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Supporting Preschool Teachers' Use Of Positive Behavior Strategies Through Conjoint Behavioral Consultation

Lisa Wells

ACCEPTANCE

This dissertation, SUPPORTING PRESCHOOL TEACHERS' USE OF POSITIVE BEHAVIOR STRATEGIES THROUGH CONJOINT BEHAVIORAL CONSULTATION, by LISA M. WELLS, was prepared under the direction of the candidate's Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the College of Education, Georgia State University.

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

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ABSTRACT

SUPPORTING PRESCHOOL TEACHERS' USE OF POSITIVE BEHAVIOR STRATEGIES THROUGH CONJOINT BEHAVIORAL CONSULTATION

by

Lisa M. Wells

The evidence clearly indicates that, not only is the learning process affected by many factors including students' mental health and social-emotional learning (SEL), but also zero tolerance methods of managing students' problem behaviors are largely ineffective. This dissertation introduces a suggested model for supporting educators' efforts in the implementation and sustainability of SEL programs using a response-to-intervention (RTI) model for educators. Additionally, the current study examined the effects of conjoint behavioral consultation (CBC) on (a) the role of teachers' classroom practices, (b) the home-school partnership, and (c) the relationship these two factors have on young children's challenging behaviors. Participants in this study were four triads, each consisting of one pre-k teacher, one preschool student with challenging behaviors, and one set of preschool students' parents from a suburban county in the southeast. Three dependent variables were measured in this study: (1) teachers' target behaviors were measured using direct observation; (2) students' target behaviors were measured using direct observation (i.e., daily by teachers and parents) and ratings on the *Social Skills Improvement System Rating Scale* (*SSIS-RS*; Elliott & Gresham, 2008); and (3) the impact of the intervention on the home-school relationship was measured both pre- and post-intervention using the *Parent-Teacher Relationship Scale - II* (*PTRS-II*; Vickers & Minke, 1995). The independent variable was a multi-component intervention package that incorporated the four stages of CBC (Sheridan & Kratochwill, 2010) with a social

skills intervention plan. A relationship was established between the intervention and teachers' use of select positive behavior support (PBS) strategies. Furthermore, results indicated that the intervention package was effective in improving all students' challenging behaviors in the *school* setting and for three of the four students challenging behaviors in the *home* setting. Finally, results from the *PTRS-II* indicated that parents and teachers' perceptions of the home-school relationship actually declined. However, this outcome was unexpected because the anecdotal reactions from the participants throughout this study were very positive. Ratings on the social validity of the intervention as measured by the *Treatment Evaluation Inventory – Short Form* (*TEI-SF*; Kelley, Heffer, Gresham, & Elliott, 1989) were high.

SUPPORTING PRESCHOOL TEACHERS' USE OF POSITIVE BEHAVIOR STRATEGIES THROUGH CONJOINT BEHAVIORAL CONSULTATION

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A Dissertation

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"Ubuntu: … I am because you are."
(*Desmond Tutu, 2008*)

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ABBREVIATIONS

APA Task Force	American Psychological Association Zero Tolerance Task Force
ADHD	Attention Deficit Hyperactivity Disorder
CASEL	Collaborative for Academic, Social, and Emotional Learning
CBC	Conjoint Behavioral Consultation
EBD	Emotional and Behavioral Disorder
EBIs	Evidence-Based Interventions
FBA	Functional Behavioral Analysis
IDEA	Individuals with Disabilities Education Act
IOA	Interobserver Agreement
NRC	National Research Council
PBIS	Positive Behavioral and Interventions Supports
PTRS-II	Parent-Teacher Relationship Scale - II
PL	Professional Learning
RCI	Reliable Change Index
RTI	Response-To-Intervention
RTI-E	RTI for educators
SBC	School-Based Consultation
SEL	Social and Emotional Learning
SSIS-RS	Social Skills Improvement System Rating Scale
TEI-SF	Treatment Evaluation Inventory – Short Form
USDHHS	United States Department of Health and Humans Services

CHAPTER 1

REFRAMING SCHOOL DISCIPLINE PRACTICES WITH AN EVIDENCE-BASED MODEL

In today's era of federal mandates for educational outcomes and accountability, one might think that the only function of school is academic achievement. While teaching academics may be the primary purpose for education, this is not all that children learn at school. The general consensus is that today's schools must also teach children how to be responsible, socially adept, and healthy citizens (Greenberg et al., 2003; Ysseldyke, Burns, & Rosenfield, 2009). Consequently, schools can play an important role in both the cognitive development of children and in their social, emotional, and behavioral development (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). However, when faced with tough choices, schools are often forced to allocate already limited resources to academic programs at the expense of programs targeting children's mental health and social-emotional competencies (Doll, Spies, & Champion, 2012; Ringeisen, Henderson, & Hoagwood, 2003). This is a problem because research shows us that it is essential for today's schools to consider how children learn from a holistic perspective (Doll et al., 2012; National Research Council (NRC), 1999a).

When Behavior Interferes with Learning

Learning does not occur in isolation and social, emotional, and behavioral problems in children can interfere with academic achievement (Walker, Ramsey, & Gresham, 2003). It has been estimated that up to 20% of children under the age of 18 experience developmental, emotional, or behavioral problems significant enough to warrant treatment (Ehrhardt-Padgett, Hatzichristou, Kitson, & Meyers, 2004; Friedman,

2003). Furthermore, approximately two-thirds of these students currently receive more than 60% of their instruction in the general education classroom (Niesyn, 2009). However, availability of quality mental health services for children is limited (Weist, Rubin, Moore, Adelsheim, & Wrobel, 2007) and only 20% to 30% of those children with identified mental health needs actually receive treatment (Ehrhardt-Padgett et al., 2004; Friedman, 2003). The unmet mental health needs of children in the United States is considered by many to be a national crisis (Ehrhardt-Padgett et al., 2004) and are increasingly recognized by schools.

Schools are the largest provider of mental health services for children, and for some children, it is the only place where they receive mental health care (Kratochwill & Shernoff, 2004). All children are likely to experience some degree of mental health problems (e.g., stress, anxiety, depression, family problems, and learning disabilities), which may affect their behavior (National Association of School Psychologists [NASP], 2006). When these behaviors begin to interfere with academic achievement, schools are mandated by the Individuals with Disabilities Education Act (IDEA) to provide special education and related services (Herman, Merrell, Reinke, & Tucker, 2004). For example, under IDEA, children who exhibit significant social, emotional, and behavioral problems can be served under the IDEA category of Emotional and Behavioral Disorder (EBD). However, some children who exhibit significant levels of behavioral problems may not be eligible for school-based services. Reasons suggested for this exclusion from available services include: (a) the definition of EBD under IDEA specifically excludes "social maladjustment" as a criteria for eligibility, (b) schools' historical philosophy that they are not responsible for the mental health needs of their students, and (c) the decision

regarding the degree to which emotional and/or behavioral difficulties becomes a disability is largely subjective:

> This philosophy is based on the premise that students who have problems in conduct (i.e., social maladjustment) are responsible for their behavior and thus do not have a legitimate disability. In contrast, students who exhibit internalizing behaviors (e.g., anxiety, depression, and fearfulness) do so because these problems are beyond their control. These students are considered to be victims of circumstance and therefore have a "legitimate" disability. (Gresham, 2005, p. 329)

Current Behavior Management Practices

Regardless of the origin of behavioral problems, schools are responsible for providing a safe learning environment for all students (Skiba, 2010). Toward that end, schools utilize various approaches of behavior management in response to problem behaviors (Kelly & Vaillancourt, 2012). Most often found in schools are punitive methods of school discipline, of which the most common approach is the use of zero-tolerance practices (Bear, 2010). Originally intended for drug enforcement, this philosophy was applied in 1994 to include weapons by the national Gun Free Schools Act (Skiba, 2010). Today, the zero tolerance policy has been expanded to address a variety of behaviors (e.g., threats, fighting, and failure to complete homework) and without consideration for individual circumstances (Skiba, 2010). Characterized primarily by suspension, expulsion, and placement in alternative school settings (Bear, Cavalier, & Manning, 2005), the implied intent of these strict policies is to communicate to students that certain behaviors, for both major and minor infractions, will not be tolerated (Skiba, 2010).

According to the American Psychological Association Zero Tolerance Task Force (APA Task Force, 2008), controversy over the use of zero tolerance is on the rise. In response to this controversy, the APA Task Force (2008) conducted an extensive review

of the literature and examined the data on the following five key assumptions of the zero tolerance approach to maintaining school discipline:

1. School violence is at a crisis level and increasing.
2. Zero tolerance policies increase the consistency of school discipline.
3. Removal of students who violate school rules will create a school climate more conducive to learning.
4. Zero tolerance has a deterrent effect and improves overall student behavior.
5. Parents overwhelmingly support zero tolerance policies and students feel safer.

Results of this review indicated that, despite a 20 year history of implementation of a zero tolerance approach to school discipline, data did not support these five key assumptions, and in some cases even demonstrated the opposite effect. For example, the data showed that schools with the highest rates of suspension and expulsion spent more time on disciplinary activities, had lower ratings for school climate, and had lower academic outcomes. For students of color and students with disabilities, the rate of suspensions and expulsions is even higher compared to their peers (APA Task Force, 2008). Furthermore, there is evidence that zero tolerance policies may negatively affect the mental health of these students (APA Task Force, 2008). Not only have the data consistently demonstrated that suspension and expulsion do not change undesirable behaviors, they also have been shown to increase the probability of subsequent disciplinary exclusions, academic failure, school drop out (Achilles, McLaughlin, & Croninger, 2007), incarceration, and lower school satisfaction (Skiba, 2010).

Current methods of school discipline often do not work (i.e., zero tolerance, expulsion, suspension) for several reasons including: (a) teaching students what not to do, (b) teaching students to not get caught, (c) producing short-term effects, (d) often requiring the presence and engagement of adults, and (e) failing to address the multiple factors that typically contribute to a student's misbehavior (Bear, 2010). Reactive and punitive school discipline policies do not teach students the interpersonal skills they need to be successful in school and society (APA Task Force, 2008). Furthermore, the disproportionate rate of suspensions and expulsions for students of color and students with disabilities, especially students with EBD, suggest that zero tolerance practices may not be implemented objectively or with regard to contributing contextual factors (APA Task Force, 2008).

Purpose of This Article

A new model moving away from reactive, punitive strategies for behavior management toward more preventive strategies is being increasingly considered by schools (Tillery, Varjas, Meyers, & Collins., 2010). The "key to this effort is designing and sustaining teaching and learning environments that actively teach and promote contextually appropriate social behaviors and prevent the occurrence of norm- or rule-violating problem behaviors" (Sugai & Horner, 2008, p. 67). Efforts for implementing preventive behavior management strategies can be accomplished by maximizing existing resources in schools. For example, school-based professionals such as school counselors, school social workers, and school psychologists can play integral roles in the development and implementation of positive behavior management and school discipline programs. The purpose of this article is to illustrate one way school administrators can

reduce behavioral problems by promoting social-emotional competencies in students using services provided by the school psychologist. Therefore, this article will begin with a summary on the role mental health and social-emotional competencies have on how children learn. This will be followed by a summary of the research on best practices for promoting the development of social-emotional competencies in students. Finally, a suggested model for supporting educators' efforts in the implementation and sustainability of programs targeting the development of social-emotional skills will be presented.

The Learning Process: The Role of Mental Health and Social-Emotional Competence

Research conducted over the last 30 to 40 years provides important information on how people learn and has significant implications on how we educate our children (NRC, 1999a). Based on this research, we know that the process of learning involves more than just cognitive ability and can be impacted in many ways. For example, Wang, Haertel, and Walberg (1993) examined the influence of educational, psychological, and social factors (grouped into 28 categories) on students' learning. They found that eight of the top 11 most influential categories involved social-emotional variables (e.g., home environment and parental support, student-teacher social interactions, social and behavioral, classroom climate). The factor that exerted the most influence on students' learning was classroom management (Wang et al., 1993). The research has clearly demonstrated that students' mental health problems (USDHHS, 1999) and deficits in social-emotional competencies (Zins & Elias, 2006) can negatively affect the learning process.

Mental health and social-emotional skills. Mental health is more than simply the absence of illness (Suldo & Shaffer, 2008). It can be viewed along a continuum between healthy living and chronic illness and plays an important role on people's overall health and productivity (USDHHS, 1999). As children progress through their development, their mental health is often expressed within the context of their social and cultural environments (USDHHS, 1999). As such, children's mental health is directly related to their social-emotional competencies. Often referred to as social and emotional learning (SEL), social-emotional competencies are described as a process of managing emotions, developing empathy for others, establishing positive relationships while balancing interpersonal challenges, and making decisions that reflect personal responsibility (Collaborative for Academic, Social, and Emotional Learning (CASEL), 2013). These skills play an important role in students' ability to meet the demands of school by providing a foundation for positive social behavior, fewer conduct problems, less emotional distress, and academic success (CASEL, 2013).

When behaviors affect the learning process. When children have mental health problems and/or deficits in their SEL, they often exhibit problem behaviors which may impact the learning process (Walker et al., 2003). There are several reasons why children may experience mental health or SEL problems. For example, from a developmental point of view (i.e., age), some children may have limited ability to verbally communicate their thoughts, experiences, and feelings in any meaningful way (Bratton, Ray, Rhine, & Jones, 2005). Until they learn the necessary verbal skills to express themselves in socially appropriate ways, these children often communicate through their behaviors. Some problem behaviors in children can also be attributed to biological and/or

neurological causes such as autism, temperament, or a learning disorder (Walker et al., 2003). However, the vast majority of problem behaviors in children can be attributed to environmental causes such as poverty, gender, ethnic discrimination (USDHHS, 1999), quality of instruction, quality of teacher-child interaction, peer interactions, and deficits in children's social skills (Hester et al., 2004). While schools may not be the cause of behavior problems in children, there are ways schools can help children with behavior problems and achieve their primary goal of educating children (Walker et al., 2003).

Best Practices in School Discipline: Preventive Approaches

Recently, more schools have shown an increased focus on preventive approaches for behavior problems that also promote school safety and foster a positive learning environment (APA, 2008; Skiba, 2010). This increased attention to preventive approaches for behavior problems can be found not only throughout individual schools in the United States (CASEL, 2013) but also at the state level where some legislation now includes educational standards for SEL instruction (Zins & Elias, 2006). There is even federal legislation addressing the need for supporting students' SEL development: the Academic, Social, and Emotional Learning Act (HR 2437, 2011). The good news is that there are behavior management strategies that already exist which can prevent and/or reduce problem behaviors. In fact, there is a large body of "research that provides potentially effective, culturally relevant prevention programs, instructional technologies, interventions, and organizational structures designed to address many of the challenges faced by educators" (Truscott et al., 2012, p. 2).

