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Student-Teacher Relationships and Students with Behavior Difficulties in Therapeutic Schools

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ACCEPTANCE

This dissertation, STUDENT-TEACHER RELATIONSHIPS AND STUDENTS WITH

BEHAVIOR DIFFICULTIES IN THERAPEUTIC SCHOOLS, by CARRIE A. KANE, was

prepared under the direction of the candidate's Dissertation Advisory Committee. It is accepted

by the committee members in partial fulfillment of the requirements for the degree, Doctor of

Philosophy, in the College of Education and Human Development, Georgia State University.

The Dissertation Advisory Committee and the student's Department Chairperson, as

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STUDENT-TEACHER RELATIONSHIPS AND STUDENTS WITH BEHAVIOR
DIFFICULTIES IN THERAPEUTIC SCHOOLS

by

Carrie A Kane

Under the Direction of David E. Houchins

ABSTRACT

In Chapter One, a systematic literature review was conducted to analyze intervention studies that measured student- teacher relationships (STR). STR are important for all students (Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002; Hughes, Luo, Kwok, & Loyd, 2008; Pianta & Stuhlman, 2004). Students who have positive relationships that include high levels of closeness with their teachers have better academic, behavioral, and social emotional outcomes (Mihalas, Morse, Allsopp, & McHatton, 2009; Roorda, Koomen, Spilt & Oort, 2011). In addition, students who have relationships with their teacher that are high in conflict are more likely to demonstrate negative behavior, social skills and academic achievement (Murray & Greenberg, 2001; Pianta & Stuhlman, 2004). Fourteen intervention studies were synthesized in this systematic literature review to identify strategies that can be used in the classroom to improve STR. Ten strategies were represented in two or more studies that had a positive impact on STR: (a) specific praise and positive feedback, (b) direct student intervention, (c) de-escalation by ignoring or redirecting, (d) increased one-to-one time, (e) helping students change their representational models, (f) adjusting the teachers representational models, (g) tangible reinforcement, (I) parent involvement, and (j) morning meetings. One intervention in Chapter One that improved STR was dialogue journaling (DJ). DJ is an ongoing, personal, and interactive written conversation between the teacher and student. Previous research suggests that DJ has the potential to help students and teachers improve their relationships as they develop a personal connection that is mutually respectful. DJ also has the potential to reduce students' disruptive behavior, improve their interactions with the teacher, and enhance their writing skills.

In Chapter Two, a multiple baseline across participants single-case design study was conducted to examined the relationship between DJ and disruptive behavior, teacher praise,

writing length, writing quality, and STR with four middle school students with emotional and behavior disorders in a therapeutic school. Students responded to journal prompts or wrote to a topic of their choosing during baseline and maintenance. During intervention, students and teachers corresponded in writing through the dialogue journals. A functional relation was found between DJ and disruptive behavior, but not between DJ and teacher praise, STR or writing skills. However, there was an effect demonstrated between DJ and writing length for two students. In addition, three of the four students reported an increased perception of teacher-student relationships. Students and teachers expressed satisfaction with the intervention. Limitations and future directions are discussed.

INDEX WORDS: Student-teacher relationships, Emotional and behavior disorders, Therapeutic schools, Dialogue journaling, Writing

STUDENT-TEACHER RELATIONSHIPS AND STUDENTS WITH BEHAVIORAL

DIFFICULTIES IN THERAPEUTIC SCHOOLS

by

Carrie A Kane

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DEDICATION

I dedicate this dissertation to my amazing parents, Bruce and Shirley Spegal. Thank you for instilling in me the idea that I could do and be anything I set my mind to and that "can't" was not an option. You always encouraged and supported anything I attempted no matter how crazy it seemed. You taught me what unconditional love and support looked like from the day I was born. I could not have done this or most things in my life without you.

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1   A SYSTEMATIC LITERATURE REVIEW OF STUDENT-TEACHER RELATIONSHIPS

Research in general education has found that positive student teacher relationships (STR) are vitally important for student success (Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002; Hughes, Luo, Kwok, & Loyd, 2008; Pianta & Stuhlman, 2004). Students who perceived their relationships with their teacher to be positive had better social and emotional adjustment, fewer incidents of delinquency and fewer conduct problems (Murray & Greenberg, 2001; Pianta & Stuhlman, 2004). They also had higher levels of engagement (Engels et al., 2016; Hughes et al., 2008) and improved attendance rates (De Wit, Karioja, & Rye, 2010). In addition to improved behavioral and social emotional outcomes, positive student teacher relationships have been correlated to improved academic achievement in reading and math (Burchinal et al.; Hughes et al.).

Like their typically developing peers, students with disabilities, especially those with behavior difficulties, have better academic, behavior, and social emotional outcomes when they perceived their relationship with their teacher to be positive (Mihalas, Morse, Allsopp, & McHatton, 2009; Murray & Malmgren, 2005). However, students with behavior difficulties often have higher levels of disruptive behavior and off-task behavior that can influence the way the child interacts with the teacher, as well as how the teacher interacts with the child (Sutherland & Oswald, 2005). This can be a problem for students with behavior difficulties because teachers tend to spend substantially less time instructing and interacting in ways that increase the likelihood of further disengagement (neglect and coercion; Sutherland & Oswald,

2005).

In the last decade, there have been two meta-analyses conducted that examined the effects of STR on student outcomes for students in both general and special education. Cornelius-White (2007) conducted a meta-analysis examining the effects of STR on student outcomes. He synthesized 119 studies written between 1948 and 2004 that examined the relationship between STR and students' affective, cognitive, and behavior outcomes. The studies included 355,325 students. According to Pearson Correlation measures, the findings of this study revealed a medium correlation *(r=.36)* between positive STR and positive student outcomes (affective, behavioral, and cognitive outcomes). Positive STR had a low correlation with cognitive outcomes (*r=.25*) and a medium correlation with behavior outcomes (*r=.35*). In addition, there was a low correlation (*r=.25*) between positive STR and a reduction in disruptive behavior. This meta-analysis illustrates the impact positive STR can have on students' social/emotional and behavioral well-being and the importance of STR for improving students' academic outcomes.

Roorda, Koomen, Spilt, and Oort (2011) conducted a meta-analysis examining the influence of affective STR on students' school engagement and achievement. This meta-analysis consisted of 99 studies conducted between 1990 and 2011 and involved 129,423 students, including students with learning difficulties. They conducted separate analyses for positive relationships and engagement, negative relationships and engagement, positive relationships and achievement and negative relationships and achievement. The researchers found a medium association between both positive relationships and engagement (*r=.39)* and a negative relationships with engagement (*r=-.32).* They found a small to medium association between positive relationships and achievement (*r=.16)* and a negative relationship with achievement

(*r=-.15*). In addition, engagement had a mediating effect between positive and negative STR and achievement. The effect sizes were greater in studies conducted with students in higher grades, suggesting that positive STR had a better impact on engagement and achievement of middle and high school students than on younger students. There was a significantly higher effect for both positive and negative relationships in studies with more males, and a significantly higher effect size for positive relationships and achievement in studies involving more females. Finally, there was a significantly stronger association between negative relationships and decreased achievement and engagement.

