there had to be teacher coverage for the pull-out TCIT sessions. Therefore, schools may have difficulty providing the necessary staffing. In terms of logistics, the setting of the current study was in a preschool in western Pennsylvania. The school itself was not equipped for the traditional TCIT intervention (e.g., appropriate rooms, one-way mirror, bug in the ear, etc.). The room that was used to implement the TCIT intervention had the "more than recommended" objects and furniture in place. With

that being said, the results of the intervention may have been more effective or would have taken less time to implement if the appropriate space and materials were provided. Also, in order to implement the TCIT intervention, in-vivo coaching was used. Whereas in the traditional PCIT model, a bug-in-the-ear system is utilized. This created some barriers because it was unclear whether the students were distracted by the live coaching. More so in terms of the implementation, the advanced doctoral student who coached teachers throughout the intervention was not PCIT certified. However, she had readily available consultation and practice with a certified therapist, Level II and Masters PCIT trainers.

Additionally, over the course of the intervention, two teacher-child dyads dropped out of the study. The first two teacher-child dyads dropped out due to one of the students leaving the preschool and another teacher resigning. Therefore, the third teacher-child dyad was recruited towards the end of the study. Since they entered the study later than the other two teachers and children, they had less time spent with them for the intervention. Although, despite this limitation, a significant number of observations were conducted on this student and the teacher was still able to meet mastery criteria with PRIDE skill use.

Recommendations for Future Research

The current implementation of TCIT demonstrated support for the effectiveness of TCIT. It also addressed gaps in the existing literature by implementing a model that sped up the process for teachers to reach mastery of the PRIDE skills, allowing them to reach the second phase of the TCIT intervention. In order to speed up the process of the teachers reaching mastery, the whole school attended an in-service day in the summer, prior to the school year, which focused on learning the PRIDE skills. An advanced doctoral level school psychology student, an emerging doctoral level school psychology student, and a licensed psychologist conducted the training. Each skill was discussed in detail and teachers were offered time to practice the skills. In addition to the PRIDE skills, teachers were also exposed to a social-emotional curriculum that the school implemented alongside the TCIT intervention. Additionally, the current study

implemented TCIT in a way that fits the three-tiered approach to intervention that is often seen in school districts. However, future research can further contribute to the empirical support for this intervention.

Although, given the promising results of this study, more research is warranted. Future TCIT studies should examine the effects of the TCIT principles in a Tier 1 and Tier 2 model to see how students respond behaviorally from receiving TCIT at a whole-school approach. Additionally, future studies should examine the effects of this model's implementation with a certified PCIT therapist, specifically one who is a school psychologist. This may allow for more flexibility in implanting the TCIT intervention as well as more knowledge about the school and its operation. Given the current literature and this present study, there is no determined TCIT model that is used universally throughout schools. Therefore, examining different adaptions of the TCIT model are warranted.

One adaption that can be made to the TCIT model, is to establish an effective consequence procedure or behavior management strategy within the classroom first and then focus on the relational component with PRIDE skill coaching. By implementing the behavior management component prior to the relationship building piece this may account for rapid behavioral change which in return may have teacher buy-in. Another adaption that should be researched is implementing TCIT with more specialized populations within the school. Special education classrooms would be an excellent setting to do so since they often house students who struggle with emotional, behavioral, and learning difficulties. Additionally, special education classrooms have more flexibility within their schedules as opposed to general education classrooms where schedules and academics may be more stringent. Lastly, as mentioned previously, studies are beginning to expand to older populations such as Kindergarteners. Future

research and adaptions should begin to look at the TCIT intervention and its effectiveness with older children, such as school aged.

One of the barriers to this current study was drop-out due to reasons outside of this study's control. Therefore, future research should consider recruiting students who are already participants in PCIT alongside their parents. Comparison of children who receive PCIT only versus children who receive both PCIT and TCIT concurrently, could analyze whether both interventions together would provide more behavioral change compared to children who only receive PCIT. Another barrier was the acceptability of time-out, which is the standard consequence used within the traditional PCIT model. Therefore, further research should be conducted on the different consequence strategies utilized in this study and their effectiveness within the TDI phase of treatment.