Prevention Using Evidence-Based Programs

There are a variety of school-based prevention programs for SEL that do work and are supported by research (Greenberg et al., 2003). Often referred to in the literature as evidence-based interventions (EBIs), these programs have been found to be effective through systematic evaluation using scientific methods (Shernoff & Kratochwill, 2007). When designed and implemented well, programs targeting SEL skills have demonstrated positive improvements in students' social development, mental health, problem behaviors, academic performance, and learning (Durlak et al., 2011; Greenberg et al., 2003). Furthermore, research has shown that schools experience a significant reduction in disciplinary actions and office referrals when EBIs targeting SEL are implemented effectively (APA, 2008; Bear, 2010). Finally, there is a potential for reduction in special education referrals when EBIs are not only implemented and sustained, but also started early (Zins & Erchul, 2002). [i]

While there are no quick fixes to address problem behaviors in students, behavior strategies that have been shown to be effective include providing a positive, supportive environment (i.e., positive adult-student relationship), consistent discipline (e.g., clear, predictable rules and consequences), direct social skills instruction, and positive feedback (Walker et al., 2003). These student-centered programs focus primarily on prevention and early intervention by supporting students' development of self-discipline as opposed to schools' use of discipline strategies (Bear, 2010). Through these programs, students are explicitly taught and given opportunities to practice critical SEL competencies (Zins & Elias, 2006). These competencies identified by CASEL (2013) include (a) self-awareness (i.e., the ability to recognize one's emotions and thoughts), (b) self-management (i.e., the ability to regulate one's emotions, thoughts, and behaviors), (c)

social awareness (i.e., the ability to take perspective of and empathize with others), (d) relationship skills (i.e., the ability to establish and maintain healthy relationships), and (e) responsible decision making (i.e., the ability to make constructive choices about personal behavior). While the development of these SEL competencies is important for all students, this is particularly true for those students whose SEL skill deficits are severe enough to warrant special education services.

Prevention through a Continuum of Supports

A safe, positive learning environment that is supported by effective school discipline programs is best when it includes a continuum of services (i.e., multi-tiered models) that emphasize prevention and early intervention (APA Task Force, 2008). Adapted from the public health model of prevention science, these models employ systems of prevention and early intervention that typically include three levels of support (Merrell & Buchanan, 2006). Thus, activities that promote the healthy development of social, emotional, and behavioral skills across environments (i.e., home, school) are delivered within this hierarchical framework of intervention (Powell, Dunlap, & Fox, 2006). Commonly referred to in the literature as response-to-intervention (RTI), this approach is increasingly being called upon as a means for meeting the educational, mental health, and behavioral needs of all children (Barnes & Harlacher, 2008; Merrell & Buchanan, 2006).

RTI is a service delivery method through which all students receive interventions based on their level of need. This method of intervention involves ongoing progress monitoring, data-based decision making, and placement of students within a range of supports (Barnes & Harlacher, 2008). The use of a RTI model helps educators

"determine which children need what services, delivered with how much intensity" (Gresham, VanDerHeydon, & Witt, 2005, p. 3). In an attempt to provide clarity on the purpose of RTI, Barnes and Harlacher (2008) make a distinction between the five principles of RTI and its four features. The five guiding principles of RTI provide practitioners with a fundamental understanding of why RTI is needed. These five principles include: (a) a proactive and preventive approach to education, (b) a match between SEL instruction and individual students' needs, (c) a problem-solving orientation and data-based decision making, (d) the use of effective practices, and (e) a systems-level approach (Barnes & Harlacher, 2008). These principles do not change. Instead, these five principles provide a guide by which school systems may choose how to implement the key features of RTI. The four features of RTI, describing what RTI looks like, include (a) multiple tiers, (b) formal and organized assessment system (e.g., identification, progress monitoring), (c) protocol (i.e., method for determining the resources and level of support a student needs such as the problem-solving model), and (d) use of evidence-based instruction and interventions (Barnes & Harlacher, 2008).

Tier 1. The first level of a RTI model (i.e., Tier 1) provides prevention strategies promoting SEL skills to all children through universal activities. Most of these activities take place in the classroom but also incorporate school-wide preventive practices. Prevention activities at Tier 1 target all students and include instructional practices (i.e., differentiated instruction), classroom organization and routines, accommodations, and problem-solving strategies that address student performance (Fuchs & Fuchs, 2009). Behavioral expectations are clearly communicated, explicitly taught, and reinforced to all students to prevent problem behaviors from occurring (Kelly & Vaillancourt, 2012).

Data are collected to monitor the efficacy of these activities as well as identify those students who may require more intensive supports.

Tier 2. The second level of a RTI model (i.e., Tier 2) provides more specialized services to those children who are at-risk for developing problem behaviors. Prevention and early intervention activities at Tier 2 of RTI support students who have been identified in Tier 1 as being at-risk (academically or behaviorally). These activities are distinguished from Tier 1 of RTI by the use of interventions that are provided in a small group setting through explicit instruction (Fuchs & Fuchs, 2009). The goal of activities at Tier 2 of RTI is to prevent at-risk behaviors from getting worse and these activities often involve progress monitoring to assess students' response to the interventions (Kelly & Vaillancourt, 2012).

Tier 3. The third level (i.e., Tier 3) provides more intensive, individualized interventions to those children exhibiting severe and persistent problem behaviors. Activities at Tier 3 are interventions provided for those individual students who require more intensive support. The goal at this level of support is to keep students engaged in the learning process in the classroom through efforts that focus on a specific set of behaviors (Kelly & Vaillancourt, 2012). All the strategies used at Tier 1 with all students would also be applicable for those students at Tier 2 and Tier 3 of the RTI model. However, the difference is that these strategies would be "used more frequently, intensely, and in a more structured and systematic manner that often requires supports and resources outside of the regular classroom" (Bear, 2010, p.3).

School discipline and RTI. According to Bear (2010), a more balanced and comprehensive approach to behavior management and school discipline should strive to

both manage student behavior and develop student's self-discipline. Achieving both of these goals requires the use of interventions designed to address four critical components of a comprehensive school discipline model: (a) developing self-discipline, (b) preventing behavior problems, (c) correcting behavior problems, and (d) addressing serious/chronic behavior problems (Bear, 2010). The first three components of a comprehensive school discipline model (i.e., developing self-discipline, preventing behavior problem, and correcting behavior problems) would be considered a Tier 1 level of prevention within the RTI model. The fourth critical component of a comprehensive discipline model (i.e., addressing serious and chronic behavior problems) would be considered a part of the Tier 2 and Tier 3 levels of prevention.

Adopting Preventive Practices for School Discipline

Although the need for adopting a more proactive, preventive approach to school discipline has been recognized for some time, the implementation and sustained use of effective interventions has not occurred on a large-scale level (Sugai & Horner, 2008). This may be due, in part, to what Ringeisen and colleagues (2003) called "organizational fit" or translating research to practice. That is to say, research on effective SEL programs is often conducted in controlled environments and expanding this research to larger settings is needed. Other challenges related to the lack of sustained use of SEL programs include:

- Lack of coordinated planning at the system level.
- Failure to obtain ownership from key stakeholders at each level of the school system (e.g., school personnel, parents, community providers).
- Selecting inappropriate SEL programs and/or concepts.

- Difficulty applying SEL programs and/or concepts into existing school climates, curricula, and behavior management policies.
- Failure to establish procedures for program monitoring and efficacy.
- Difficulty integrating SEL concepts and methods across all levels of prevention/early intervention systems (i.e., RTI), student developmental levels, and family and community systems (Zins & Elias, 2006).

Models for school reform will require an emphasis on comprehensive, evidence-based policies and procedures focusing on the overall development of students, professional development for educators on SEL concepts and implementation, and ongoing monitoring and evaluation of school reform efforts (Zins & Elias, 2006). This type of reform "requires transformative leadership: leadership that is willing to realign structures and relationships to achieve genuine and sustainable change" (Elias, O'Brien, & Weissberg, 2006, p. 11). Achieving change of this magnitude may require consideration for a fundamental shift in school discipline policies at the organizational level (Bear, 2010).

Changes at the Organizational Level

Bridging the gap between research on effective SEL interventions and programs and actual application at the system level is needed (Ringeisen et al., 2003). Two challenges school leaders may face in bridging this "research to practice" gap are (a) identifying the resources necessary for the sustained use of SEL interventions into current school climate and curricula and (b) providing the necessary training and support on SEL concepts and programs for educators (Durlak et al, 2011; Ringeisen et al., 2003; Zins & Elias, 2006).

Identifying existing resources. One reason why schools may not have fully embraced system-wide implementation of SEL is due to a common concern most schools have: finding the time to incorporate SEL programs and methods into an already packed day (Loucks-Horsley, 1995; Zins & Elias, 2006). Fortunately, there are a wide range of options, "from relatively minor to more substantial changes in the school ecology", which can be adapted depending on the unique needs of each school (Zins & Elias, 2006, p. 9). Furthermore, there are a variety of resources related to SEL which can "help schools select and implement SEL programs that fit their specific needs" (CASEL, 2013, p. 38). These resources include literature reviews and publications, national databases and reports, and SEL program reviews (see Table 1 for examples). Perhaps more importantly, especially for those responsible for the selection of these interventions, several of these resources have already reviewed and rated the efficacy of these SEL programs using strict standards (Zins & Elias, 2006). These reviews are important because they provide a systematic means for educators to compare and select programs that will best meet the unique needs of their school.

Table 1. *List of Resources for SEL*

Resource	Type	Description	Cost
Author- Bear	Book	"School discipline and self discipline: A Practical Guide to Promoting Student Prosocial Behavior"	Yes
Author - Rathvon	Book	"Effective School Interventions; Strategies for Enhancing Social Competence"	Yes
www.jimwrightonline.com	Web-based	Many behavior intervention ideas	Free
www.casel.org	Web-based	Resource for social-emotional learning	Yes
www.behaviordoctor.org	Web-based	Strategies and solutions for behavior problems	Free
www.behavioradvisor.com	Web-based	Strategies and solutions for behavior problems	Free
www.pbis.org	Web-based	Resource for positive behavioral interventions and supports	Free
www.swis.org	Web-based	Software system for collecting data on office referrals	Yes
www.nea.org	Web-based	Whole class and individual intervention ideas	Free
www.schoolbehavior.com	Web-based	Whole class and individual intervention ideas	Free*
www.disciplinehelp.com	Web-based	A reference for handling misbehaviors at school and in the home	Free*
		* Not all information is free - membership may be required.	

For example, one resource that provides up-to-date information on effective SEL programs for all levels of education (i.e., preschool through high school) can be found at the CASEL website. To meet CASEL's rigorous criteria for inclusion in their review, SEL programs must (a) be well-designed, classroom-based programs that address all five areas of SEL competence by systematically promoting SEL, offering opportunities for practice, and offering multi-year programming; (b) deliver high-quality training and supports; (c) and be evidence-based (CASEL, 2013). Those programs that "made the cut" by CASEL's standards are then rated on criteria such as (a) how well the five SEL skills were addressed (e.g., explicit instruction, integration into academic curricula, and teachers' instructional practices), (b) the presence of evidence on effective outcomes (i.e., positive impact on behavioral and/or academic performance), (c) how SEL instruction was approached, (d) breadth of contexts in which SEL was promoted (i.e., classroom, school-wide, family, and community), and (e) availability of tools for monitoring implementation and program's impact on student behaviors (CASEL, 2013).

In addition to the above mentioned resources, educational leaders also can utilize resources found within their own schools. School counselors, social workers, and school psychologists are all qualified to provide the necessary supports to educators for promoting the SEL of students. Perhaps one of a school's best resources, and certainly one of the most under-utilized (Deno, 2002), is the school psychologist. Some have argued that school psychologists can be viewed as an asset to a school system because of the "dual nature of their training, which encompasses both clinical and educational components" (Wizda, 2004, p. 278). Areas of expertise in which school psychologists are trained include:

- Basic and applied psychological science, research, and evaluation.
- Designing, implementing, and evaluating academic and behavioral interventions.
- Learning theory, child development, curriculum and instruction, applied behavioral analysis, and child psychopathology.

Training and support for teachers. The lack of effective, wide-spread use of SEL programs is also related to what Zins and Elias (2006) refer to as "person power" issues. That is, not nearly enough school personnel are actually trained in SEL methods. SEL and academic learning should be a coordinated, fundamental part of education. Thus, it is critical to provide evidence-based training (i.e., professional development) that prepares and supports educators on these efforts (*Greenberg et al.*, 2003). While the ultimate goal is to improve outcomes in *student* learning, the main purpose of professional development activities is to foster change in *teachers'* practices, beliefs, and attitudes (Guskey, 1986). The focus of professional development should be on changing

how teachers think, what they do, and how they evaluate their efforts (Truscott et al., 2012). That is to say, if we want to see a fundamental change in teacher's instructional practices and ideologies, we must think of teachers as "learners" rather than simply agents for implementing interventions. Accordingly, Truscott and colleagues (2012) prefer the term professional *learning* as opposed to professional *development* to better encompass the concept of teaching educators and increasing the likelihood of sustained change in instructional practices. Thus, for the remainder of this article, the term professional learning (PL) will be used in place of professional development. Unfortunately, PL programs for educators historically have been criticized for focusing on fads or "bandwagon movements" rather than research (Guskey, 2003). Moreover, the programs often are not:

- *Learner centered*. Rather than ask teachers where they need help, they are simply expected to attend prearranged workshops.
- *Knowledge centered*. Teachers are often introduced to a new technique without being given the opportunity to understand why or how it might be valuable to them.
- *Assessment centered*. In order for teachers to change their practices, they need opportunities to try things out in their classrooms and then receive feedback.
- *Community centered*. Many professional development opportunities are conducted in isolation. Opportunities are limited for continued contact and support as teachers incorporate new ideas into their teaching (NRC, 1999a).

To be considered "best practices," the research on PL has shown that it is important to focus on the (a) duration, (b) collective participation, and (c) three core

features of PL (Garet, Porter, Desimone, Birman, & Yoon., 2001). *Duration* of PL activities refers to the period of time (e.g., days, weeks, months) over which an activity occurs (time span) and total number of hours spent in an activity (contact hours). According to Garet et al. (2001), the duration of professional development is critical for two reasons: it allows for increased opportunities for in-depth conversations on various teaching related topics as well as more time to apply new strategies in the classroom and get feedback. *Collective participation* refers to PL activities that are "designed for groups of teachers from the same school, department, or grade level" (Garet et al., 2001, p. 922). Collective participation is said to be advantageous because it provides teachers who work together with more opportunities to (a) discuss concepts, skills, and problems; (b) share common materials and assessment requirements; (c) discuss students' needs across classes and grade levels; and (4) sustain changes in practice over time (i.e., shared professional culture). The *three core features* of PL activities that have the most significant effects on teachers' knowledge, skills, and changes in classroom practices include (a) *content* (i.e., content that teachers learn during PL activities), (b) *active learning* (i.e., activities that provide teachers with opportunities to become actively engaged in the PL experience), and (c) *coherence* (i.e., to the degree to which an activity is perceived by teachers as being a coherent part of a wider program of teacher learning).

A Model for Change in School Discipline Practices: RTI for Educators

A fundamental shift is needed in how we approach *teachers as learners* (Donovan, Bransford, & Pellegrino, 1999). That is, teachers should be considered the "learners" in PL activities. Due in part to an increased awareness of the similarities between how children and adults learn (Guskey, 2003), contemporary PL activities are

shifting their focus from the individual teacher (i.e., traditional activities) toward schools, professional networks, and collective learning communities (Loucks-Horley, 1995). Thus, one way school leaders could achieve changes in school discipline policies and behavior management practices is to deliver PL activities on SEL concepts and interventions within the same RTI model used to provide interventions for students. By thinking of teachers as learners, the concept of "RTI for educators" (RTI-E) would provide a continuum of supports ranging from universal training for all educators to more specialized support for those educators who indicate a need (Barnes & Harlacher, 2008). While a review of all the areas in which the RTI-E model could support teachers is beyond the scope of this article, a brief description of how PL activities can provide support to teachers at each of the three levels of RTI-E are described next.