Developmental Systems Theory

These meta-analyses provided evidence of the impact STR have on student outcomes. A theoretical framework that explains STR is Developmental Systems Theory (Ford & Lerner, 1992). Developmental Systems Theory embraces the notion that the study of human development is often the study of living systems. Systems are defined as "units composed of sets of interrelated parts that act in organized, interdependent ways to promote the adaptation and survival of the whole" (Pianta, Hamre, & Stuhlman, 2003 p. 202). Families, schools, STR, reading groups, and communities are all examples of systems. Some systems are distal such as communities and culture while others are more proximal such as biological systems and dyadic relationships that influence one another and affect development (Bronfenbrennner, 1979).

Based on Developmental Systems Theory, Pianta (1999) described STR as containing four major components: (a) features of the two individuals themselves, (b) the representational model that each brings with them, (c) the way information is exchanged between the two individuals, and (d) external influences on the relationship. First, the features of the two individuals include each person's biological factors, temperament, personality, developmental

history, age, and gender. Second, the representational models are the feelings, memories, experiences, and beliefs encoded into a person. This means feelings or memories that a person has from one relationship are often transferred to other relationships. These models are fairly stable but they can be changed with new experiences. Second, these models are two-sided, for instance the teacher's representational models are influenced by his/her experiences as a student as well as by his/her experiences as a teacher. The representational model is a rulebook that individuals carry with them containing rules for how to behave in relationships based on previous and current experiences with relationships. The representational model often guides the way people interact with the world around them. Third, the way the information is exchanged between two individuals or the interactions, communications and experiences they have with one another are part of the STR. Finally, there are external influences such as the school climate, community, and administrative requirements that influence the STR.

These components of the STR are not stand-alone as they all interact and influence one another. The interactions the teacher and student have with one another may be influenced by the child's age or external demands on the teacher, which both influence the teacher and child's representational model. Using this model, STR can be defined as a dyadic relationship that is the result of the actions and interactions of these components over time (Pianta, 1999; Pianta et al., 2003). That is to say, the relationship is a compellation of the individual's characteristics, representational models, information exchanges, and external influences. Therefore, it is important that teachers understand how these components work together and how they can use them to improve STR using evidence-based interventions.

Interventions

Teachers need interventions to help develop positive STR in their classrooms. It is not

possible to change a person's personal and biological characteristics nor is it possible to control all of the external influences on relationships. Therefore, interventions focus primarily on changing the representational model or the way information is exchanged between the student and the teacher. Much of the responsibility for developing positive STR falls on the teacher as the more mature and experienced of the two individuals in the relationship (Pianta, 1999). This is especially true when it comes to interventions to change the representational model. To help teacher make changes to their representational models, strategies are needed that inform the teachers about social development and the connection between relationships and social adjustment (Spilt, Koomen, & Thijs, 2011). Strategies also are needed to help teachers reflect on and reevaluate their responsibility for the STR and then adjust their actions and expectations. Reflective practice is needed because teachers often report that they become frustrated with the amount of conflict in the STR. In addition, teachers often expect there to be conflict in the STR, which can lead to increased conflict in the STR (Pianta, 1999; Spilt et al., 2011)

Interventions can also change the way information is exchanged between students and teacher. It is clear that the way information is exchanged in the STR is important but to improve the exchanges of information there needs to be clear and measurable ways to identify them. Previous literature has identified three dimensions that account for the way information is exchanged in the STR: (a) closeness, (b) conflict, (c) and dependency (Koomen & Jellesma, 2015; Pianta, 1999; Verschueren & Koomen, 2012). Closeness is related to emotionally positive interactions, involvement and responses between the teacher and student (Pianta, 1999). In relationships with high levels of closeness the teacher and student interact in warm and supportive ways, have high levels of open communication, praise, encouragement and students feel safe going to the teacher when they are troubled or experiences a difficult situation. Students

who experience STR with high levels of closeness often have more positive academic, social and behavioral outcomes. Conflict in the STR is the degree of negativity, disagreement, unpleasantness and unpredictability in the relationship (Koomen & Jellesma, 2015). High levels of student off-task and disruptive behavior, negative interactions between the teacher and student, and ineffective behavior management, often characterize relationships with high levels of conflict. Finally, dependency refers to the student's unwillingness to use the teacher as a safe base from which to explore the world but instead is over reliant and possessive of the teacher's time and attention (Koomen & Jellesma, 2015; Verschueren & Koomen, 2012). STR with high levels of dependency are characterized by high levels of help or attention seeking by the student, the student wanting to be in close proximity to the teacher, and emotionally negative interactions between the teacher and student. In relationships with high levels of conflict and/or high levels of dependency, students have poorer academic, social, and behavioral outcomes than their peers with low levels of conflict and dependency. Interventions that increase closeness and decrease conflict and dependency can improve students' school success (Koomen & Jellesma, 2015; Pianta, 1999; Pianta et al., 2003; Verschueren & Koomen, 2012).

Rationale for Study

This systematic literature review of intervention studies that measure STR fills a gap in the research. Neither of the meta-analyses conducted on STR (Cornelius-White, 2007; Roorda, Koomen, Spilt, & Oort, 2011) included intervention studies. Previously, there have been no systematic literature reviews conducted on intervention studies measuring STR. Correlational studies clearly indicate that positive STR are important but there is a need to identify interventions that teachers can implement in the classroom that improve STR.

Method

This systematic literature review examined experimental, quasi-experimental, and single-case design (SCD) STR intervention studies involving students in grades K-12. Four steps were used. The first step involved searching relevant electronic databases with no limit on earliest date through December, 2016. Databases included: Academic Search Complete, Education Source, ERIC, Professional Development, PsycINFO, Psychology and Behavioral Sciences Collection. Results were limited to only include peer-reviewed studies published in academic journals. Search terms were: *"student-teacher relationship*" or, "teacher student relationship*" or, "student teacher relationship*" or, "teacher-child relationship" and intervention or implement*.* Second, another researcher conducted a hand search of seven major journals commonly reporting studies involving student-teacher relationships to capture any studies that may have been missed in the electronic search (*Attachment and Human Development, Behavior Disorders, Exceptional Children, Journal of Emotional and Behavioral Disorders, Psychology in Schools, Remedial and Special Education, and School Psychology Review,*). Third, to find unpublished in–press articles, a search of journals offering Online First articles was conducted in December 2016 through the Science Direct Journal (*Journal of School Psychology),* SAGE Journal (*Exceptional Children, Journal of Emotional and Behavioral Disorders, Remedial and Special Education),* Taylor and Francis Online (*Attachment and Human Development*) and Wiley (*Psychology in* Schools); websites: www.sciencedirect.com, online.sagepub.com, www.tandfonline.com/page/openaccess, and onlinelibrary.wiley.com respectively. Finally, an ancestral search of the references in the studies that qualified for inclusion in this systematic literature review was completed.