In conclusion, there is room to grow the TCIT research. TCIT is in the early stages of building a strong evidence base, especially compared to PCIT. Therefore, replication of this model should be completed with varying participants, intensities, and settings.

<div align="center">**Summary**</div>

This study examined the implementation of Teacher-Child Interaction Training (TCIT) within a general preschool population. The model was implemented within a three-tiered approach, which is commonly seen among school districts. The first tier involved training the whole preschool staff in the use of PRIDE skills and the introduction of a social-emotional curriculum. If students did not respond behaviorally to this approach, then tier 2 was used with these students. Tier 2 involved in-classroom coaching with the teacher and student using more intensive PRIDE skills during 5 minutes of special playtime during the classes free play period. Then, if these students continued to not respond to this intervention component, they received

pull-out intensive one-on-one TCIT sessions once per week. Three participants were identified to receive the TCIT intervention. These students were chosen by a data driven and team decision. In order to measure behavioral gains, the REDSOCS behavioral recording system and the SESBI-R were used. The REDSOCS provided observational data within the classroom and the SESBI-R provided a report from the teacher on the student's behavioral progress. In addition to behavioral data, this study also examined the relationship between each teacher and student. In order to measure relational improvements, the DPICS-II coding system was used to code for PRIDE skill use between the teacher and student. Lastly, it was studied whether teachers found the TCIT intervention to be beneficial and feasible which was measured by the TAT.

The TCIT intervention consisted of two phases. The first phase was the Child-Directed Interaction (CDI) phase and the second phase was the Teacher-Directed Interaction (TDI) phase. The CDI phase focused on improving the teacher-child relationship using the PRIDE skills. Once teachers met mastery of the PRIDE skills, they then moved to the TDI phase. In the TDI phase, teachers were taught to use effective commands and implement a consistent and predictable consequence procedure. Although the original PCIT model uses time-out, this study utilized alternatives to time-out. For example, either the "broken record" procedure, "swoop and ignore" procedure, or an if-then statement were used. These strategies allowed for feasible generalization within the classroom. Prior to the completion of the TCIT intervention, it was collaborated with the student's teacher in order to determine if that was an appropriate decision. Data was then collected on behavioral gains during a maintenance phase to see if behavioral gains were maintained without the intervention.

Results from this study indicated positive results. According to the REDSOCS and SESBI-R, all students demonstrated a decrease in their disruptive behaviors. The decrease in

disruptive behaviors also occurred throughout the maintenance phase of the intervention. In terms of the second research question, teachers and students improved their relationship as evidenced by a consistent and increased use of the PRIDE skills measured by the DPICS-II coding system. Lastly, teachers indicated that the TCIT intervention was effective and feasible as measured by the TAT. These results indicate important implications for application within the preschool setting. First, these results show that forming a positive relationship between teacher and student within the early childhood setting lays the groundwork for implementing an effective consequence strategy. By improving the positive relationship between teacher and student it translates into the relationship/attention from the teacher as the main reinforcer for good behavior. This is important because teacher's can use their positive attention throughout the day to selectively praise and reinforce positive behaviors. The second phase of the intervention, the TDI phase, allows teachers to implement effective behavioral management strategies that can be generalized to their classroom.

With the increase in children attending preschools and the lack of training in early education to manage disruptive behaviors, there is a need for early childhood interventions that target both the teacher and student. Additionally, early intervention in general, is most effective in reducing behavioral concerns in the later years of childhood. Findings of the TCIT intervention show initial support for the implementation of this model. Considering the strong evidence-base for Parent-Child Interaction Therapy and the growing evidence for the TCIT model, the future of this treatment is promising. TCIT is an intervention which utilizes both teacher and child in a way that promotes generalization and skill acquisition. This unique approach potentially leads the way in training teachers in more positive ways to interact with their students and develop effective behavior management strategies within their classrooms.

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