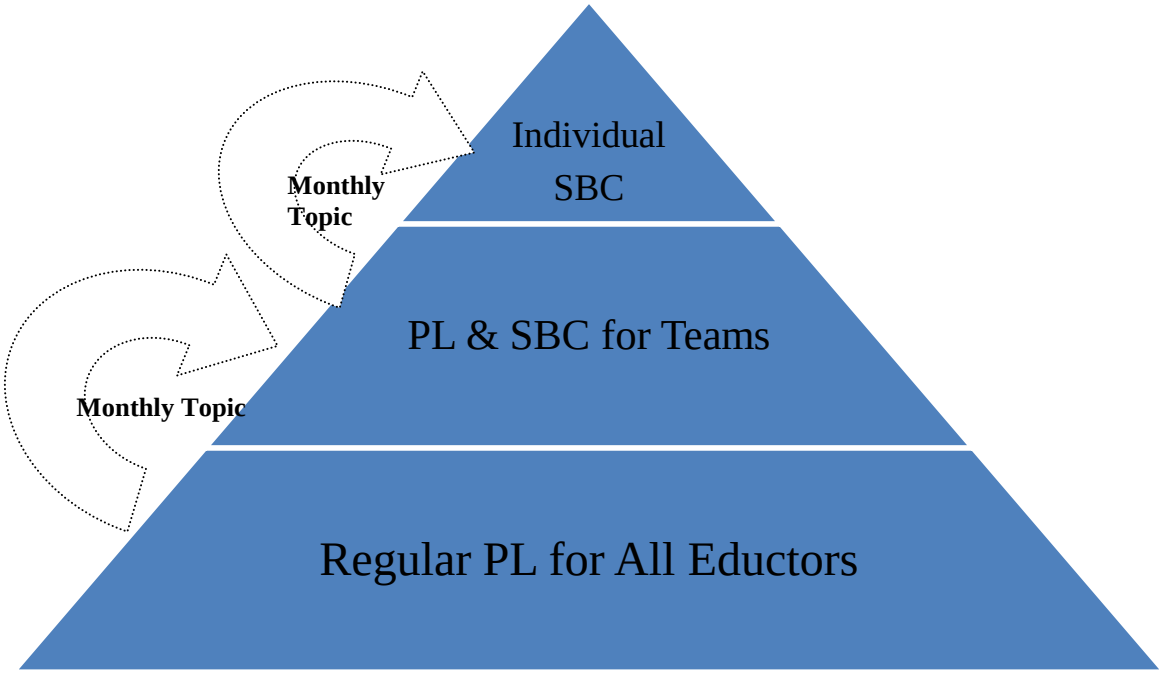

Figure 1. RTI-E.

RTI-E: Tier 1. The first level of a RTI-E model (i.e., Tier 1) would provide PL to all educators' that promote the knowledge and skills needed to prevent or remediate social, emotional, and behavioral concerns in their classrooms. PL activities would be provided on a regular basis (e.g., monthly) and include a variety of topics related to the SEL (e.g., the nature of behavior in students, the theoretical underpinnings of behavior management strategies, or supports for students with deficits in SEL skills).

An example of how Tier 1 in a RTI-E model could be conceptualized is through trainings provided by the school psychologist. These trainings could be conducted during monthly staff meetings on a variety of topics relevant to SEL development, behavior, and classroom management strategies. For instance, classroom management strategies for all students (including students with disabilities) is one area cited in the literature in which educators could benefit from more training (APA, 2008; Gilliam, 2005). Providing training and support to educators on how to explicitly teach students with SEL skill deficits, and all students in general, is an area of expertise for school psychologists (Zins & Elias, 2006). Educators (i.e., administrators, teachers, and support personnel) could also be taught how to recognize the risk factors and warning signs related to mental health problems (e.g., depression (Zenere & Lazarus, 2009). Supplemental materials, information, and additional resources on the topics discussed during staff meetings also could be provided for educators to review at their convenience. Additional examples of activities which could be performed by school psychologists at the universal level of RTI-E include:

- Providing educators with a variety of activities that allow them to practice new skills in their classrooms in-between monthly PL trainings.

- Working with school administrators on ways to support teachers (e.g., stress management, self-care, and planning periods).
- Conducting presentations during parent-teacher association (PTA) meetings.
- Facilitating a needs assessment on areas where teachers would like more support.

RTI-E: Tier 2. The second level of a RTI-E model (i.e., Tier 2) would provide more specialized services to those educators who may require additional information and/or support on SEL development and classroom management strategies. The goal of activities at the Tier 2 level of RTI-E is to provide teachers with the necessary support and feedback from knowledgeable sources toward the sustained use of these new strategies (Gersten, Vaughn, Deshler, & Schiller, 1997). This support and feedback can be provided at the Tier 2 level of RTI-E through educators' peers and mental health professionals (e.g., school psychologists, counselors, social workers). These activities are distinguished from the Tier 1 level of RTI-E by the use of PL activities which are provided in a small group setting on a regular basis. Rather than the traditional short-term, one-time experience where participants "listen" to experts (Loucks-Horsley, 1995), PL activities at this level of RTI-E would be ongoing, take place during the regular school day, and include mentoring preservice teachers, peer observations, coaching, and study groups (Garet et al., 2001; Loucks-Horsley, 1995).

One way to envision what PL would look like at the Tier 2 level of RTI-E is to provide ongoing support through monthly (or more frequently as needed) grade-level team meetings or normal planning periods. School psychologists could tailor topics first presented at the monthly school-wide staff meetings (i.e., Tier 1 of RTI-E) for the

specific needs of individual teams. That is, school psychologists could provide more in-depth information on the various topics and tailor activities toward the specific needs of the team such as age-appropriate expectations for behavior and strategies for promoting the development of SEL. This would also be a good time to conduct a "questions and answers" session about activities teachers may have tried in between trainings (Garet et al., 2001). Facilitating these "Q & A" sessions is important because teachers are more likely to value the research behind interventions when their feedback is considered relevant and taken into consideration (Gersten et al., 1997).

School psychologists could also help establish relevant professional learning communities (PLCs), school improvement teams, or student support teams**.** PL that is designed to target specific groups of teachers (e.g., same school, department, grade level) is advantageous for several reasons. Teachers who work together will have more opportunities to discuss what they have been learning through the PL activities, support each other as they integrate the new material into their current teaching practices, and discuss student needs across classes (Loucks-Horsley, 1995). In addition, a "shared professional culture" is developed where teachers collaborate on shared goals, methods, problems, and solutions (Garet et al., 2001). One example would be a team of grade level teachers who collaborate and plan learning experiences that are designed to develop social-emotional competencies in their students and are integrated into existing academic curriculum (Loucks-Horsley, 1995).

RTI-E: Tier 3. The third level of RTI-E (i.e., Tier 3) would provide more individualized training and support to those educators who would benefit from one-on-one support on SEL development and classroom management strategies. In particular,

teaching philosophy and resistance to change has been identified in the literature as an area of concern when adopting evidence-based classroom management strategies (Gersten et al., 1997). Encouraging educators to move away from strategies with which they are more comfortable using (i.e., philosophical and behavioral change) may require more individualized support. This level of support could be provided through consultation services on a one-on-one basis. School-based consultation (SBC) is one of the current leading strategies for supporting positive SEL development in children (Gilliam, 2005; Raver & Knitzer, 2002). Research has shown that the likelihood of suspension and expulsion is significantly reduced when teachers have access to SBC from mental health professionals (e.g., school psychologists) who provide classroom-based strategies for dealing with problem behaviors in students (Gilliam, 2005). While the focus of SBC is typically behavioral change in individual students, it can also involve problem-solving with parents and teachers (e.g., conjoint behavioral consultation (CBC); Sheridan & Kratochwill, 1992). Other examples of individualized, one-on-one support through SBC services include conducting classroom observations on teachers' behavior management practices in the classroom, providing constructive feedback on teachers' strengths and areas for improvement, and coaching teachers on best practices for effective SEL skill development.

Conclusion

The evidence clearly indicates that, not only is the learning process affected by many factors including students' mental health and SEL, but also zero tolerance methods of managing students' problem behaviors are largely ineffective. Maintaining a safe, positive learning environment and supporting students' development of self-discipline are

both equally important elements of a comprehensive school discipline model (Bear et al., 2005). Toward that end, schools need to adopt a philosophy of *prevention* regarding students' behaviors and focus their efforts not only on their academic practices (i.e., instructional and curricular) but also on the social context of the environment that promotes learning (Sugai & Horner, 2008). Thus, schools should incorporate "SEL programs as a core component of their efforts to promote students' social, emotional, and academic learning" (CASEL, 2013, p. 6).

However, determining what to implement (i.e., which interventions) is not the problem (Truscott et al., 2012). The problem is the successful integration and implementation of evidence-based SEL programs into existing curriculum (i.e., translating research to classroom practice) in ways that are meaningful and sustainable (Gersten et al., 1997; Zins & Elias, 2006). A fundamental shift is needed in the way educators approach instructional methods to create change that is sustained over time (Truscott et al., 2012). Just as students learn, practice, and apply academic skills, students also must learn, practice, and apply their SEL skills (Zins & Elias, 2006). These skills are best developed through effective classroom instruction and positive, preventive classroom management (Greenberg et al., 2003) which are viewed as some of our best instructional support strategies for all students:

> The success of schools as effective learning environments rests in part on establishing a social context that promotes and supports successful academic engagement. Schools that do not establish a constructive social culture will have difficulty achieving the academic gains that define the purpose of educational systems in the United States. Faced with this reality, schools need to attend simultaneously to developing the schoolwide systems of constructive social behavior and the curricular and instructional practices that will promote successful academic achievement for *all* students. Effective behavior-support practices benefit academic outcomes, *and* effective instructional practices benefit social behavior (Sugai & Horner, 2008, p. 67).

Effective learning is directly related to effective instruction which "begins with the knowledge and skills that learners bring to the learning task" (NRC, 1999a, p. 50). According to CASEL (2013), sound, effective implementation of SEL programs requires not only initial training of educators but also ongoing support. This will be a critical consideration when attempting to facilitate conceptual and behavioral change in educators. This is important because the level of support that teachers will need for addressing behavior problems in the classroom will vary. Applying a continuum of supports to teachers allows for PL activities to be ongoing and tailored toward the unique needs of individual teachers, schools, and districts. Changes in educators' practices can be facilitated, supported, and, perhaps most importantly, sustained through effective PL activities (Truscott et al., 2012) and delivered within a RTI-E model. The resulting affect would support one of the main goals of education: developing responsible citizens.

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CHAPTER 2

SUPPORTING PRESCHOOL TEACHERS' USE OF POSITIVE BEHAVIOR STRATEGIES THROUGH CONJOINT BEHAVIORAL CONSULTATION

During the early childhood period from birth to age five (Weiss, Caspe, & Lopez, 2006), children develop critical social, emotional, and behavioral skills that serve as the foundation for school readiness. Recognizing the importance of these skills, most states provide guidelines to support the development of school readiness skills for children in early childhood education settings (Daily, Burkhauser, & Halle, 2010). Toward that end, many states also provide funding for preschool education (Gilliam, 2005). As a result, just over one-third of all three-year olds (i.e., 38.2%), over two-thirds of all four-year olds (i.e., 68.6%), and nearly all five-year olds (i.e., 86.3%; excluding those enrolled in kindergarten) are enrolled in either a part-time or full-time preprimary program (i.e., nursery school, preschool, or kindergarten; Aud et al., 2012).

High quality preschool programs can help support students development of school readiness skills. Yet many young children experiencing social, emotional, and/or behavioral difficulties reach kindergarten unprepared (Gilliam, 2005). In fact, behavioral problems exhibited in early childhood are one of the best predictors of future problems in adolescence and adulthood including peer rejection, drug abuse, depression, juvenile delinquency, school drop out, incarceration, and early death (Dunlap et al., 2006; Hester et al., 2004). Often referred to as "challenging behaviors" in the literature, behavior problems in early childhood are frequently defined as "any repeated pattern of behavior or perception of behavior that interferes with or is at risk of interfering with optimal learning or engagement in pro-social interactions with peers and adults" (Smith & Fox,

2003, p. 6). Common challenging behaviors young children exhibit include prolonged tantrums, aggression (physical and verbal), property destruction, self-injury, noncompliance, and withdrawal (Smith & Fox, 2003). Estimated prevalence rates for young children experiencing significant social, emotional, and behavioral problems range between 7% to 16% (Caselman & Self, 2008) and this number is increasing (Hemmeter, Santos, & Ostrosky, 2008). An additional 17% to 25% of young children are considered at-risk for developing emotional and/or behavioral problems (Caselman & Self, 2008). This risk increases significantly for children living in low-income families (Qi & Kaiser, 2003).

Although the purpose of preschool is to prepare young children for future success in school by promoting the development of school readiness skills (Gilliam, 2005), many early childhood educators do not feel equipped to handle young children with challenging behaviors (Hemmeter et al., 2008). Consequently, young children with challenging behaviors are often expelled or excluded from early childhood programs (Hemmeter et al., 2008); putting them at a higher risk for future school failure (Gilliam, 2005). In fact, the expulsion rate for young children in publicly-funded preschool programs was found to be three times higher than the expulsion rate for K – 12 students (Gilliam, 2005). "The frustrating irony of course is that preschool-age children who are expelled from early education experiences are the very students who need those experiences the most in order to gain appropriate social behaviors" (Lewis, Beckner, & Stormont, 2009, p. 76).

Prevention and Early Intervention

Because there is a clear linkage between social, emotional, and behavioral competencies in young children and future success, there is a compelling need for

effective early childhood intervention (Raver & Knitzer, 2002). This is particularly true for young children with challenging behaviors because effective prevention and early intervention efforts can change a child's negative trajectory toward more positive outcomes (Shonkoff & Phillips, 2000). Not only are many prevention/early intervention programs effective, but also these effects can be sustained over time (Smith & Fox, 2003). In fact, evidence has shown that the development of school readiness skills during the preschool years is a better predictor of academic performance in first grade than student cognitive abilities or family background (Raver & Knitzer, 2002).

Several early intervention methods have proven to be effective in the development of critical school readiness skills. Positive behavioral interventions and supports (PBIS) is one such approach. Theoretical and foundational underpinnings of PBIS include behavioral theory (e.g., Skinner), applied behavioral analysis (ABA; Sugai, 2007), community living and family support advocacy movements, and ecological/family systems theories (Lucyshyn, Horner, Dunlap, Albin, & Ben, 2002). The PBIS method of behavior management was originally intended for children with severe developmental disabilities (Sugai, 2007). Today, PBIS principles, practices, and interventions have been applied to children with a wide range of academic and behavioral problems and their families (Sugai, 2007).

The PBIS framework, delivered on a continuum of supports ranging from universal to individualized activities (Sugai & Horner, 2008), emphasizes the use of positive, proactive strategies that teach young children socially acceptable behaviors and has been shown to be effective across multiple problem behaviors, participants, settings, intervention strategies, and interventionists (Lucyshyn et al., 2002). PBIS interventions

focus on changes within the child's environment (Sugai, 2007) including clearly defined behavioral expectations, explicit instruction on these behavioral expectations, and consistent positive reinforcement (e.g., praise, rewards; Horner, Sugai, & Anderson, 2010; Sugai, 2007). In addition, preschool teachers can support young children's development of appropriate behaviors through PBIS strategies such as warnings (i.e., prior to a change in activity), transition signals (i.e., signals the change in activity), precorrections (i.e., reminder of appropriate behavioral expectations), and specific praise (i.e., when appropriate behavioral expectations are displayed; Stormont, Smith, & Lewis, 2007).

Home-School Partnership

It is important to keep in mind when choosing effective interventions that "neither the problem nor its solution rests solely with the child" (Hester et al., 2004, p. 7). An effective intervention must also consider the complex nature of the interaction between children and the various settings as well as the mediating factors that influence both the child and the settings (Morse, 1993). In particular, young children's outcomes are improved when interventions target both parents and teachers (Raver & Knitzer, 2002). For example, because teachers often are not adequately trained in addressing the social, emotional, and behavioral needs of their students, programs aimed at training teachers to be proactive in this area can have a positive impact on the classroom (Koller & Bertel, 2006). In addition, these programs can be modified and implemented in the home environment, subsequently providing consistency across environments (Conroy, Sutherland, Haydon, Stormont, & Harmon, 2009).