Studies were selected based on the following criteria: (a) the study was published in English; (b) participants were enrolled in grades K-12; (c) student-teacher relationships were measured; and (d) the research was an experimental, quasi-experimental, or SCD study. The initial search yielded 3,094 results. Most of the studies ($n = 3,063$) were eliminated after inspection of titles or abstracts indicated the article did not meet the criteria for inclusion. Most studies were rejected because they did not include an intervention. In addition, many were rejected because the interventions were conducted with preschool or college students. Next, the researcher read the remaining 31 studies to determine their eligibility for inclusion. Fourteen studies from the initial electronic search met the inclusionary criteria. No additional studies were located in the hand search, the Online First search or the IES website that met the criteria for this review. A second researcher was provided the search terms mentioned above that she used to conduct the search of the same databases. The second researcher also conducted the hand search and Online first search of the journals mentioned above, as well as a search of the IES website. The second researcher determined that the same 14 studies identified by the primary researcher were the only studies to meet the inclusion, indicating 100% interrater reliability.

Results

The intervention studies in this systematic literature review were synthesized to identify strategies that can be used in the classroom to improve STR (see Table 1.1). There were 9 strategies represented in two or more studies that had a positive impact on STR (see Table 1.2): (a) specific praise and positive feedback, (b) direct student intervention, (c) de-escalation, (d) increased one-to-one time, (e) helping students change their representational models, (f) adjusting the teachers representational models, (g) tangible reinforcement, (h) parent involvement, and (i) morning meetings (see Table 1.3).

Specific Praise and Positive Feedback

Specific praise and positive feedback strategies were implemented in 11 of the 14 studies (Anderson, Nelson, Richardson, Webb, & Young, 2011; Baroody, Rimm-Kaufman, Larsen, & Curby, 2014; Eisenhower, Taylor, & Baker, 2016; Kirkhaug et al., 2016; Mautone et al., 2012; O'Connor, McCormick, Cappella, & McClowry, 2014; Ray, 2007; Ray, Henson, Schottelkorb, Brown, & Muro, 2008; Rimm-Kaufman & Chiu, 2007; Thompson, 2014; Tsai & Cheney, 2012). All 11 of the interventions that incorporated specific praise and positive feedback had improved STR after the intervention. The Fabiano et al. (2010) study was the only study where the intervention did not have a positive impact on STR and it was the only study that took place in the classroom between the teacher and students, but did not contain specific praise or positive feedback. Specific praise and positive feedback were incorporated into the interventions in several ways; Anderson and colleagues (2011) had teachers incorporate praise or positive feedback about the student's behavior or previous journal entries into the teacher's dialogue journaling response. This was done completely through written responses. In the Responsive Classroom studies, the teachers were taught to conscientiously and carefully use language that was respectful and encouraging to the students (Baroody et al., 2014; Rimm-Kaufman & Chiu, 2007). In addition, other interventions had teachers encourage students to work toward their goals and then verbally praise specific progress made toward those goals. If the students did not achieve their goals, the teachers were instructed to encourage students that they could try again the next day (Mautone et al., 2012; Thompson, 2014; Tsai & Cheney, 2012). The rest of the interventions were less specific about what praise looked like. One study (Eisenhower et al., 2016) noted that teachers were trained to give praise, another study (Kirkhaug et al., 2016)

instructed teachers to be nurturing, and use praise and encouragement to improve classroom management.

Direct Student Intervention

A strategy to intervene directly with students to change student behavior was incorporated in nine studies (Anderson et al., 2011; Fabiano et al., 2010; Leff et al., 2016; Mautone et al., 2012; O'Connor et al., 2014; Ray, 2007; Ray et al., 2008; Thompson, 2014; Tsai & Cheney, 2012). Anderson and colleagues (2011) had teachers write journal notes to students explaining why certain behaviors (e.g. greeting the teacher, responding positively when asked a question) were important and then asking them to use the behavior the next day. In the Leff and colleagues (2016) study, students were taught strategies to identify feelings, cope with anger and the effects of rumors. They practiced and discussed these skills using culturally relevant cartoon based worksheets, videotaped illustrations, and role-plays. O'Conner and colleagues (2014) had students work with puppets to identify hypothetical dilemmas, develop a plan to solve the dilemmas, and then try the plan. Next, students used these same strategies to deal with real dilemmas. In two studies, students worked with therapists to learn strategies to manage their anger and inappropriate behavior through play (Ray, 2007; Ray et al., 2008). Goal setting and daily report cards were also used to change and monitor student behavior. First the student, with the help of an adult, identified the behavior they needed to improve and then set a goal to improve the behavior and monitored their progress with daily report cards (Fabiano et al., 2010; Mautone et al., 2012; Thompson, 2014; Tsai & Cheney, 2012). Strategies that focused on changing student behaviors improved closeness in the STR (Anderson et al., 2011; Leff et al., 2016; Tsai & Cheney, 2012) and overall quality of STR (Mautone et al., 2012; O'Connor et al., 2014; Thompson, 2014). In addition, there was a decrease in teacher reported stress (Ray, 2007;

Ray et al., 2008) as well as disruptive behavior (Fabiano et al., 2010; Leff et al., 2016; Mautone et al., 2012; O'Connor et al., 2014; Thompson, 2014; Tsai & Cheney, 2012). Interestingly, of the nine interventions that were implemented to change students' classroom behavior, only four of them were conducted in classrooms with teachers (Anderson et al., 2011; Fabiano et al., 2010; O'Connor et al., 2014; Tsai & Cheney, 2012). Counselors or therapists conducted the other five interventions outside the classroom (Leff et al., 2016; Mautone et al., 2012; Ray, 2007; Ray et al., 2008; Thompson, 2014).

De-escalating Strategies

Teachers were taught strategies to de-escalate behavior (Baroody et al., 2014; Kirkhaug et al., 2016; O'Connor et al., 2014; Rimm-Kaufman & Chiu, 200). In two studies teachers were taught to respond to students' behavior in ways that were respectful, supportive, and helped the students learn from their mistakes (Baroody et al., 2014; Rimm-Kaufman & Chiu, 2007). Teachers also were taught de-escalation strategies that involved recognizing when they were responding to students' behavior in optimal, adequate, or counterproductive ways (O'Connor et al., 2014). Finally, teachers were taught to ignore or redirect behavior when possible and to follow through with consequences when consequences were necessary. The results of these studies found that when de-escalating interventions were implemented, STR closeness increased (Baroody et al., 2014; Rimm-Kaufman & Chiu, 2007), conflict in the STR decreased (Kirkhaug et al., 2016), overall STR quality improved (O'Connor et al., 2014), and academic performance improved (Kirkhaug et al., 2016; Rimm-Kaufman & Chiu, 2007).

Increased One-to-One Time

Strategies that increased one-to-one interactions between the student and teachers (Anderson et al., 2011; Eisenhower et al., 2016) included both face-to-face and written

interactions. Anderson and colleagues (2011) implemented dialogue journaling in which the teacher and the students wrote notes back and forth in a journal on a regular basis. The notes were not graded and were nonthreatening. The teacher and students were able to ask each other questions and engage in meaningful personal and relevant conversations. In a second study, Eisenhower and colleagues (2016) had teachers meet in small group consultations with the intent of helping teachers feel more empowered and effective in improving STR and dealing with disruptive behavior. One focus of these meetings was to help teachers develop strategies to provide more positive individual time to students who were difficult to reach. Unfortunately, the authors did not expand on what that individual time looked like. Students in these studies demonstrated increased closeness (Anderson et al., 2011), as well as improved overall quality of STR and decreased disruptive behavior (Eisenhower et al., 2016).

Student Representational Models

Three studies included strategies to help students change their representational models. As mentioned earlier, representational models are ideas, memories, and feelings we have about relationships (Leff et al., 2016; O'Connor et al., 2012; Thompson, 2014). Leff and colleagues (2016) intervened with a group of student with negative relationship behaviors and an equal number of their peers without negative relationship behaviors. The students were taught to identify social cues, interpret others intentions, prioritize social goals, and develop potential alternatives for responding in challenging social structures through mentoring and role-play. O'Conner and colleagues (2012) had students use puppets to help them understand that people had different temperaments and how they might interact with different people. Thompson (2014) implemented a self-management and self-regulation strategy where they helped students take the perceptions of others, consider alternative solutions, reframe mistakes as part of learning,

recognize their own internal responses to problems and manage their external responses. Closeness in the STR (Leff et al., 2016) and STR quality (O'Connor et al., 2012; Thompson, 2014) improved and disruptive behavior decreased in all three of these interventions.

Teacher's Representational Model

Finally, three studies included interventions aimed at changing the teachers representational models or perceptions of their STR (Eisenhower et al., 2016; O'Connor et al., 2012; Spilt et al., 2012). Eisenhower and colleagues and O'Connor and colleagues focused on providing teachers with information about the importance of STR and social emotional learning. Spilt and colleagues (2012) implemented strategies where teachers first participated in narration and reflection paying particular attention to positive and negative emotions that they experienced each day working with particular students. Then they met with a consultant, watched videos of their interactions with the students, and then compared the reflection to the strength and weaknesses portfolio developed by the consultant, allowing teacher to reflect on the difference in the actual interactions and real interactions to help change the way they see the relationship. Changing the teacher's representational model may be the first step to improving STR. Studies implementing this strategy reported an increase in the quality of STR (Eisenhower et al., 2016; O'Connor et al., 2012), improved closeness in STR (Spilt et al., 2012) and decreased disruptive behavior (Eisenhower et al., 2016; O'Connor et al., 2012).

Tangible Reinforcement

Tangible reinforcement was a strategy taught in three of the intervention studies (Eisenhower et al., 2016; Kirkhaug et al., 2016; Mautone et al., 2012). In the Eisenhower and colleagues (2016) as well as Kirkhaug and colleague (2016) studies, teachers were taught to use incentives such as stickers and stars to manage behavior and improve STR. In the Mautone and

colleagues study, counselors used a token economy to encourage appropriate behavior from students in the therapy sessions. The results of these interventions revealed decreased conflict in the STR (Kirkhaug et al., 2016) and improved overall STR quality (Eisenhower et al., 2016; Mautone et al., 2012).

Parent Involvement

Parent involvement was included in two studies (Eisenhower et al., 2016; Mautone et al., 2012). In the Eisenhower and colleagues study, parents attended sessions at their child's school and the parents in the Mautone and colleagues (2012) study attended family therapy sessions. In both studies, parents were taught the importance of parents and teacher collaboration. They were also taught ways to positively manage their child's behavior and strategies to help their child understand and manage his or her behavior at school. In the Mauntone and colleagues study parents and teachers both attended two parent-school collaboration meetings to promote home-school collaboration. Studies incorporating parent involvement reported an increased STR quality and decreased disruptive behavior.

Morning Meeting

Morning meetings were used in two studies implementing the Responsive Classroom intervention (Baroody et al., 2014; Rimm-Kaufman & Chiu, 2007). The morning meeting was a time for the teacher and students to gather in one place and greet one another, share personal news, and participate in community building activities. This meeting provided a platform for students and teachers to get to know one another. Both studies reported increased closeness in STR after the intervention. Rimm-Kaufman and Chiu (2007) also reported improved reading, writing, and math scores as well as less anxious-fearful behavior in students. Baroody and

colleagues (2014) reported that the primary effect of the Responsive Classroom intervention was due to the morning meeting strategy.

Discussion

The purpose of this systematic literature review was to identify experimental, quasi-experimental, and SCD intervention studies that measured STR for student and teachers in K–12th grade and to identify strategies that improved the STR. There were 14 studies that met inclusion criteria and were synthesized for this systematic literature review. From this synthesis, we were able to draw some conclusions about representational models, the measures, students' placement, teacher involvement, and the need for future intervention research.

The studies reviewed in this systematic literature review reported findings of decreased stress and disruptive behavior in the STR, as well as, increased closeness in the STR, and improved academic outcomes for students. This is consistent with the correlational literature that found that as STR become more positive students' academic and behavior outcomes improve (Burchinal et al., 2002; Engels et al., 2016; Hughes et al., 2008; Murray & Greenberg, 2001; Pianta & Stuhlman, 2004).