Rather than explaining a child's performance from either the family's or the school's point of view, Reschly and Christenson (2012) contend that educational practices should take into account the reciprocal effects of both environments and emphasize the importance of the home-school partnership. Shared goal development, problem-solving, and joint responsibility are inherent in these educational practices, as is the need for two-way communication (Reschly & Christenson, 2012). Thus, an important element of any intervention program designed for children with behavioral problems is collaboration between parents and teachers (Conroy et al., 2009).

The goal in home-school collaboration is to support children's learning through a partnership involving shared effort and responsibility (Esler, Godber, & Christenson, 2002). While often used interchangeably in the literature, Cowen, Swearer, and Sheridan (2004) make a distinction between the terms collaboration and partnership: *collaboration* can be a relatively short term *process*; whereas a *partnership* is more of a long-term *relationship* between parents and educators. Thus, this relationship between the home and school environments should be viewed as a partnership that involves collaboration toward mutual goals and decision-making. Although there are clear potential benefits to establishing home-school partnerships, less is known about how to create and sustain them (Reschly & Christenson, 2012).

Conjoint Behavioral Consultation

One way to facilitate the promotion of the home-school partnership is the behavioral consultation model, which is the most common model employed in schools for working with school personnel and families (Guli, 2005). The behavioral consultation model is a structured model for collaborative problem-solving between those

adults who most directly influence child development (Sheridan & Kratochwill, 1992). Traditionally, behavioral consultation focused on teachers as a method of service delivery to support positive social, emotional, and behavioral outcomes in children (Guli, 2005). Over the past two decades, this model has been applied to parents as consultees as a means for improving children's school-related behaviors.

Conjoint Behavioral Consultation (CBC, Sheridan & Kratochwill, 1992) is one behavioral consultation model that purposefully serves both parents and teachers simultaneously (Guli, 2005). The focus of CBC is to explicitly support those adults who work with young children (i.e., parents and teachers) through the use of problem-solving practices that integrate evidence-based interventions with prevention and early intervention programs (Sheridan & Kratochwill, 2010). Furthermore, the CBC model has been shown to be effective across home and school settings for a variety of target behaviors (i.e., academic, social, and behavioral) with children from preschool through grade nine (Sheridan & Kratochwill, 2010). Congruent with "best practices" for home-school collaboration, the CBC model has been rated the most acceptable approach to consultation by parents, teachers, and school psychologists (Guli, 2005).

In the growing body of research examining the effects of CBC, the most common topic for evaluation is behavior (Sheridan, Clarke, & Burt, 2008). One example is a study conducted by Colton and Sheridan (1998) which examined the effects of CBC on children with attention deficit hyperactivity disorder (ADHD). Utilizing a single-subject, multiple baseline design across participants, Colton and Sheridan (1998) evaluated the efficacy of an intervention package with three male students (ages eight and nine) who were diagnosed with ADHD and who exhibited social skills deficits in their

cooperative play behavior. Specifically, the *intervention package* was comprised of CBC and a behavioral social skills intervention that included four general strategies: home-school communication, social skills coaching and role play, positive reinforcement, and self-monitoring. Through the use of the CBC model, parents and teachers worked together to develop behavioral plans using the four general strategies tailored toward the unique needs of each child. The CBC intervention package was related to increases in positive, cooperative interactions between the target students and their peers.

Purpose of this study

Typically, the primary means of measuring the efficacy of an intervention focuses on child outcomes and does not consider the environmental context or people with whom the child interacts (Hester et al., 2004). However, positive outcomes of effective interventions rely heavily on children's responses to their various environments and the adults who influence them. Recently, there has been a call for more training for early childhood teachers in effective behavioral intervention strategies designed to improve children's problem behaviors as well as methods to promote the home-school relationship (Lane, Stanton-Chapman, Jamison, & Phillips, 2007). Specifically, research must focus on early childhood teachers' implementation of behavioral interventions and on the efficacy of the home-school partnership in preschool programs, both of which can have significant impacts on results in any behavioral intervention (Conroy et al., 2009). The purpose of the current study was to extend the research conducted by Colton and Sheridan (1998) by examining the effects of a social skills intervention package delivered in the context of CBC on preschool teachers' use of PBIS strategies, the home-school partnership, and the relationship these two factors have on the development of prosocial

behaviors in young children. It was expected that the results of this study would contribute toward a better understanding of the impact of CBC on the functional relation between preschool children with challenging behaviors and the adults in their lives (Powell, Dunlap, & Fox, 2006). Toward that end the following specific questions were examined:

1. Is there a functional relation between a CBC intervention package and teachers' use of select PBIS strategies?
2. What effect does implementation of a CBC intervention package have on students' prosocial behaviors?
3. What effect does implementation of a CBC intervention package have on the home-school relationship?

Method

Participants

Participants in this study were four early childhood educators (i.e., pre-k teachers), four preschool students with challenging behaviors, and four sets of preschool students' parents from a suburban county in the Southeast U. S. Through the use of single-subject research methodology, each participant was considered the "unit of analysis," and as such, served as his or her own control, limiting any variability to within the participant (Horner et al., 2005). The systematic and detailed analysis of individual behaviors before, during, and after the experiment provided experimental control for most threats to internal validity, and allowed for the "confirmation of a functional relationship between manipulation of the independent variable and change in the dependent variable" (Horner et al., 2005, p. 168).

Teacher participants. A total of four female preschool teachers participated in this study with signed consent. All four teachers had a bachelor's degree in early childhood education (ECE) and one teacher was currently enrolled in a master's level ECE program. Two teachers were Caucasian, one was Latina, and one was African-American. The average number of years teaching was 7 (range, 5 to 8). The average number of years teaching 3-4 year olds was 3.7 (range, 2 to 5). The average number of years teaching at this particular preschool center was 1.9 (range, .7 to 3). Two of the teachers reported getting "some" classroom management training in the past. All teachers reported having little to no training on classroom management outside their college courses.

Student participants. Four male student participants with an average age of 4.17 years (range, 2.83 to 4.83) were included in this study. Three of the students were Caucasian and one was Middle Eastern. Two of the students had no siblings and two had one older sibling. To be included in the study, all student participants were identified by the director of the preschool center as having challenging behaviors significant enough that they were at risk for expulsion or referral for an outside psychoeducational evaluation (see recruitment procedures below). In addition, all student participants: (a) were not taking any prescribed psychopharmacological medications, (b) had no medical diagnoses, and (c) had parental permission to have data collected on them. Challenging behavior was defined as children who exhibited high rates of socially inappropriate behavior (e.g., noncompliance, aggression [physical and verbal], destroying property, etc.).

Parent Participants. Both biological parents of each of the four student participants participated in the study (i.e., four sets of parents). All four households reported having at least one parent who had a bachelor's degree. Two households reported at least one parent attaining a graduate level degree. Three households reported income in the $100,000+ range and one household reported income in the $25,000 – $50,000 range. All parents gave permission for data to be collected on their child during this study and signed consent for their own participation.

Consultant. The primary researcher served as the consultant for this study. The primary researcher was a doctoral student in an accredited school psychology program in the Southeast. Her background and training included nearly twenty years experience working with families of preschool age children, training in counseling and consultation skills, consultation services provided to teachers during supervised internships, and training and supervised experience in conducting functional behavioral analysis (FBA).

Recruitment procedures. Four triads each consisting of one teacher, one parent, and one student were recruited to participate in the study. Recruitment procedures consisted of the following:

1. The consultant approached the directors of state-licensed, preschool centers.
2. The consultant explained the purpose of the study.
3. The consultant asked directors whether they had any students and their respective parents who are currently involved in the center's "*formal referral process"* and who would benefit from the intervention being offered in this study.
4. Steps in the "*formal referral process*" explained:

a. A child displayed challenging behaviors in the classroom and did not respond to typical classroom management strategies implemented by the teacher.
b. If a child's behavior did not improve, the director met with the parents and teacher to discuss additional strategies to be implemented in the classroom and/or at home. Strategies were co-developed by the teacher and parent and aimed at helping the child.
c. The director, teacher, and parent continued to work together for a period of time (e.g., several weeks or more) on various strategies for the child.
d. If the child's behaviors did not improve through this process, the last step was for the director to refer the child for an outside psychoeducational evaluation.

5. The intervention in this study was offered to the parent and teacher as another option toward helping the child and, if it worked, eliminated the need to refer the child for an outside evaluation.
    a. The director asked teachers and parents of identified children if they would be interested in volunteering for the study. The director emphasized that participation was completely voluntary.
    b. The consultant met individually with each teacher and parent to answer any questions they had regarding the study.
    c. The consultant asked parents and teachers willing to volunteer for the study to sign an informed consent and parental permission to collect data on their child and to complete their respective demographic forms.

d. Teachers who agreed to participate in the study and had signed consent were asked to send a note home to all parents in their class (See Appendix A).

Setting

All preschool classrooms were located in one child care center in a suburban county in the Southeast U. S. Consultation sessions took place in either the office of the director or the office of the owner of the center. Times for each of the consultation sessions were determined by each of the parent/teacher dyads. Observations and data collection were conducted in the classrooms or in the home. In addition, the consultant was available in-between consultation sessions via phone and/or email as needed by the consultees.

Dependent Variables

Three dependent variables (DVs) were measured in this study. The *first* DV, teachers' target behaviors (i.e., use of select PBIS strategies), was measured using direct observation. The *second* DV, students' target behaviors, was measured both pre- and post-intervention using ratings on the *Social Skills Improvement System* (*SSIS*; Gresham & Elliott, 2008). The *third* DV, the impact of the intervention on the home-school relationship was measured both pre- and post-intervention using ratings on the *Parent-Teacher Relationship Scale - II* (*PTRS-II*; Vickers & Minke, 1995). As a reminder, the data collected on teachers' behaviors was the primary focus of this study; whereas, the anecdotal data (described below) collected on students' behaviors was considered a secondary focus.

Independent Variable

The independent variable for this study was a multi-component intervention package that incorporated the four stages of CBC (Sheridan & Kratochwill, 2010) with a social skills intervention plan. Elements of the intervention included an initial meeting, three consultation meetings, and a social skills intervention plan. In addition, classroom observations, feedback from classroom observations, and follow-up meetings were provided as requested by teachers and/or parents (Diamond & Powell, 2011; Garet, Porter, Desimone, Birman, & Yoon, 2001). Feedback information included analysis of data collected from classroom observations, positive reinforcement, and suggestions for areas of improvement. Follow-up meetings were determined and tailored toward the unique needs and preferences (i.e., face-to-face, email, phone) of each parent/teacher dyad. The following is a description of the consultation process, including the initial meeting and the four stages of CBC. A description of the data collection procedures and outcome measures is described later.

Initial meeting. The purpose of the initial meeting (i.e., meeting #1) was to begin developing rapport, explain the CBC process, review the roles of each person on the team (i.e., consultant, parent, and teacher), and set up a schedule for subsequent meetings (Wilkinson, 2005). In addition, adult participants completed their respective demographic forms and signed for permission to have each CBC session audiotaped. Finally, teachers and parents completed the *Social Skills Improvement System Rating Scale* (*SSIS-RS*; Gresham & Elliott, 2008).

Consultation meetings. The consultant guided parent/teacher dyads through each of the four stages of CBC (i.e., needs identification, needs analysis, plan implementation, and plan evaluation). Of the four stages in the CBC process, one stage

(i.e., Plan Implementation) did not require a formal meeting. Therefore, there were three meetings held during which a standardized CBC interview was used to ensure the integrity of the consultation process (Shernoff & Kratochwill, 2007). While the focus of the consultation meetings was increasing preschool students' performance of prosocial behaviors (i.e., secondary data), the focus of this study was change in teacher behaviors (Barton-Arwood, Murrow, Lane, & Jolivette, 2005). Thus, the following provides a description of the CBC process as it applies to each dyad versus the data collection procedures which are described later.

Needs identification meeting. This meeting (i.e., meeting #2) introduced the first stage of the CBC process: Needs Identification. During this meeting, the parent/teacher dyad met with the consultant to identify areas of concern and determine procedures for collecting data across all phases of the study. Primary objectives for this meeting included (a) prioritizing needs, (b) specifying and defining target concerns, and (c) establishing procedures for collecting baseline data (Sheridan & Kratochwill, 2010). Each dyad achieved these objectives by (a) identifying the strengths of the student, the parents, and the teachers; (b) exploring environmental factors and setting events contributing to the targeted concern; and (c) determining shared goals for outcomes. Specific steps included (a) identifying no more than two target behaviors which occurred across settings, (b) operationally defining (i.e., clear, objective, measurable, observable) the target behavior(s), (c) establishing procedures for collecting anecdotal data using narrative recording procedures (i.e., antecedents, behaviors, and consequences), and (d) conducting the data collection. The structured interview Conjoint Needs Identification

Interview (CNII; Sheridan & Kratochwill, 2010) was used to facilitate this meeting. Each dyad then collected anecdotal data over a period of at least five consecutive school days.

Needs analysis meeting. This meeting (i.e., meeting #3) brought all parties "back to the table" to evaluate the baseline data collected from the Needs Identification stage and to subsequently establish a plan (i.e., intervention) for improving preschool students' targeted behavior(s). Thus, this meeting consisted of two parts: analysis of the narrative data collected by the parents and teachers and development of an intervention which parents and teachers could implement across both environments. In the *first* part, the team discussed the narrative information collected including the setting events and environmental conditions influencing the targeted behavior. Through analysis of the narrative data, the team generated hypotheses as to the function of the behavior and identified specific social skills that would be the focus of the training (Colton & Sheridan, 1998).

In the *second* part of this meeting, the team collaboratively designed an intervention plan that took into consideration the interpretations of the data collected. While the plan incorporated the three general treatment components (See below for a more detailed description), each team individualized the strategies to meet the specific needs of their student. Therefore, the team linked information obtained from the anecdotal data collection and analysis stages to an intervention plan that integrated relevant strategies designed to address the targeted behavior(s) across settings (Colton & Sheridan, 1998). Each team included the following elements in their plan: (a) the specific prosocial skills to be targeted, (b) when and where each component of the intervention would occur, (3) and the steps needed to implement the plan in both the

home and school settings (including the time, place(s), and procedures for data collection). Similar to the Problem Identification meeting, this meeting was conducted using the structured interview called Conjoint Needs Analysis Interview (CNAI; Sheridan & Kratochwill, 2010).

Plan implementation (no meeting). No formal meeting was required for this stage of the CBC process; instead, parents and teachers implemented the plan developed in the second stage for at least 10 consecutive school days. While the role of the parents and teachers in this stage was to implement the plan as designed, the role of the consultant was to monitor both the integrity of the plan's implementation and the effects of the intervention on the teacher's, parent's, and student's targeted behavior(s). A description of the strategies the consultant used to monitor the integrity of the intervention can be found in the Treatment Integrity section below. No structured interview was required with this stage of CBC (Sheridan & Kratochwill, 2010).

Plan evaluation meeting. The main objective of this meeting (i.e., meeting #4), the final stage of the CBC process, was to determine whether the intervention package worked as designed. This objective was accomplished by evaluating whether the (a) intervention package was effective across settings, (b) the intervention needed to be continued, modified, or terminated, (c) goals were met, and (d) outcomes were socially meaningful (i.e., social validity). The structured interview Conjoint Plan Evaluation Interview (CNEI; Sheridan & Kratochwill, 2010) was used to facilitate this meeting.