Based on Developmental Systems Theory, Pianta (1999) the representational model that teachers and students bring with them is one component of STR where interventions can focus to change STR. This literature review found that changing teachers and students representational model was associated with decreased conflict in the STR as well as increased closeness in the STR (Leff et al., 2016; O'Connor et al., 2012; Spilt et al., 2012; Thompson, 2014). A persons' representational model (e.g., their beliefs, memories, and ideas about relationships) affects how they view current relationships. For example if a teacher attended a very strict and authoritarian school and had relationships with teachers where the teacher was dominate and the students were

expected to be submissive the teacher may have a representational model about him/herself that says he/she should be an authoritarian and that students should be submissive (Pianta, 1999). If the teacher has students in the classroom who have behavior difficulties, the teacher may not feel comfortable stepping back, ignoring, or redirecting. Teaching a teacher with this representational model de-escalation strategies might not be effective until the teacher changed his or her representational models about children with behavior difficulties. The teacher would need a better understanding of the child's developmental and social needs (Pianta, 1999). Strategies must be implemented to change this representational model, and then once the teacher is open to learning de-escalation strategies, they can be implemented. Changing the representational model of student and teachers are both important, but as the more mature party, much of this burden falls on the teacher (Pianta, 1999; Spilt et al., 2012).

The way students and teachers exchange information is another component of STR explained by Developmental Systems Theory (Pianta, 1999) where interventions can help improve the STR. Several of the strategies mentioned in this literature review used the daily report card strategy (Fabiano et al., 2010; Mautone et al., 2012; Thompson, 2014; Tsai & Cheney, 2012). Using daily report cards was a strategy that incorporated direct student intervention, praise and positive feedback, increased one-to-one time, and parent involvement. Students meet with an adult daily to review and develop goals for the day. The goals were written on the daily report card, which the student carried with them throughout the day, and teachers regularly marked the students' progress providing feedback, usually at the end of a subject or class period. As the teachers marked the daily report card and throughout the class period, teachers encouraged the student to work toward their goal and praised their progress. At the end of the day, the student met with the adult mentor again and reviewed their progress for

the day and adjusted to the goals for the next day. The daily report card was then often sent home for the student's parent to review with the student and sign. The three studies that included the praise and encouragement aspect of this intervention all showed improved STR (Mautone et al., 2012; Thompson, 2014; Tsai & Cheney, 2012) and students in all four intervention studies decreased their disruptive behaviors.

All but two of the studies in this systematic literature review reported only the teacher's perception of the STR quality (Anderson et al., 2011; Tsai & Cheney, 2012). Students' perspectives are important and should be measured, but this was more difficult in the studies in this systematic review because most of them were conducted with kindergarten through third grade students where it was more challenging to collect survey data. This highlights the importance of conducting intervention studies on STR with older students where the students' perception of the STR can be measured. In their meta-analysis, Roorda and colleagues (2011) found that positive STR actually had higher effects on middle and high school students than on students in elementary school for both engagement and academic outcomes. The only study in this systematic review that was conducted with students in middle or high school was a dialogue journaling intervention (Anderson et al., 2011). This study was a SCD study and had mixed results but both students improved the number of positive responses and interactions with the teacher. More research is need to determine if interventions with middle and high school students can help improve their perspective of the STR and in turn improve their academic, social and or behavior outcomes. Correlational research suggests that as students' perception of the STR becomes more positive the students' academic, social, and behavioral outcomes improve (De Wit, Karioja, & Rye, 2010; Engels et al., 2016; Hughes et al., 2008; Murray & Greenberg, 2001; Pianta & Stuhlman, 2004). In this systematic review, the only study that

reported improved students' perspective of the STR (Thompson, 2014) found that students who perceived their teachers to care about them demonstrated less disruptive behavior as well as improved social competence and authority acceptance.

As mentioned above, all of the interventions with the exception of one SCD study involving two 8th grade students (Anderson et al., 2011) were conducted in elementary schools. In addition, only 17 of the 2,044 (< 1%) participants in these studies were in a placement other than a general education classrooms. One study required student to be receiving special education services and 17 of the students in that study were in a special education classroom (Fabiano et al., 2010). Even though only one study included students in classrooms outside of the general education classroom, 10 of the 14 studies included only students who had behavior difficulties. This focus on students with behavior difficulties is important because even more than their typically developing peers, students with behavior difficulties have better academic, behavior and social emotional outcomes (Capern & Hammond; 2014; Mihalas, Morse, Allsopp & McHatton, 2009; Murray & Malmgren, 2005), improved engagement, fewer office discipline referrals, and fewer suspensions (Decker et al., 2007) when they perceive their relationship with their teacher to be caring, trusting, respectful, have low degrees of conflict, where they communicate, and know the teacher personally (Baker, Grant & Morlock, 2008; Capern & Hammond, 2014; Mihalas et al., 2009).

More intervention studies on STR need to focus on populations not served in traditional classrooms. None of the studies in this review was conducted in alternative settings. Research suggests that students with behavior difficulties are more likely to be educated outside the general education classroom in more restrictive alternative education settings (AES) as compared to their typical peers (Becker, 2010; Carver, Lewis, & Tice, 2010; Foley & Pang, 2006; Gagnon

& Barber, 2015). In a national survey, half of the school districts surveyed reported that disruptive behavior was a qualifying reason to educate a student in an AES (Carver et al., 2010). A disproportionate number of students who frequently demonstrate disruptive behavior are educated in AES (Becker, 2010; Carver et al., 2010). Fifty present of students educated in AES have behavior difficulties (Foley & Pang, 2006; Gagnon & Barber, 2015). For this reason, AES often focus on remediating behavior problems that contribute to students lack of success in traditional schools (Lehr, Moreau, Lange, & Lanners, 2004). Many of these students are often two years behind their peers without behavior difficulties in math and reading and are more likely to drop out of high school (Ruzzi & Kraemer, 2006). Fortunately, improving STR for students with behavior difficulties can lead to improved academic, social, and behavior success in school (Capern & Hammond; 2014; Mihalas, Morse, Allsopp & McHatton, 2009; Murray & Malmgren, 2005) which can help these students return to their traditional school and increases their chances of graduating from high school (Wilkerson, Afacan, Perzigian, Justin, & Lequia, 2016).

Five of the studies in this systematic review of interventions implemented to improve STR even though teachers did not implement the interventions (Leff et al., 2016; Mautone et al., 2012; Ray, 2007; Ray et al., 2008; Thompson, 2014). Although teachers are one of the main participants in the STR, counselors and therapists implemented these interventions to improve STR quality. The primary focus of these interventions was to change students' behavior or representational model in order to improve the STR. All five of these studies were successful in improving some aspect of the STR, however it might have been more authentic had teachers been more involved in the interventions.