Social skills intervention plan. Each dyad employed the following social skills intervention plan (modeling, PBIS strategies, and home-school communication) in an effort to provide consistency across participants necessary for experimental control

(Colton & Sheridan, 1998). However, it is important to note that one of the goals of consultation services is to individualize the services based on the unique needs of each child (Colton & Sheridan, 1998). Thus, individualization occurred based on the specific needs of each student as identified by each dyad during the Problem Identification stage of the CBC process (i.e., meeting #2). Once the team identified and defined the replacement behavior, the team reviewed, discussed, and determined which ways parents and teachers would teach the student the replacement behavior. In addition, the consultant was available via phone, email, or in person to answer any questions and provide on-going support to participants in between consultation sessions.

Modeling. During the Problem Analysis stage of the CBC process (i.e., meeting #3), an explanation was provided about the importance of explicitly teaching/modeling the desired replacement behavior to the student. Handouts were provided with examples of explicit instruction on prosocial skills (formal and informal), which participants could use as a reference during the Plan Implementation stage (i.e., stage 3). In addition, parents and teachers were shown how to model the desired replacement behavior for the student. Throughout the Plan Implementation stage, both parents and teachers were asked to provide opportunities for the student to practice, role-play, and receive feedback on the replacement behavior(s).

PBIS strategies. During the Problem Analysis meeting (i.e., meeting #3) parents and teachers were taught how to use the following PBIS strategies for promoting positive behaviors: (a) a transition signal, (b) warning prior to transition, (c) precorrection, (d) increased use of positive statements, (e) decreased use of negative statements, and (f) specific praise. The use of these practices promotes positive adult-child interactions and

consistency across environments (Conroy et al., 2009). Operational definitions and examples of these PBIS strategies (see Table 2) were reviewed with each dyad.

Table 2
Operational definitions for PBIS strategies.

PBIS **Strategy**	**Definition**	**Examples**
1. Transition Signal	A strategy other than or in addition to a verbal direction which signals a transition from one activity to another. This signal can be auditory, visual, gestural, or physical.	Auditory: ringing a bell, clapping, playing or singing a song Visual: turning off the lights briefly Gestural: holding up 3 fingers, pointing to a picture Physical: gently tapping on head, making eye contact
2. Warning Prior to Transition	A strategy by which children are provided a verbal warning prior to a transition from a non-structured activity (e.g., centers time, playing at the park, watching a TV program) to another activity. This is a specific warning indicating to the child that the activity will be ending soon.	"We have 5 more minutes before it is time to clean up." "2 more minutes…" "In 5 minutes we will stop watching TV and start getting ready for bed."
3. Pre-Correction	A strategy where children are provided a statement *reminding* them of an expected appropriate behavior *prior* to the occurrence of an otherwise expected misbehavior. This can be directed toward the whole class or an individual student.	(For a child who has difficulty with sharing) "Remember to ask for permission and/or wait your turn to play with a "toy" if "Johnny" is using it first."
4. Praise	A strategy which emphasizes positive interactions between adults and children. Praise is defined as any comments indicating *praise* or *approval* of a child's behavior.	"Great work!" "You tried your best and I am proud of you!" "That was nice!" "Way to go!"
5. Negative Statements	A strategy for minimizing negative interactions between adults and children. Negative statements are defined as any comments indicating a *reprimand* or *disapproval* of a child's behavior and can include statements with negative and loud tone of voice.	"Stop that." "No more talking." "You hurt his feelings. Tell him you're sorry." "I don't like what I am seeing here." "Excuse me!"
6. Specific Praise	A strategy where a positive term or statement is used to reinforce an appropriate behavior of an individual student. This strategy is expressed in specific terms (i.e., specify the behavior) immediately after the appropriate behavior is exhibited and involves 3 elements: (a) student's name (or can be in a manner such that the student knows who is being praised), (b) identifies the behavior, and (c) a positive term/statement of praise.	"Thank you for putting your toys away!" (while looking at the student) "That was very nice of you to share your car with your friend." "You did a good job of asking permission to use that toy." "I like how Susie is sitting quietly at her desk."

Note. Adapted from Benedict, Horner, and Squires (2007).

Home-school communication. The use of a daily home-school note provided a systematic means for both parents and teachers to maintain communication and consistency of the plan implementation (derived from the Plan Implementation stage of

the CBC process) across environments (Colton & Sheridan, 1998). This home-school note included (a) the prosocial skill(s) being practiced, (b) results of the student's progress for that day/evening, (c) PBIS strategies used, (d) when and where it was measured (both home and school), and (e) whether the goal for that day was met (see Appendix B). Each morning the teacher was asked to fill out the note and send it home that afternoon. The parent was asked to read the note from school that afternoon, fill out the note from home, and send it back to school for the teacher to read the next morning.

Data Collection Procedures

Experimental Designs. To address the first research question, a multiprobe multiple baseline design across teacher participants was implemented to examine the effect of an intervention package comprised of CBC and a social skills intervention plan on teachers' use of select PBIS strategies. All decision rules for implementing the intervention were made based on teachers' behaviors. The second research question was addressed using a pre- and posttest design where the Reliable Change Index (RCI; Jacobson & Truax, 1991) method was used to determine whether parent and teacher ratings on the *SSIS-RS* (Gresham & Elliott, 2008) changed as a function of their involvement in this study. To address the third research question, a pre- and posttest design was also utilized where the RCI method was used to determine whether parents' and teachers' perceptions of students' behaviors and/or the home-school relationship changed as a function of their involvement in the CBC process.

Baseline phase. Baseline data collection began after all participants had been recruited and requisite consent had been acquired. Because part of the recruitment process for teachers included a brief presentation on select PBIS strategies, a controlled

baseline design was utilized (Kennedy, 2005). The purpose of this phase of the study was to establish a pattern of behavior in teachers' current use of PBIS strategies after participating in PBIS training (during the recruitment phase of this study described above) prior to implementation of the intervention (Horner et al., 2005). In addition, for teachers who received the intervention later in the experimental sequence, direct observations (i.e., data probes) were conducted intermittently to allow for an efficient means of recording and scoring observational sessions by establishing an estimate in trends and related patterns (Colton & Sheridan, 1998; Kennedy, 2005).

During baseline data collection for all teachers, an independent observer collected data on teachers' use of PBIS strategies. The decision criterion for moving from the baseline phase to the intervention phase involved two parts: when to move from baseline to intervention in tier 1 (i.e., Teacher 1) and when to move subsequent tiers into the intervention phase. *First*, for tier 1, the observer collected baseline data for at least five sessions and until data on teacher's use of *negative statements* were stable (50% either side of the mean; Alberto & Troutman, 2013). The intervention phase for tier 1 began once these two criteria were met.

Second, the criterion for moving subsequent tiers into intervention was dependent on the previous tier. The criteria for moving from tier 1 to subsequent tiers included (a) the initial meeting between the consultant and Dyad 2 had been conducted, (b) Problem Identification Stage of CBC had been facilitated with Dyad 2, and (c) there were at least three consecutive data points showing a positive trend in change in Teacher 1's use of *positive statements* from the baseline mean. The intervention for Teacher 2 was

implemented once these criteria were met. Moving subsequent tiers into intervention (i.e., tier 3 and tier 4) followed the same decision criterion as tier 2.

Intervention phase. Once criteria had been met during the baseline phase of this study, implementation of the intervention began. The purpose of this phase of the study was to establish an effect of the intervention (i.e., independent variable) on teachers' targeted behaviors (i.e., dependent variable) over time and document a pattern indicating internal validity of the study (Horner et al., 2005). An independent observer conducted four 20 minute observations in the classroom each week throughout the study.

Follow-up phase. Follow-up data were collected two weeks after the last intervention session for each dyad. During this final phase of the study, an independent observer conducted five 20 minute observations and collected data on teachers' targeted behaviors during each observation.

Outcome Measures

Measures for interobserver agreement (IOA), treatment integrity, and social validity were obtained and are described below. In addition, several measures were utilized to answer the research questions. The following provides a description of measures used for teachers' target behaviors, students' prosocial behaviors, and the home-school relationship.

Teacher behaviors. Teachers' target behaviors in the classroom were measured using direct observation data collection methods. Data were collected on teachers' use of (a) warnings, (b) transition signals, (c) precorrections, (d) praise, and (e) specific praise to determine whether those behaviors increased as a result of participating in the CBC intervention. Data also were collected on teachers' use of negative statements to

determine whether those behaviors decreased. Operational definitions and examples of these PBIS strategies can be found in Table 1. Observational sessions in each classroom lasted for 20 minutes and included a transition from an unstructured activity (e.g., morning work) to a structured activity (e.g., carpet time). Using a teachers' behaviors observation form (see Appendix C), an independent observer measured teachers' use of PBIS strategies (i.e., target behaviors) using two recording methods. First, a frequency count was used for warnings, transition signals, and precorrections where the number of occurrences for each target behavior used by the teacher was recorded for each session. The reason for using this type of data recording is due to the expected low rate of occurrence of these behaviors during the designated observational period. Second, partial-interval recording was used for praise, specific praise, and negative statements because the rate of occurrence for these three behaviors is expected to be high. Thus, the number of the intervals with these target behaviors is reported for each session. The results of this assessment were used to determine the effect of the intervention on teachers' use of PBIS strategies in the classroom (i.e., research question #1).

Student behaviors. The *Social Skills Improvement System Rating Scale* (*SSIS-RS*; Gresham & Elliott, 2008) was administered as a baseline and an outcome measure of the students' developmental level of prosocial behaviors during the initial meeting and the Plan Evaluation meeting. Available at the Preschool, Elementary, and Secondary levels, the *SSIS-RS* enables targeted assessment of individuals and small groups to help evaluate social skills, problem behaviors, and academic competence. Teacher, parent, and student forms help provide a comprehensive picture across school, home, and community settings. The multi-rater *SSIS-RS* helps measure: (a) *Social Skills*:

communication, cooperation, assertion, responsibility, empathy, engagement, and self-control; (b) *Competing Problem Behaviors*: hyperactivity/inattention, bullying, externalizing, internalizing, and autism spectrum; and (c) *Academic Competence*: reading achievement, math achievement, and motivation to learn. Reliability data for the *SSIS-RS* at the Preschool level included the following: (a) internal consistency: teacher form ranged .75 to .97, internal consistency: parent form ranged from .76 to .96; (b) test-retest: teacher form .68 to .92, test-retest: parent form ranged from .73 to .88; and (c) interrater reliability: teacher form ranged from .54 to .69, interrater reliability: parent form ranged from .37 to .69. Validity evidence for the *SSIS–RS* included correlational studies with the *Behavioral Assessment System for Children, Second Edition* (*BASC–2*; Reynolds & Kamphaus, 2004), the *Social Skills Rating System* (*SSRS*; Gresham & Elliott, 1990), and the *Vineland Adaptive Behavior Scale, Second Edition* (*Vineland II*; Sparrow, Balla, & Cicchetti, 2005). Overall, the *SSIS–RS* showed moderate to high correlations with each of these instruments. Finally, the *SSIS–RS* has been shown to differentiate members of special populations such as autism spectrum disorder, attention deficit/hyperactivity disorder, developmental delay, emotional/behavioral disturbance, intellectual disability, and speech/language impairment.

Home-school relationship. Parents' and teachers' perceptions of the home-school relationship was assessed using the *Parent-Teacher Relationship Scale - II* (*PTRS-II*; Vickers & Minke, 1995) which was administered prior to and upon completion of this study. The *PTRS-II* is a 24-item measure developed to assess the quality of the parent-teacher relationship, with versions available for parents and teachers. Items are rated on a 5-point scale (1 = *almost never*, 5 = *almost always*) and form two subscales: *Joining* and

Communication to Other. Higher scores on the *Joining* subscale indicate greater perceptions of affiliation and support, dependability and availability, and shared expectations and beliefs in the parent-teacher relationship. Higher scores on the *Communication to Other* subscale indicate more sharing of emotions and information in the parent-teacher relationship. Cronbach's coefficient alpha of .98, a well established statistic for estimating reliability (Hogan, Benjamin, & Brezinski, 2000; Schweizer, 2011), was reported for the *Joining* subscale (both parents and teachers). On the *Communication to Other* subscale, a Cronbach's coefficient alpha of .85 and .86 was reported for teachers and parents respectively. The results of this assessment were used to determine the effect of the intervention on the home-school relationship (i.e., research question #3).

Data Analysis

Direct observation data. Data collected to answer research question one was analyzed two ways. First, a pre- and postintervention frequency count for the first three PBIS strategies in Table 2 was conducted due to the low rate of occurrence for these behaviors in a classroom environment. That is, there is typically only one opportunity for the use of a warning prior to a transition and a transition signal during the designated observation period. Also, the opportunity for teachers to use a precorrection during the designated observation period was expected to be relatively low. Thus, data on teachers' use of warnings, transition signals, and precorrections were analyzed by comparing the total number of each behavior being used before and after the introduction of the intervention. Second, a systematic visual comparison of graphic data on the remaining three PBIS strategies (i.e., praise, negative statements, and specific praise) was used to

analyze the data and to determine whether a functional relation was established (Horner et al., 2005). Data were plotted on teachers' use of *negative* statements and *positive* statements; where "positive statements" was the aggregate of praise and specific praise. Visual analyses required the integration and interpretation of data collected within and between all phases of the study (i.e., baseline, intervention, and follow-up) and, consequently, aided in establishing a specific pattern in the data which was used to determine whether any change in the dependent variable was directly related to the independent variable (Horner et al., 2005).

Within each phase of the study, data collected were analyzed and interpreted for patterns. Specifically, data collected *within* the baseline and intervention phases were analyzed, compared, and interpreted by examining the percentage of intervals with each type of statement (i.e., positive or negative). In addition, the percentage of sessions within each phase in which there were more intervals with positive statements than intervals with negative statements was determined using the following formulas:

- Percentage of intervals with positive statements per *session*: (A/B)* 100; where A represents the number of intervals with positive statements spoken in a session and B represents the total number intervals with either type of statements were spoken in that session.
- Percentage of intervals of positive statements per *phase*: (C/D)*100; where C represents the total number of sessions that had more intervals of positive statements than intervals of negative statements and D represents the total number of sessions in that phase.

In addition, data *between* phases of the study were compared, analyzed, and interpreted for patterns. There are two different patterns to examine between phases: immediacy of effect and overlap (Kennedy, 2005). *Immediacy of effect* was used to describe the rate at which change occurred in the data pattern following a phase change. Qualitative descriptors such as rapid or slow are typically used to refer to the rate in change of the data pattern. The greater the immediacy of effect, the more convincing is the functional relation. *Overlap* was used to describe the degree to which data between adjacent phases share quantitative values. Often referred to as effect size, the percentage of overlapping data were calculated using the following formula: (A/B)*100; where A was the number of data points in the intervention phase that fell within the range of data point values in the baseline phase and B was the total number of data points in the intervention phase (Alberto & Troutman, 2013).

Rating scales data. Research questions two and three were addressed using parent and teacher ratings on the *SSIS-RS* and the *PTRS-II*. Parent and teacher pretest scores were compared to their respective posttest scores using the Reliable Change Index (RCI) proposed by Jacobson and Truax (1991) to analyze changes in ratings on the *Social Skills* and *Competing Problem Behaviors* scales. The RCI was computed based on the following formula:

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

where X_{post} and X_{pre} represent posttest and pretest ratings, respectively (parent and teacher) and S_{diff} represents the Standard Error of the Difference between the two test scores. S_{diff}, describing the distribution of the expected scores if no change had occurred (Jacobson & Truax, 1991), was calculated using the following formula:

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

where SE represents the Standard Error of Measurement (SEM) which was calculated using the following formula: $SE = SD_1\ SQRT\ (1 - r_{xx})$. SD_1 represents the Standard Deviation (SD) of the sample at Time 1, and r_{xx} represents the Test-Retest reliability coefficient of the measure (i.e., *SSIS-RS*: Social Skills Scale or Problem Behaviors Scale). Based on this formula, an RCI greater than +/-1.96 is unlikely due to chance ($p < .05$).