With the exception of one of the daily report card interventions (Fabiano et al., 2010), all of the interventions in this systematic review increased one or more aspects of STR quality. However, there have been thousands of correlational studies conducted examining the relationship of student teacher relationships and students' academic, behavior and social outcomes (e.g., Becker, 2010; Decker, Dona, & Christenson, 2007; Fisher, Reynolds, & Sheehan, 2016; Henricsson & Rydell, 2004; Morrison & Bratton, 2010; O'Connor et al., 2012). It is important for teachers to know that positive STR that are more caring and have less conflict improve students academic, behavior and social outcomes. This systematic literature review identified nine strategies that improved these aspects of the STR; (a) specific praise and positive feedback, (b) direct student intervention, (c) de-escalation, (d) increased one-to-one time, (e) helping students change their representational models, (f) adjusting the teachers representational models, (g) tangible reinforcement, (h) parent involvement, and (i) morning meetings (see Table 1.3). It is important that they have a toolbox of interventions and strategies that they can use to make their relationships with their students more positive. Currently, there is a need for additional interventions studies involving a variety of populations to give teachers specific interventions that they can use to improve STR.

Limitations and Future Research

This literature review has some limitations. First, this review only included studies where the terms implementation or intervention were included in the title or abstract to eliminate nonintervention studies. It is potentially possible that studies that involved STR were not included because of this criterion. In addition, this literature review did not include dissertations, national center reports, or state agency studies. This literature review only used peer-reviewed

articles. Grey literature was not used thus some studies may have been left out of this literature review. Future studies should consider using grey literature.

Future research should replicate the intervention findings. Correlational studies provide a clear picture of why we need strategies to improve STR for students. However, only the Responsive Classroom intervention (Baroody et al., 2014; Rimm-Kaufman & Chiu, 2007) was examined in more than one study. Even though most of these studies were large randomized control studies, they need to be replicated to increase generalizability. In addition to replicating intervention studies in this review, future research should include student report measures as well as teacher report. This is necessary because student perspective of STR is correlated to positive student outcomes (Decker et al., 2007).

Future research also needs to expand intervention studies on STR to middle and high school students. This is not only important because positive student relationships are as important in middle and high school as in elementary school (Roorda et al., 2011), it will also make student report of STR quality more feasible. Improved academic, social emotional and behavior outcomes have been correlated to improved student perception of the STR (Murray & Greenberg, 2001; Pianta & Stuhlman, 2004).

Finally future researchers should consider conducting intervention studies with students with disabilities especially those who are not educated in the general education classroom. Conflict in STR has a more negative effect on the academic achievement and engagement of students with disabilities than on their non-disabled peers. Also, students with behavior difficulties are more likely to experience conflict and low feelings of closeness in their STR (Birch & Ladd, 1998; Howes, 2000) and many of these students are educated in more restrictive

alternative settings (Baker, Clark, Maier, & Viger, 2008; Foley & Pang, 2006; Gagnon & Barber, 2015).

Table 1.1

Student-teacher Relationships Intervention Studies

Study	Intervention and Duration	Participants (*N*; disability; grade; age)	Purpose	Research design	Dependent variable(s)	Measure of STR/Teacher or Student Report	Results
Anderson, Nelson, Richardson, Webb, & Young, (2011)	Dialogue Journaling 23 days	Two eighth grade boys with high rates of problem behavior	To facilitate a relationship between the teacher and the student through dialogue journaling to improve students classroom behavior.	SCD	Student positive responses to the teacher, positive interactions initiated toward the teacher, failure to respond or negative responses to the teacher, students' perception of the student-teacher relationship.	Quality of the student/teacher relationship scale (Davis, 2001) Student Report	Students improved on the positive responses to and positive interactions initiated toward the teacher. One student improve on negative responses to the teacher and there was no improvement on the quality of STR
Baroody, Rimm-Kaufman, Larsen, &Curby (2014)	Responsive Classroom (RC) teacher training 8 months	63 fifth grade teachers and 387 fifth grade students	To examine the link between RC approach and STR quality, Then to investigate the role of fidelity.	RCT	Responsive Classroom practices, STR	Student Teacher Relationship Scale (Pianta, 2001) Teacher Report	Training in the RC approach increased teachers' use of RC practices. These practices, namely morning meeting, increased the teachers perception of closeness in the relationship
Eisenhower, Taylor, & Baker (2016)	Starting Strong in Kindergarten 3 months	97 families of kindergarteners with high levels of behavior problems and 33 teachers.	Determine the effect of Starting Strong on reducing behavior problem and improving student-teacher relationships and parent involvement.	RCT	Parent engagement, teacher perspective of student-teacher relationship, student problem behavior	Student Teacher Relationship Scale (Pianta, 2001) Teacher Report	The intervention had an overall positive effect on teacher and parent reported student behavior. Students with lower pretest scores on STR quality had higher posttest STR quality scores than the control group.
Fabiano et al., (2010)	Daily Report Cards 7 months	63 children with ADHD in grades 1 – 6	To investigate the effectiveness of the DRC as a mechanism for enhancing the utility of IEPs and the outcomes of children with ADHD in special education settings.	RCT	Respect for others, obey adults, work quietly, use materials and possessions appropriately, stay in assigned seat or area, raise your hand, stay on-task. Academic achievement for both reading and math. ADHD, ODD and CD symptoms, STR, and social validity	Student Teacher Relationship Scale (Pianta, 2001) Teacher Report	The DRC group improved on frequency of rule valuations observed in the classroom compared to the BAU Group. There was a significant effect of the DRC intervention on teacher ratings of ODD/CD. There was a sig effect on Academic productivity, IEP goal attainment. There was no sig difference between groups on STR.
Kirkhaug, Drugli, Handegard, Lydersen, Asheim & Fossum (2016)	Incredible Years Teacher Classroom Management Training	83 students in grades 1-3 with disruptive behavior	To assess whether the IY-TCM program, provided as a universal stand-alone program improved behavior, social competence,	Quasi-experimental pre-post test	Externalizing problems, Internalizing problems, Social skills, academic performance and STR	Student Teacher Relationship Scale (Pianta, 2001) Teacher Report	There were statistically significant differences in the change from baseline to follow-up between the two conditions in teacher-reported student teacher conflicts and academic performance. No