In addition, data from the *PTRS-II* was analyzed for consistency of scores (i.e., reliability) using the same method (i.e., Cronbach's coefficient alpha) used by Vickers and Minke (1995). The Cronbach alphas obtained in this study were compared to previously reported reliability scores on the *PTRS-II* (i.e., Hogan et al., 2000).

Interobserver Agreement (IOA)

To determine the reliability of the data collected on the teacher's behavior, interobserver agreement (IOA) was calculated for at least 20% of the sessions (range, 20 to 60%) during each phase of the study using the point-by-point agreement method (Kennedy, 2005; What Works Clearinghouse, 2013). Data collection procedures and the operational definitions of the target behaviors for each teacher were reviewed with research assistants (i.e., graduate students in an accredited school psychology program) prior to the beginning of the study. Two observers (i.e., a secondary observer and the consultant) collected IOA data with sufficient distance between them as to ensure independence of data recording. Using the occurrence/nonoccurrence agreement method, a "more stringent approach to estimating" IOA (Kennedy, 2005, p. 117), agreement was defined as an interval where both observers recorded identical scores (i.e., occurrence or nonoccurrence of a targeted behavior) during a 20 minute observation period. IOA was

calculated by dividing the number of agreements by the number of agreements plus disagreements, then multiplying by 100. Across all participants average IOA was 94.54% with a range of 90.64 – 95.96%.

Treatment Integrity

Integrity of CBC. Consultant's performance of CBC objectives was assessed using audiotaped analysis of all CBC interviews (Colton & Sheridan, 1998; Sheridan, Clarke, Knoche, & Edwards, 2006). Thus, each CBC interview (i.e., CNII, CNAI, and CPEI) was audiotaped and 50% of the audiotapes (for each of the three interviews) were randomly selected and coded by an independent, trained research assistant (Kratochwill & Bergan, 1990). For coding the selected tapes, a list of objectives (including definitions and examples) for each CBC interview was provided to and reviewed with a research assistant (See Appendix D). The research assistant listened to each selected tape and checked off those objectives that were met. The percentage of objectives that were met was determined by dividing the number of objectives met by the total number of possible objectives and multiplying by 100.

Integrity of social skills intervention procedures. Permanent products from the CNAI (i.e., treatment plan worksheets) and social skills intervention plan (e.g., home-school notes, monitoring sheets, sticker charts, etc.) can provide subjective evidence of the treatment integrity of the interventions implemented at home and school (Sheridan et al., 2006). Thus, parents and teachers adherence to intervention procedures were measured two ways: (a) by their self-recorded completion of the steps outlined in their treatment plan worksheets (described above) and (b) by their self-report responses of item completion on the home-school note system (Colton & Sheridan, 1998). Fidelity to the

intervention as planned was determined by the presence of self-reported completion of each step on these products (Sheridan et al., 2006). For each worksheet and home-school note, the percentage of completed items was determined by dividing the number of completed items by the total number of possible items and multiplying by 100. Analysis of these data was the average of these items completed by each participant.

Treatment Acceptability

In addition to treatment integrity, the degree to which participants viewed the CBC intervention package as acceptable was assessed through a questionnaire designed to evaluate the acceptability of behavioral treatments for children (Dunlap et al., 2006). Thus, the *Treatment Evaluation Inventory – Short Form* (*TEI-SF*; Kelley, Heffer, Gresham, & Elliott, 1989) was administered at the end of the intervention phase. The *TEI-SF* (see Appendix E) is a nine-item, psychometrically sound questionnaire designed to assess parent and teacher perceptions regarding the acceptability, appropriateness, and effectiveness of behavioral interventions for children. Items on the *TEI-SF* are rated on a 5-point scale (1 [*strongly disagree*] to 5 [*strongly agree*]) and possible scores range from 9–45, with higher scores representing greater acceptance of the intervention. Thus, a midpoint rating of 27 (i.e., score of 3 on each of the 9 items) would be indicative of a "moderate" acceptability rating.

These results were supported by anecdotal comments from the parents and teachers. For example, in the home of S2, the intervention was implemented primarily by the mother. However, at one point in the intervention phase, the father asked to schedule a meeting with the consultant. According to the father, the purpose of this meeting was for him to get more information about the social skills intervention plan because the

father noticed a difference in his son's behaviors as a result of the mother's implementation of the intervention. Thus, the father felt he needed to "get on board" and learn more about how he could help his son. Furthermore, S2's teacher reported that he was so responsive to her implementation of the social skills intervention that he was able to generalize the new skills with a different teacher when she was not in the classroom. Finally, according to the director, S2's behavior improved so much that he was no longer sent to her office and/or home on an almost daily basis. Rather, S2 was able to remain in the classroom all day, every day after introduction of the intervention.

Anecdotally, the teachers in this study reported the skills they learned through the CBC model improved their ability to manage students' behaviors. For example, one teacher said, before the study, "I felt like I was a pretty good teacher. I believe that learning these skills has actually made me a better teacher." Another teacher reported that she not only used the new skills in her classroom, but that she had also used them at home with her own children. In this study, the individualized support that teachers received from the consultant provided them with the necessary experiential examples they needed to apply newly learned skills in their unique classroom environments (Diamond & Powell, 2011; Garet et al., 2011). This type of support may have contributed to the immediate effect of teachers' targeted behaviors noted during the intervention phase of the study.

Results

Research Question One

In an effort to answer the first research question (i.e., Is there a functional relation between a CBC intervention package and teachers' use of select PBIS strategies?), two

methods of data analysis were used. First, data on teachers' use of the first three PBIS strategies (i.e., warnings, transition signals, and precorrections) were analyzed by comparing the total number of occurrences for each behavior being used during baseline to the total number of occurrences for each behavior being used after the intervention was introduced. Second, a visual analysis of direct observational data on teachers' use of positive (i.e., praise and specific praise) and negative statements was conducted.

During the baseline phase across all four teachers, there were no occurrences of the first three behaviors (i.e., warnings, transition signals, and precorrections). During the intervention phase, there were seven observations sessions conducted and during the follow up phase there were five observation sessions conducted. Thus, there were 12 opportunities for teachers to use a warning, transition signal, and precorrection. After the intervention was introduced and through follow up (i.e., 12 observation sessions), T1 used a total of two warnings, three transition signals, and three precorrections, T2 used four warnings, three transition signals, and seven precorrections, T3 used three warnings, two transition signals, and eight precorrections, and T4 used seven warnings, three transition signals, and three precorrections. Results of data analysis on teachers' use of the remaining three PBIS strategies are reported next (see Figure 2).

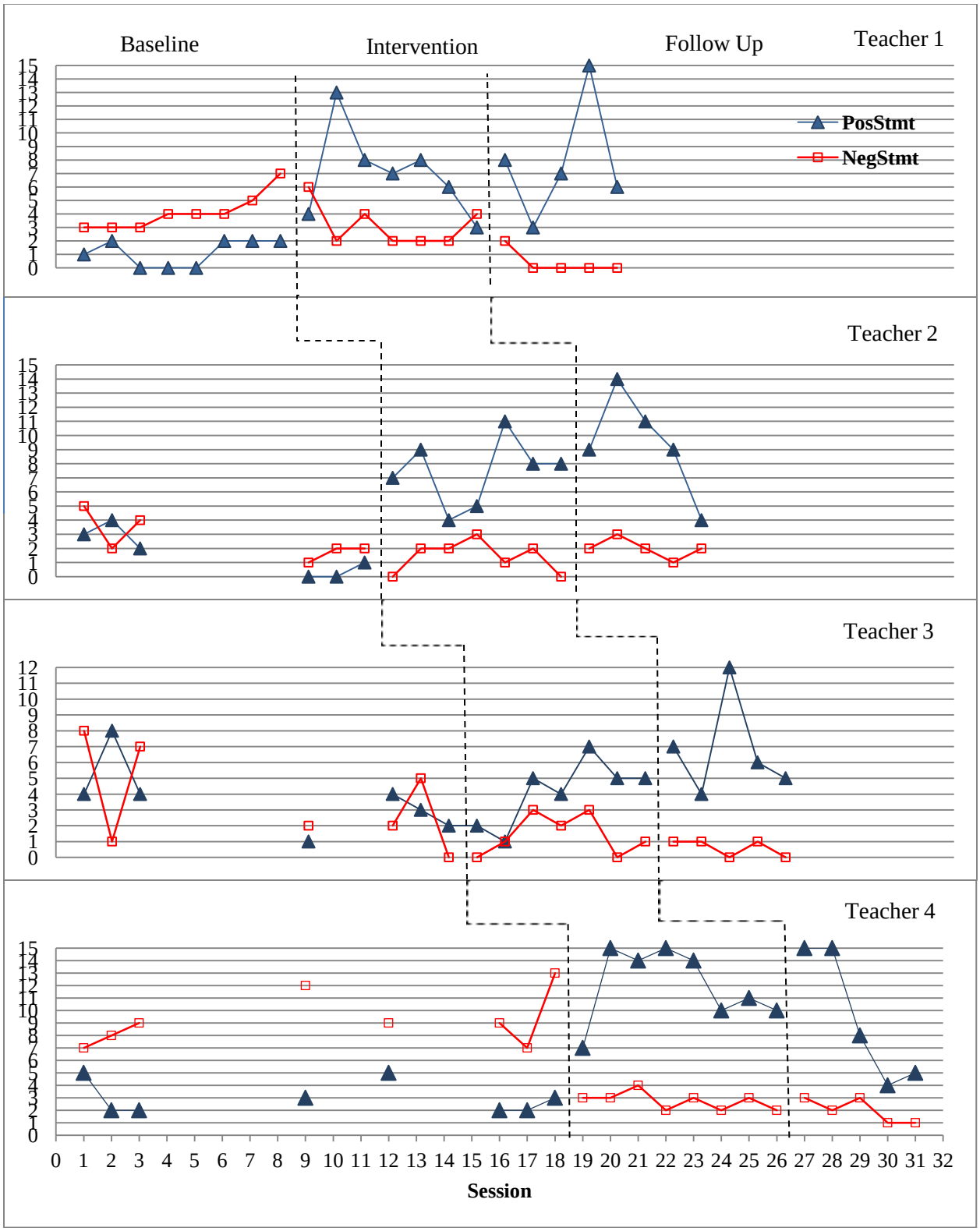

Figure 2. Number of intervals for teachers' use of positive statements and negative statements across conditions

Teacher 1. During the ***baseline*** phase, the average number intervals with *negative* statements was 4.1 (range, 3 to 7), the average number intervals with *positive* statements was 1.1 (range, 0 to 2), and none of the sessions had more intervals with *positive* statements than *negative*. The ratio of intervals with positive statements to intervals with negative statements was .3 to 1. During the ***intervention*** phase, the average number of intervals with *negative* statements was 3.1 (range, 2 to 6), the average number of intervals with *positive* statements was 7.0 (range, 3 to 13), and 71.43 % of the sessions had more intervals with *positive* statements than *negative*. The ratio of intervals with positive statements to intervals with negative statements was 2.3 to 1. During the ***follow-up*** phase, the average number of intervals with *negative* statements was 0.4 (range, 0 to 2), the average number of intervals with *positive* statements was 7.8 (range, 3 to 15), and 100 % of the sessions had more intervals with *positive* statements than *negative*. The ratio of intervals with positive statements to intervals with negative statements was 13.3 to 1. Between baseline and the introduction of the intervention, there was an immediate increase in number of intervals with *positive* statements and an immediate decrease in number of intervals with *negative* statements. There were no overlapping data points between baseline and intervention for intervals with *positive* statements and the percentage of overlapping data points for intervals with *negative* statements was 42.86%. There were no overlapping data points between baseline and follow-up for intervals with *positive* and *negative* statements.

Teacher 2. During the ***baseline*** phase, the average number of intervals with *negative* statements was 2.7 (range, 1 to 5), the average number of intervals with *positive* statements was 1.7 (range, 0 to 4), and 16.67% of the sessions had more intervals with

positive statements than *negative* statements. The ratio of intervals with positive statements to intervals with negative statements was .6 to 1. During the ***intervention*** phase, the average number of intervals with *negative* statements was 1.4 (range, 0 to 3), the average number of intervals with *positive* statements was 7.4 (range, 4 to 11), and 100 % of the sessions had more intervals with *positive* statements than *negative*. The ratio of intervals with positive statements to intervals with negative statements was 5.2 to 1. During the ***follow-up*** phase, the average number of intervals with *negative* statements was 2.0 (range, 1 to 3), the average number of intervals with *positive* statements was 9.4 (range, 4 to 14), and 100 % of the sessions had more intervals with *positive* statements than *negative*. The ratio of intervals with positive statements to intervals with negative statements was 4.7 to 1. Between baseline and the introduction of the intervention, there was an immediate increase in number of intervals with *positive* statements and an immediate decrease in number of intervals with *negative* statements. The percentage of overlapping data points between baseline and intervention for intervals with *positive* statements was 14.29% and the percentage of overlapping data points for intervals with *negative* statements was 71.43%. The percentage of overlapping data points between baseline and follow-up for intervals with *positive* statements was 20% and for intervals with *negative* statements was 100%.

Teacher 3. During the ***baseline*** phase, the average number of intervals with *negative* statements was 3.6 (range, 1 to 8), the average number of intervals with *positive* statements was 3.7 (range, 1 to 8), and 42.86% of the sessions had more intervals with *positive* statements than *negative*. The ratio of intervals with positive statements to intervals with negative statements was 1 to 1. During the ***intervention*** phase, the average

number of intervals with *negative* statements was 1.4 (range, 0 to 3), the average number of intervals with *positive* statements was 4.1 (range, 1 to 7), and 85.71 % of the sessions had more intervals with *positive* statements than *negative*. The ratio of intervals with positive statements to intervals with negative statements was 2.9 to 1. During the ***follow-up*** phase, the average number of intervals with *negative* statements was 0.6 (range, 0 to 1), the average number of intervals with *positive* statements was 6.8 (range, 4 to 12), and 100 % of the sessions had more intervals with *positive* statements than *negative*. The ratio of intervals with positive statements to intervals with negative statements was 11.3 to 1. Between baseline and the introduction of the intervention, there was a slow increase in number of intervals with *positive* statements and a slow decrease in number of intervals with *negative* statements. The percentage of overlapping data points between baseline and intervention for intervals with *positive* statements was 100% and the percentage of overlapping data points for intervals with *negative* statements was 71.43%. The percentage of overlapping data points between baseline and follow-up for intervals with *positive* statements was 80% and for intervals with *negative* statements was 60%.

Teacher 4. During the ***baseline*** phase, the average number of intervals with *negative* statements was 9.3 (range, 7 to 12), the average number of intervals with *positive* statements was 3.0 (range, 2 to 5), and none of the sessions had more intervals with *positive* statements than *negative*. The ratio of intervals with positive statements to intervals with negative statements was .3 to 1. During the ***intervention*** phase, the average number of intervals with *negative* statements was 2.8 (range, 2 to 4), the average number of intervals with *positive* statements was 12.0 (range, 7 to 15), and 100 % of the sessions had more intervals with *positive* statements than *negative*. The ratio of intervals

with positive statements to intervals with negative statements was 4.4 to 1. During the ***follow-up*** phase, the average number of intervals with *negative* statements was 2.0 (range, 1 to 3), the average number of intervals with *positive* statements was 9.4 (range, 4 to 15), and 100 % of the sessions had more intervals with *positive* statements than *negative*. The ratio of intervals with positive statements to intervals with negative statements was 4.7 to 1. Between baseline and the introduction of the intervention, there was an immediate increase in number of intervals with *positive* statements and an immediate decrease in number of intervals with *negative* statements. There were no overlapping data points between baseline and intervention for intervals with *positive* statements or for intervals with *negative* statements. The percentage of overlapping data points between baseline and follow-up for intervals with *positive* statements was 40% and there were no overlapping data points for intervals with *negative* statements.

Research Question Two

Research question two (i.e., What effect does implementation of a CBC intervention package have on student's prosocial skills?) was examined using parent and teacher ratings on the *SSIS-RS* (Gresham & Elliott, 2008). Because the *Social Skills* scale assesses prosocial behaviors, standard scores below 85 on this scale are considered to be problematic. On the other hand, because the *Competing Problem Behaviors* scale measures negative behaviors, scores above 115 on this scale are considered to be problematic. Parent and teacher pre-test ratings were compared to their respective post-test ratings using the Reliable Change Index (RCI) to analyze changes in ratings on the *Social Skills* and *Competing Problem Behaviors* scales of the *SSIS-RS* (see Table 3). An RCI greater than or equal to +/- 1.96 is unlikely due to chance ($p < .05$).

Table 3
Parent and Teacher Ratings and RCI Scores for the SSIS-RS

	Parent			Teacher		
Student	Pretest	Posttest	RCI	Pretest	Posttest	RCI
	Social Skills					
1	100	122	4.65*	82	90	1.60
2	91	104	2.75*	70	90	4.00*
3	104	109	1.40	90	112	4.40*
4	92	82	-2.11*	78	84	1.20
	Competing Problem Behaviors					
1	100	85	-1.64	124	112	-1.48
2	103	93	-1.09	149	117	-3.94*
3	96	92	-0.46	123	109	-1.73
4	133	127	-0.66	118	112	-0.74

Note. Scores reported as standard scores where Average = 85 – 115
*$p < .05$

Student participant 1: S1. Based on information obtained during the first CBC meeting (i.e., CNII), the target behavior for S1 was identified as tantruming. Pretest parent ratings for S1 on the *Social Skills* scale (SS = 100) and on the *Problem Behaviors* scale (SS = 100) were considered to be in the average range. Posttest ratings for *Social Skills* (SS = 122) were in the above average range and *Problem Behaviors* (SS = 85) were at the low end of the average range. Thus, significant change in ratings from pre- to posttest was noted on the *Social Skills* scale (RCI = 4.65) but not on the *Problem Behaviors* scale (RCI = -1.64).

Pretest teacher ratings for S1 on the *Social Skills* scale (SS = 82) were in the below average range and on *Problem Behaviors* scale (SS = 124) were in the above average range. Posttest ratings for *Social Skills* (SS = 90) and for *Problem Behaviors* (SS = 112) were in the average range of functioning. While teacher change in ratings for S1at *school* indicated improvement in behaviors on the *Social Skills* scale (RCI = 1.60) and the *Problem Behaviors* scale (RCI = -1.48), these scores were not statistically significant.

Student participant 2: S2. Based on information obtained during the first CBC meeting (i.e., CNII), the target behavior for S2 was identified as tantruming. Pretest parent ratings for S2 on the *Social Skills* scale (SS = 91) and on the *Problem Behaviors* scale (SS = 103) were in the average range of functioning. While still in the average range, posttest ratings for *Social Skills* (SS = 104) increased and ratings for *Problem Behaviors* (SS = 93) decreased. Parent ratings for S2 changed significantly from pre- to posttest on the *Social Skills* scale (RCI = 2.75) but not on the *Problem Behaviors* scale (RCI = -1.09).

Pretest teacher ratings for S2 on the *Social Skills* scale (SS = 70) were in the below average range and on the *Problem Behaviors* scale (SS = 149) were in the above average range. Posttest ratings for *Social Skills* (SS = 90) increased, moving into the average range of functioning. While still in the above average range, posttest ratings for *Problem Behaviors* (SS = 117) decreased. At *school*, teacher ratings for S2 changed significantly pre- to posttest on the *Social Skills* scale (RCI = 4.00) and on the *Problem Behaviors* scale (RCI = -3.94).

Student participant 3: S3. Based on information obtained during the first CBC meeting (i.e., CNII), the target behavior for S3 was identified as not following directions. Pretest parent ratings for S3 on the *Social Skills* scale (SS = 104) and on the *Problem Behaviors* scale (SS = 96) were in the average range of functioning. While still considered to be within the average range, posttest ratings for *Social Skills* (SS = 109) increased while ratings for *Problem Behaviors* (SS = 92) decreased slightly. Parent ratings for S3 positively changed from pre- to posttest, albeit not significantly, on the *Social Skills* scale (RCI = 1.40) and on the *Problem Behaviors* scale (RCI = -0.46).

Pretest teacher ratings for S3 on the *Social Skills* scale (SS = 90) were in the average range and on the *Problem Behaviors* scale (SS = 123) were in the above average range. While still in the average range of functioning, posttest ratings for *Social Skills* increased (SS = 112) and ratings for *Problem Behaviors* decreased (SS = 109), moving into the average range. At *school*, teacher ratings for S3 increased significantly from pre- to posttest on the *Social Skills* scale (RCI = 4.40) but not on the *Problem Behaviors* scale (RCI = -1.73).

Student participant 4: S4. Based on information obtained during the first CBC meeting (i.e., CNII), the target behavior for S4 was identified as not following directions. Pretest parent ratings for S4 on the *Social Skills* (SS = 92) were in the average range of functioning and on the *Problem Behaviors* scales (SS = 133) were in the above average range. Posttest ratings for *Social Skills* (SS = 82) decreased to the below average range and ratings for *Problem Behaviors* (SS = 127) decreased slightly, remaining in the above average range. Parent ratings for S4 from pre- to posttest declined significantly on the *Social Skills* scale (RCI = -2.11) but not on the *Problem Behaviors* scale (RCI = -0.66).

Pretest teacher ratings for S4 on the *Social Skills* scale (SS = 78) were in the below average range of functioning while ratings on the *Problem Behaviors* scale (SS = 118) were in the above average range. Posttest ratings for *Social Skills* (SS = 84) increased slightly but remained in the below average range while ratings for *Problem Behaviors* (SS = 112) decreased slightly, moving into the average range. At *school*, teacher ratings for S4 did not change significantly from pre- to posttest on the *Social Skills* scale (RCI = 1.20) or the *Problem Behaviors* scale (RCI = -1.74).

Research Question Three

To address the last research question (i.e., What effect does implementation of a CBC intervention package have on the home-school relationship?), data from the *PTRS-II* were analyzed for consistency of scores (i.e., reliability) using the same method (i.e., Cronbach's coefficient alpha) as Vickers and Minke (1995). The Cronbach alphas obtained in this study were as follows: on the *Joining* subscale was .91 for parents and .83 for teachers; the *Communication to Others* subscale was .98 for parents and .78 for teachers. These scores suggest that the internal consistency of this administration of the *PTRS-II* ranged from good (i.e., ≥ .70) to better than good (i.e., ≥ .80; Schweizer, 2011). In addition, changes in ratings on the *Joining* and *Communication to Others* scales of the *PTRS-II* were analyzed using the RCI method described earlier (see Table 4). An RCI greater than or equal to +/- 1.96 is unlikely due to chance ($p < .05$). On the *Joining* subscale, statistically significant negative changes were noted for all parent ratings and for three of the four teachers' ratings. Statistically significant positive change was noted for T3 (RCI = 4.01). On the *Communication to Others* subscale, statistically significant negative changes were noted for P3 (RCI = -8.75), P4 (RCI = -2.50), and T4 (RCI = 7.83). Finally, total relationship ratings yielded statistically significant negative changes following CBC for all adult participants with the exception of T3 (RCI = 3.62).

Table 4
Parents and Teachers Pre- and Posttest Ratings on the PTRS-II and Their Respective RCI

	Joining			Communication to Others			Total		
Participant	Pre	Post	RCI	Pre	Post	RCI	Pre	Post	RCI
Parent									
1	4.63	3.21	-8.67*	5.00	5.00	0.00	4.71	3.58	-7.90*
2	4.37	3.50	-5.30*	5.00	5.00	0.00	4.50	3.50	-3.62*
3	4.16	3.37	-4.82*	5.00	3.60	-8.75*	4.33	3.42	-6.43*
4	3.74	3.16	-3.53*	3.40	3.00	-2.50*	3.67	3.13	-6.72*
Teacher									
1	3.74	2.95	-4.63*	5.00	5.00	0.00	4.00	3.38	-3.88*
2	4.26	3.53	-4.32*	5.00	5.00	0.00	4.42	3.83	-3.62*
3	3.58	4.26	4.01*	4.00	4.20	0.52	3.88	4.25	3.62*
4	3.84	2.79	-6.16*	4.00	1.00	-7.83*	3.67	2.79	-6.72*

*$p < .05$

Treatment integrity

CBC procedures. The consultant's performance of CBC objectives was assessed using audiotaped analysis of all CBC interviews (Colton & Sheridan, 1998; Sheridan et al., 2006). Fifty percent of the audiotapes for each of the three interviews (i.e., CNII, CNAI, and CPEI) were randomly selected and coded by an independent, trained research assistant (Kratochwill & Bergan, 1990). The objectives were met for 100% of the CNII, 96.78% of the CNAI, and 96.28% of the CPEI. Across all interviews, 97.69% of the objectives were achieved.

Social skills intervention procedures. Parents and teachers adherence to intervention procedures was measured two ways: (a) their self-recorded completion of the steps outlined in their treatment plan worksheets and (b) their self-report responses on item completion on the home-school note (Colton & Sheridan, 1998). None of the participants in any of the dyads completed the treatment plan worksheets. Furthermore, only participants in dyad 1 and 3 regularly completed the home-school note, in which 100% of the items on the home-school notes were completed.

Treatment Acceptability Data

Parent and teacher acceptability of the intervention was measured using the *Treatment Evaluation Inventory – Short Form* (*TEI-SF*; Kelley et al., 1989) which was administered at the end of the intervention phase. Average parent ratings were 39.75 (range, 34 to 45; *SD* = 5.12) and average teacher ratings were 44.50 (range, 43 to 45; *SD* = 1.00). All *TEI-SF* scores were $\geq$ 34, indicating that participants' view of the appropriateness and effectiveness of this behavioral intervention for children was better than "moderate" (i.e., a midpoint rating of 27). Out of a possible score of 5, parents' average item rating was 4.42 (range, 2 to 5) and teachers' average item rating was 4.92 (range, 3 to 5). Consistent with previous literature (Sheridan, Clarke, & Burt, 2008), these ratings indicate that parents and teachers view the CBC process was highly acceptable.

Discussion

The current study extended the research conducted by Colton and Sheridan (1998) on using CBC to deliver a social skills intervention package by examining the effects on (a) teachers' use of PBIS strategies, (b) the development of prosocial skills in young children, and (c) the home-school partnership. Most research on behavioral interventions for young children has focused on children's outcomes (Conroy, Dunlap, Clarke, & Alter, 2005). This study focused on the outcomes of teachers' behaviors through direct assessment. Thus, the first research question sought to examine the effects of a CBC intervention package on teachers' use of select PBIS strategies.

Data were collected on teachers' use of warnings, transition signals, praise, precorrections, and specific praise to determine whether those behaviors increased as a

result of participating in the CBC intervention. Data also were collected on teachers' use of negative statements to determine whether those behaviors decreased. Frequency counts of the first three PBIS strategies appear to indicate that the CBC intervention delivery resulted in increased use of warnings, transition signals, and precorrections for all four teachers. Visual analysis of the remaining three PBIS strategies appear to indicate that a functional relation was established because all four teachers decreased their use of *negative* statements and increased their use of *positive* statements (i.e., praise and specific praise). These results suggest that CBC may have been an effective way to increase teachers' use of evidence-based PBIS interventions.

The recommended ratio of positive to negative statements is at least four to one, and higher if possible (Stormont, Covington, & Lewis, 2006; Walker, Ramsey, & Gresham, 2003). The data documented in this study suggest that the CBC intervention package resulted in substantial increases in teachers' use of praise to levels that met or exceeded the recommended minimum levels. During baseline, on average, teachers provided fewer than one positive statement for every negative statement. After the intervention was introduced, the average ratio of intervals with positive to negative statements increased to more than three to one and continued to increase to more than six to one during the follow up phase. Together, these results suggest that CBC may have been an effective means to influence the teachers' use of the PBIS strategies which is consistent with previous research findings (e.g., Stormont et al., 2007).

While all four teachers had flipped their use of positive and negative statements when the intervention was introduced, it is important to acknowledge the variability in the data on teachers' use of these types of statements. During each session in baseline,

T1 and T4 used more negative statements than positive statements, while T2 and T3's use of these statements was varied. During the intervention phase, approximately 71% of the sessions for T1 and 86% of the sessions for T3 had more intervals with positive statements than negative statements. On the other hand, all of the sessions during intervention for T2 and T4 had more intervals with positive statements than negative statements. However, during the follow up phase of the study, all four teachers had completely flipped their use of statements with 100% of the sessions having more intervals with positive statements than intervals with negative statements. Furthermore, while the trend in all four teachers' use of positive statements appears to be declining during follow up, the trend in their use of negative statements appears to be relatively stable and remaining below baseline means.

The variability in teachers' use of positive and negative statements may be explained, in part, by the type of variability found in applied settings. For example, the teacher to student ratio during the less structured summer schedule often resulted in only one teacher in the classroom. The type of activities being observed and types of behaviors being displayed by the students also may have contributed to the variability in teachers' use of PBIS strategies. Teaching style may also help explain the variability of teachers' use of positive and negative statements. For example, the slower rate of implementation of positive statements by T3 may be explained by anecdotal information noted by the independent observers which revealed that T3 often used instruction of social skills and modeling rather than using reinforcing statements.

Although change in teacher behavior was the primary purpose of this study, it is also important to establish whether any observed changes resulted in improved student

behavior (Stormont et al., 2006). Thus, the purpose of the second research question was to determine whether a CBC intervention package would have an effect on students' behaviors. In this case a social skills intervention package was implemented because preschool-age children develop strong social, emotional, and behavioral skills when they are exposed to the principles of prosocial development consistently across environments (Hester et al., 2004). Similar to previous research (Colton & Sheridan, 1998), the results of the current study suggest that a social skills intervention delivered as part of a CBC intervention package is effective in improving all students' behaviors in the *school* setting. In the *school* environment, students' behaviors, on average, improved significantly (i.e., RCI = ± 1.96) on both scales of the *SSIS-RS* (*Social Skills* $\bar{x}$ = 2.8, range: 1.20 to 4.40; *Problem Behaviors* $\bar{x}$ = -1.97, range: -0.74 to -3.94). Furthermore, the intervention was effective in improving the behaviors for three of the four students in the *home* setting. In the *home* setting, students' behaviors, on average, demonstrated improvement, albeit not at a significant level, on both scales of the *SSIS-RS* (*Social Skills* $\bar{x}$ = 1.67, range: -2.11 to 4.65; *Problem Behaviors* $\bar{x}$ = -0.96, range -0.46 to -1.64).

It is important to acknowledge the decline in social skills exhibited by S4 in the *home* environment and the lack of significant improvement in the *school* setting. It may be that this particular intervention was not appropriate for this child and/or his parents as evidenced by his parents' limited participation in the intervention; resulting in a lack of consistency across settings. For example, the consultant regularly checked in (via email and during CBC meetings) with all adult participants about the progress of the social skills intervention and whether any additional support was needed. There were several occasions when the parents of S4 reported that they had not started the intervention or

implemented it consistently "because they were so busy." It is unclear as to whether the reason these parents did not fully participate in the intervention was due to competing demands at home or the intervention itself. That is, it may be that the CBC process did not sufficiently engage the parents of S4 and the results of that engagement, if it had occurred, are unknown.