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	Program 3 – 4 weeks		academic performance and improved student-teacher relationship.				statistically significant differences between the conditions were found in externalizing problems, social skills, internalizing problems and closeness with the teacher.
Leff, Waasdorp & Paskewich (2016)	Friends 2 Friends 20 pullout sessions and 10 classroom sessions	665 students with relationally aggressive behavior and their pro-social role models in grades 3-6.	To determine if students in F2F classrooms demonstrate higher levels of teacher closeness and lower levels of teacher conflict than similar students in the control group.	Quasi-experimental pre post test	Pro-social behaviors, Aggressive and disruptive behaviors, closeness and conflict in the STR.	Student Teacher Relationship Scale (Pianta, 2001) Teacher Report	Friend 2 Friend resulted in higher scores on friendship and teacher closeness for the intervention group. Males in the intervention group had lower rates of rumor spreading, ODD behaviors, fighting and conflicts with the teacher.
Mautone, Marshall, Sharman, Eiraldi, Jawad, & Power (2012)	Family-School Success – Early Elementary 12 weekly sessions	53 students with ADHD in Kindergarten and 1st grade	To describe the development and findings of Family-School Success—Early Elementary (FSSEE) for young children with ADHD	RCT	Intervention acceptability, family involvement in education, parenting practices, child's functioning in the family and school (including TSR).	Student Teacher Relationship Scale (Pianta, 2001) Teacher Report	There were no significant differences between FSS-EE and control group on family involvement in education or child functioning in the family. On the Negative/Ineffective Discipline factor FSS was superior only for children on medication. FSS-EE was superior to on teacher ratings of ADHD and ODD symptoms and on STR quality and family Do skills.
O'Conner, McCormick, Cappella, & McClowry (2014)	INSIGHTS 2 years	435 low-income kindergarten and 1st grade students and their parents and 122 teachers.	To examine the efficacy of INSIGHTS in supporting the behaviors and academic engagement of children in urban, low-income schools during kindergarten and first grade.	RCT	Child temperament, behavior problems, classroom engagement and off task behavior, TSR quality	Student Teacher Relationship Scale (Pianta, 2001) Teacher Report	The INSIGHTS intervention reduced behavior problems, and off-task behavior and increased behavior engagement of student with high maintenance temperaments. These reductions were partially mediated through improvements in STR quality.
Ray (2007)	Child Centered Play Therapy and teacher consultation 10 weeks	93 elementary school students exhibiting emotional and behavioral difficulties and 59 teachers	To examine effects of Child Center Play Therapy and teacher consultation on the levels of stress in the STR	RCT	Stress in STR	Index of Teaching Stress (Abidin et al., 2004) Teacher Report	There was a significant decline in total stress across all three-treatment conditions. The effect size of .18 for change over time.

Ray, Henson, Schottelkorb, Brown, & Muro (2008)	Child Centered Play Therapy 10 weeks	58 elementary school students with emotional and behavioral difficulties	To examine the effects of both short and long term Child-Centered Play Therapy on Teacher student relationship stress	RCT	Levels of stress that teachers experience from the relationship with the student	Index of Teaching Stress (Abidin et al., 2004) Teacher Report	Both the short and long term groups demonstrated significantly improve STR stress fro pre- post intervention. Short-term group demonstrated statistical significant larger effects in overall total stress.
Rimm-Kaufman & Chiu (2007)	Responsive Classroom (RC) 2 years	62 teachers and 157 students in grades 1-4	To examine the effectiveness of the RC approach on improving students' academic and social growth and how this relationship is moderated by sociaodemographic risks.	Quasi-experimental, longitudinal 3 year study	Teacher implementation of RC approach, academic grades, STR, Social skills, classroom relationships with peers	Student Teacher Relationship Scale (Pianta, 2001) Teacher Report	Teachers who used RC practices had students with higher scored in reading, written language, math, closeness in STR, assertion, and pro-social behaviors with peers. The students had less anxious-fearful behavior.
Spilt, Koomen, Thijs, & Van Der Leiij (2012)	Relationship-focused reflection 5 months	64 Dutch kindergarteners with high levels of externalizing behaviors and 32 kindergarten teachers.	To promote teacher's relationships with behaviorally at-risk children	RCT	Teacher's perception of student-teacher relationship, behavior, interactions between teacher and students, teachers' efficacy.	Student Teacher Relationship Scale (Pianta, 2001) Teacher Report	Improve closeness in the STR for about half of the teacher-child dyads. Teachers with high efficacy beliefs reported more declines in conflict in the STR.
Thompson (2014)	Self-management training and regulation strategy (STARS) 6 weeks	108 students with high levels of disruptive behavior in grades 4-5 and 42 teachers	To examine the effects of STARS on disruptive behavior, authority acceptance, social competency, and STR	RCT	Disruptive behavior, authority acceptance, social competency, student autonomy and STR	Student Teacher Relationship Scale (Pianta, 2001) Teacher Report	STARS students improved in disruptive behavior, social competence, authority acceptance and STR over the control group
Tsai, & Cheney (2012)	Check, Connect and Expect 2 years	103 elementary school students with internalizing and or externalizing behaviors, 111 teacher and 9 coaches.	To examine the effects of Check, Connect and Expect on student-teacher relationship, problem behaviors and academic outcomes	Quasi-experimental pre posttest	Student perception of student-teacher relationship, teacher perception of student-teacher relationship, problem behaviors, social skills, academic competence	Teacher-Student Relationship Questionnaire (Li et al., 2012) Teacher Report ESSP-Student, Teachers Who Care subscale (Bowen, 2011) Student Report	Student-teacher relationships had a major influence on behavior outcomes, academic competence, and school engagement.

Note. SCD = Single Case Design, STR = Student Teacher Relationship, RCT = Random Control Trials, RC = Responsive Classroom, DRC = Daily Report Cards, ADHD = Attention Deficit Hyperactivity Disorder, ODD = Oppositional Defiant Disorder, CD = Conduct Disorder, BAU = Business As Usual, IY-TCM = Incredible Years Teacher Classroom Management, FSSEE = Family-School Success – Early Elementary

Table 1.2

Strategies in Each Study

Studies	Strategies
Anderson, Nelson, Richardson, Webb, & Young, (2011)	Specific praise and positive feedback Direct Student Intervention One to one interactions
Baroody, Rimm-Kaufman, Larsen, &Curby (2014)	Specific praise and positive feedback De-escalate behavior Morning Meeting
Eisenhower, Taylor, & Baker (2016)	Specific praise and positive feedback Tangible reinforcement Parent Involvement Changing teachers representational models One-to-one interactions
Fabiano et al., (2010)	Direct Student Intervention
Kirkhaug, Drugli, Handegard, Lydersen, Asheim & Fossum (2016)	Specific praise and positive feedback De-escalate behavior Tangible reinforcement
Leff, Waasdorp & Paskewich (2016)	Direct Student Intervention Changing students representational model
Mautone, Marshall, Sharman, Eiraldi, Jawad, & Power (2012)	Specific praise and positive feedback Direct Student Intervention Tangible reinforcement Parent Involvement
O'Conner, McCormick, Cappella, & McClowry (2014)	Specific praise and positive feedback Direct Student Intervention De-escalate behavior Changing students representational model Changing teachers representational models