Overall, the results of the current study indicate that the CBC intervention package demonstrated improvements on students' behaviors with some variability across settings. This variability may be explained, in part, by environmental demands and expectations, and therefore, differences in adults' views regarding behavioral skills. Therefore, it is important to remember that it is the significant adults in young children's lives who exert the most influence on their behaviors (Bransford, 2000). This is important because the interactions between adults and children in various settings may play a role in how informants (i.e., parents and teachers) rate problem behaviors depending on the setting and understanding "the expectations of the informants and characteristics of the settings could help clinicians and researchers determine if their ratings are biased by their view of children or if children indeed behave differently in different settings" (Cai, Kaiser, & Hancock, 2004, p. 311). Consequently, it is the adults' *perceptions* of the children's behaviors that may matter most, particularly for the children in this study. That is, consistent with previous research (Gilliam, 2005), the need for referral for a psychoeducational evaluation or expulsion, either of which is typically based on adults' perceptions of children's behaviors, was eliminated for all the children in this study.

The last research question centered on whether a social skills intervention package delivered through the CBC model would have an effect on the home-school relationship. The research shows that the development of critical school readiness skills is affected by the interactions children have with their various environments (Sameroff & Chandler, 1973). Further, the interactions between these environments, or what Reschly and Christenson (2012) refer to as "synergism – affects students' developmental and learning outcomes" (p. 63). Therefore, the unique perspectives of these environments (Sheridan et al., 2012) and the home-school relationship are important considerations in the effective implementation of interventions targeting children's behaviors (Esler et al., 2002; Reschly & Christenson, 2012). The CBC model focuses on these interactions with the intention of strengthening the home-school relationship (Sheridan et al., 2006).

Based on results from *PTRS-II* self-report questionnaires in this study, parents and teachers' perceptions of the home-school relationship actually declined. However, the *PTRS-II* results contrasted with the very positive anecdotal reactions from participants throughout this study. That is, participants often expressed how much they liked working together as a team to help support their student's development of prosocial skills. It may be that the *PTRS-II* was not an appropriate means for measuring change in this study. Previous research utilized this measure with sample sizes that were much larger and yielded results demonstrating positive changes in participants' perceptions of the home-school relationship after completing CBC (e.g., Sheridan et al., 2006). Another possible explanation for these results may be due to threats to internal validity (e.g., response-shift bias, wording of the questions, sensitization toward aspects of the treatment) inherent in

traditional pre/post evaluation methods which may lead to an underestimate of the intervention's effect (Colosi & Dunifon, 2006; Lam & Bengo, 2003).

An alternative method for evaluating the effects of CBC on perceptions of the home-school relationship could be the retrospective pretest approach (i.e., *post then pre* design). The retrospective method of program evaluation has more than four decades of empirical evidence supporting its application over the traditional pre/post design for measuring change (Lam & Bengo, 2003). "If the goal is to capture how participants *perceive* the changes they have made in knowledge, skills, attitudes or behavior, then a *post then pre* method may be adequate to capture information on this type of data" (Colosi & Dunifon, 2006, p. 5). Additionally, the validity of evaluating the CBC model could be strengthened if multiple methods of evaluation (i.e., multi-source, multi-measurement) are applied (Lam & Bengo, 2003).

Contributions to the Literature

Results from this study add to a growing body of research demonstrating the utility of implementing a CBC intervention package. For example, the results of this study were consistent with Colton and Sheridan's (1998) reports of improved behavior among students with challenging behaviors. Results of this study also support findings from previous research examining change in teachers' use of PBIS strategies (e.g., Stormont et al., 2006). That is, all teachers' increased their use of positive statements and decreased their use of negative statements resulting in a ratio of more than three to one by the end of the study. Furthermore, research has shown that when preschool teachers received school-based behavioral consultation, young children with challenging behaviors were less likely to be expelled from preschool programs (Gilliam, 2005). The

behaviors of all the children in the current study improved enough, at least in the school setting, that the need for expulsion was no longer warranted which may provide additional support to the previous literature.

Furthermore, most research on young children with challenging behaviors has been conducted with children who have been formally identified with a disability (e.g., developmental delay, autism, ADHD; Conroy et al., 2005). All of the children in this study had no identified disability but may have been at-risk for future behavior problems. Results of this study may provide evidence that PBIS strategies such as those used in this study are effective for young children with challenging behaviors but who have no identified disabilities. Finally, results of this study may provide support for the research on children's need for consistency across environments for interventions to produce the best effects (Conroy et al., 2009; Hester et al., 2004). For example, three of the four students in this study demonstrated at least some improvement in their social skills and problem behaviors across settings. It may be that the reason the fourth student (i.e., S4) did not demonstrate any improvement in his behaviors at *home*, and only some improvement in his behaviors at *school*, is because of the lack of consistency in the implementation of the intervention across environments. The outcomes of an intervention are best when all three members of the triad (i.e., teacher, parent, and student) are fully engaged in the process. "When only two of the three people in the intervention triad are engaged, there is only 67% engagement, which is still a failing grade" (B. Stallings, personal communication, September 28, 2013).

Limitations and Future Directions

Focusing on the use of several proactive interventions (e.g., CBC and a social skills training intervention) in one treatment "package" is likely to have a positive impact on the home and school environments by increasing the occurrence of positive behaviors and desirable reciprocal interactions (Conroy et al., 2009). However, consultation in applied settings is not without its challenges. And the preschool setting in which this study was conducted is no exception. As such, there were several factors which may limit the ability to generalize the findings of this study.

Timing of the study. This study was started (i.e., recruitment, initial meetings) at the end of a school calendar year and continued through the summer months. This is important because variability in the daily schedule of the classrooms was created as the preschool center transitioned from a structured school year schedule to a relaxed summer schedule. For example, "summer camp" type activities such as weekly "water days" were provided by the director for all the children at the center. While a schedule was created that allowed all the classrooms to rotate through these activities, this schedule was not always followed, and often disrupted the routine for those classrooms involved in this study. Additional activities such as weekly field trips for the students and special guests coming to the center (e.g., clowns, magicians) contributed to the relaxed, and at times, unpredictable structure of the daily schedule for the classrooms. Family and teacher vacations also contributed to the dynamics of the summer schedule. These vacations affected the ratio of teacher-to-students in the classroom and often resulted in times when only one teacher was in a classroom. All these variables could have affected teachers' ability to practice new skills taught through this intervention. Future researchers may want to conduct a study of this nature earlier in the school year and

continue throughout the summer. This would enable the teachers to have a longer period of time to develop these new skills (i.e., use of PBIS strategies) and strengthen their ability to apply them during the less structured summer schedules.

Lack of experiential support in the homes. While parents were provided with support via email, phone, and face-to-face contact, they were not provided with the same experiential support at home that teachers were able to receive in the classroom. The CBC process may have been strengthened if parents had received the same support and experiential opportunities to practice their new skills in their homes that teachers had received in the classroom. Focusing on the target behaviors of children would be better when parents and teachers receive the same level of individual support in the environments where the new skills are being learned (i.e., home and school). Providing opportunities to observe parenting practices and feedback in the *home* setting is an important area of CBC to investigate (Sheridan et al., 2008).

Lack of data on treatment integrity of social skills intervention **procedures.** Parents and teachers completion of the treatment plan worksheets and social skills intervention plan (e.g., home-school notes, monitoring sheets, sticker charts, etc.) was an important element, albeit a subjective one, for determining the treatment integrity of the social skills intervention. However, there were little to no data to provide evidence of whether this element was implemented with fidelity. The lack of data from parents and teachers may be explained, in part, by the lack of behaviors to record. Often the parents and teachers reported that they had little to no observational data to present (i.e., A-B-C data) simply because there were no observed target behaviors to record. This in itself may provide support that the social skills intervention procedures may have been working

despite the fact that parents and teachers were not regularly recording their use of these procedures on the worksheets or using the home-school note. Of all the components of the social skills intervention procedures (i.e., PBIS strategies, modeling, and home-school note), parents and teachers alike reported that warnings, precorrections, specific praise, and modeling appropriate behaviors were specifically effective in promoting appropriate behavior. Future research may want to consider adding a more objective means of measuring the integrity of parents and teachers implementation of the intervention.

Use of subjective data. A fourth limitation of this study is the use subjective data (i.e., rating scales and observational data collected by parents and teachers) to determine whether students' behaviors improved. For example, any improvement in students' behaviors may have been a function of typical childhood development. Rating scales provide a subjective means for determining the adults' perceptions of students' behaviors. Any variability in ratings may be a function of differences in environment, expectations, and/or interpretation of the items. Furthermore, anecdotal data from observations and permanent products (e.g., worksheets and home-school notes) provided by the adult participants were also subjective. Without objective data from unbiased sources it cannot be confirmed whether the students' behaviors did, in fact, improve. However, while subjective to be sure, this data may provide evidence that adult perceptions of the students' behaviors had improved. This is important because changing the way adults perceive children's behaviors may have an indirect affect on improvement in these behaviors. Future research should include an objective means of determining change in students' behaviors.

Conclusion

Children do not live or learn in a vacuum and their behaviors are, in large part, a result of the relationship between their interactions with the environment (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Because adults are the ones responsible for the development of school readiness skills, effective behavioral programs must include training for those adults who exert the most influence on the lives of young children (Hester et al., 2004). Previous research has documented that behavioral interventions for young children are optimized when they simultaneously address teacher classroom management practices and the home-school partnership (Lane et al., 2007). Consultation services such as those provided through CBC are one way that parents and teachers can be supported in their efforts to help young children with challenging behaviors. Furthermore, the role adults play in young children's development of school readiness skills should be an important consideration in the evaluation of any behavioral program for young children. Therefore, the efficacy of an intervention should also include a means for assessing the outcomes of the adults responsible for administering the intervention. Results of this study suggest that CBC may have had a positive effect on changing the teachers' behaviors which may, in turn, have contributed to the positive affects on students' behaviors.

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APPENDIXES

APPENDIX A

Classroom Note Home

Georgia State University
Department of Counseling and Psychological Services

Lisa Wells, M. Ed.
Department of Counseling and Psychological Services
Georgia State University
P.O. Box 3980
Atlanta, GA 30302-3980
lwells6@student.gsu.edu

Dear Parent and/or Guardian:

My name is Lisa Wells. I am a graduate student at Georgia State University. I am currently working on my dissertation which is not related to the needs of teachers and staff at your child's preschool center. The director of your child's preschool has agreed to allow me to conduct a research study in this preschool center. In addition, your child's teacher has agreed to participate in this study. I am sending this letter home to all the parents in your child's classroom.

Data for this study will be collected on a total of six teachers, six parents, and six children. Only teachers and parents will take part in this study. There will be no children who will directly participate in this study. However, your child may be in the classroom when we observe your child's teacher.

I thank you in advance for your support with this project. If you have any questions, feel free to contact me at 770.330.4522. You may also contact my supervising committee chair, Dr. Stephen Truscott by phone at (404) 413-8177 or by email at sdt55@gsu.edu.

Sincerely,

Lisa Wells, M. Ed.

APPENDIX B

Home-School Daily Communication Note

Home-School Daily Communication DATE:

1. Target Behavior:
2. Replacement Behavior that is being practiced:
3. Goal:
4. Where and When
    a. At home?
    b. At school?
5. Ways to teach the replacement behavior:
    a.
    b.
    c.
6. EBPs used that day/evening:
    a. Transition Signal?
    b. Warning prior to transition?
    c. Precorrection?
    d. Positive Statements?
    e. Specific Praise?
7. Goal met for that day/evening?
8. Additional notes/thoughts:

APPENDIX C

Teacher's Behaviors Observation Form

Teacher: Start Time: # Adults Present: Date:
Observer: End Time: # Children Present: Activity:

Transition Signal? Visual (e.g., lights on/off) Auditory (e.g., music, bell) Gesture (e.g., Ts hand on head)						**Warning** (~5 minutes prior to transition)? Verbal warning provided by teacher
Pre-Correction	1	2	3	4	5	Record Examples Here (if possible)
	6	7	8	9	10	
	11	12	13	14	15	
	16	17	18	19	20	
Specific Praise	1	2	3	4	5	Record Examples Here (if possible)
	6	7	8	9	10	
	11	12	13	14	15	
	16	17	18	19	20	
Positive Statements (Comments indicating approval)	1	2	3	4	5	Record Examples Here (if possible)
	6	7	8	9	10	
	11	12	13	14	15	
	16	17	18	19	20	
Negative Statements (Comments indicating disapproval, reprimand; includes tone of Teacher's voice)	1	2	3	4	5	Record Examples Here (if possible)
	6	7	8	9	10	
	11	12	13	14	15	
	16	17	18	19	20	

Note for Graphing: Total Positive Statements = Specific Praise + Positive Statements

Additional notes:

APPENDIX D

CBC Integrity Record Form

Conjoint Needs Identification Interview (CNII)					
Objective	**Tape 1**	**Tape 2**	**Tape 3**	**Tape 4**	**Tape 5**
1. Social Opening					
2. Open Up Dialogue					
3. Discuss Strengths (Child, Family, Teacher)					
4. Discuss Goals and Desires					
5. Select Needs and Concerns					
6. Select a Priority					
7. Define the Priority					
8. Select a Focus/Setting					
9. Determine What Works and What Doesn't					
10. Collect Information					
11. Meet Again					
12. Closing					
Percentage of Objectives Met					
Conjoint Needs Analysis Interview (CNAI)					
Objective	**Tape 1**	**Tape 2**	**Tape 3**	**Tape 4**	**Tape 5**
1. Social Opening					
2. Open Up Dialogue					
3. Discuss Information Collected/Set Goals					
4. Determine Other Events Occurring in Environment					
5. Determine Hypotheses for the Behavior					
6. Determine Actions/Intervention Strategies					
7. Collect Information					
8. Meet Again					
9. Closing					
Percentage of Objectives Met					
Conjoint Plan Evaluation Interview (CPEI)					
Objective	**Tape 1**	**Tape 2**	**Tape 3**	**Tape 4**	**Tape 5**
1. Social Opening					
2. Open Up Dialogue					
3. Determine Outcomes of Plan					
4. Determine Need to Change Plan					
5. Continue the Plan					
6. Discuss Need for Future Meetings					
7. Discuss Satisfaction/Social Validity					
8. Select a Focus/Setting					
9. Plan for Future Collaboration and Partnership					
10. End Consultation					
Percentage of Objectives Met					

APPENDIX E

The Treatment Evaluation Inventory – Short Form (TEI-SF)

Please complete the items listed below by placing a checkmark on the line next to each question that best indicates how you feel about the treatment. Please read the items very carefully because a checkmark accidentally placed on one space rather than another may not represent the meaning you intended.

		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I find this treatment to be an acceptable way of dealing with a child's problem behavior.					
2	I would be willing to use this procedure if I had to change the child's problem behavior.					
3	I believe that it would be acceptable to use this treatment without children's consent.					
4	I like the procedures used in this treatment.					
5	I believe this treatment is likely to be effective.					
6	I believe the child will experience discomfort during the treatment.					
7	I believe this treatment is likely to result in permanent improvement.					
8	I believe it would be acceptable to use this treatment with individuals who cannot choose treatments for themselves.					
9	Overall, I have a positive reaction to this treatment.					

[i] Note: From this point on, when we use the term "intervention" we mean an evidence-based intervention that has established research support.