Ray (2007)	Specific praise and positive feedback Direct Student Intervention
Ray, Henson, Schottelkorb, Brown, & Muro (2008)	Specific praise and positive feedback Direct Student Intervention
Rimm-Kaufman & Chiu (2007)	Specific praise and positive feedback De-escalate behavior Morning meeting
Spilt, Koomen, Thijs, & Van Der Leiij (2012)	Changing teachers representational models
Thompson (2014)	Specific praise and positive feedback Direct Student Intervention Changing students representational model
Tsai, & Cheney (2012)	Specific praise and positive feedback

Table 1.3

Strategies That Improved STR

Dependent Variables	Strategies
Strategies that increased closeness	Specific praise and positive feedback
	Intervene directly to change students' behavior
	De-escalate behavior
	One-to-one interactions
	Changing students representational model
	Daily Report Cards
	Morning Meeting
	Changing teachers representational models
Strategies that decreased conflict	Specific praise and positive feedback
	De-escalate behavior
	Positive reinforcement
Strategies to improve overall STR quality	Intervene directly to change students' behavior
	De-escalate behavior
	One-to-one interactions
	Changing students representational model
	Daily Report Cards
	Positive reinforcement
	Parent Involvement
	Changing teachers representational models
Strategies that improved academic outcomes	Specific praise and positive feedback
	De-escalate behavior
	Morning Meeting
Strategies that decreased disruptive behavior	Specific praise and positive feedback
	Intervene directly to change students' behavior
	One-to-one interactions
	Changing students representational model
	Daily Report Cards
	Parent involvement
	Changing Teachers Representational models
Strategies that decreased teacher stress	Intervene directly to change students' behavior

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2   IMPROVING STUDENT-TEACHER RELATIONSHIPS WITH DIALOGUE JOURNALING IN A THERAPEUTIC DAY SCHOOL: A SINGLE CASE DESIGN STUDY

Students-teacher relationships

Positive student-teacher relationships (STR) are characterized by high levels of closeness and low levels of conflict and dependency. Maintaining positive STR have been correlated to student's academic, behavior and social success in school (Burchinal et al., 2002; Engels et al., 2016; Hughes et al., 2008; Murray & Malmgren, 2005; Pianta & Stuhlman, 2004). High levels of closeness in the STR are characterized by emotionally positive interactions where the teacher and student interact in warm and supportive ways (Pianta & Stuhlman, 2004). They communicate openly with encouragement, praise, and support. In addition, the students feel safe going to the teacher with problems or when they are in trouble (Pianta, 1999; Pianta et al., 2003). Research suggests that as the level of closeness in the STR increases there will be an increase in positive interactions between the student and teacher, including teacher praise, positive feedback and encouragement (Pianta, 1999). Conflict in the STR is characterized by student disruptive and off-task behavior, negative interactions between the teacher and the student and ineffective behavior management (Pianta, 1999; Pianta et al., 2003). Positive STR are important for students success in school (Burchinal et al., 2002; Hughes et al., 2008; Pianta & Stuhlman, 2004). Students who perceive their relationships with their teacher as close with low levels of conflict have better social and emotional outcomes, demonstrate less disruptive behavior, higher levels of engagement, improved attendance, and positive academic outcomes (Engels et al., 2016; Murray & Greenberg, 2001; Pianta & Stuhlman, 2004).

Like their typically developing peers, students with behavior difficulties who perceive their relationship with the teacher to be positive have better academic, behavior and social outcomes (Baker, Grant, & Morlock, 2008; Mihalas et al., 2008; Murray & Malmgren, 2005) as well as improved engagement, fewer office discipline referrals, and fewer suspensions (Decker et al., 2007). However, students with behavior difficulties, such as students with emotional and behavior disorders (EBD), learning disabilities (LD) and attention deficit disorder (ADD), often have difficulty with forming STR that are high in closeness and low in conflict (Decker et al., 2007; Murray & Greenberg, 2001; Sutherland & Oswald, 2005). Students with behavior difficulties often have relationships with their teachers that are high in conflict (Birch & Ladd, 1998; Howes, 2000; Sutherland & Oswald, 2005). According to Baker and colleagues, both the level of caring and the amount of conflict in the STR predict student academic, behavior, and social outcomes. Sutherland and Oswald point out that not only is the child influenced by the interactions with the teacher, but the teacher is also influenced by the interactions with the student. This can be a problem for students with behavior difficulties, since teachers tend to spend substantially less time instructing students who demonstrate disruptive behavior and tend to interact with these students in ways that increase the likelihood of further disengagement (neglect and coercion; Sutherland & Oswald, 2005). This can become a negative downward spiral making it even more difficult for students and teachers to form the positive STR that are vital for students' success in school.

Disruptive Behavior

Students who demonstrate disruptive behavior in the classroom often have relationships with their teachers characterized by high levels of conflict, neglect and coercion (Birch & Ladd, 1998; Howes, 2000; Sutherland & Oswald, 2005). These negative relationships with the teacher

can have negative impacts on students' academic, behavior, and social outcomes (Mihalas et al., 2008; Murray & Malmgren, 2005). Because of the high levels of disruptive behavior, some students with behavior difficulties are educated in alternative schools (Becker, 2010; Carver et al., 2010; Foley & Pang, 2006; Wilkerson et al., 2016). Foley and Pang (2006) as well as Gagnon and Barber (2015) reported that about 50% of students are placed in alternative schools due to behavior difficulties. According to the U.S. Department of Education (2002), alternative schools are public schools that address the needs of students that are not met in traditional schools that provide nontraditional education opportunities. Therapeutic schools are one type of alternative schools which focus primarily on improving students behavior (Brown et al., 2012). Therapeutic schools are alternative schools for students with behavior difficulties who require full time special education services (Brown et al., 2012). Students with behavior difficulties who frequently demonstrate disruptive behavior, are often removed from their traditional schools and educated in therapeutic alternative schools (Carver et al., 2010). A national survey reported that more than half of school districts surveyed reported that students could be enrolled in therapeutic alternative school due solely to disruptive behavior (Carver et al., 2010). These schools have the potential to meet student's academic, behavioral, and social/emotional needs by providing smaller class sizes, supportive environments, student-centered curricula, and increased student decision-making opportunities.

Research suggests that students with behavior difficulties are more successful in school when they have relationships with teachers who are caring, trusting, respectful, have low degrees of conflict, and when they communicate with the teacher and the teacher knows them personally (Baker, Grant, et al., 2008; Capern & Hammond, 2014; Mihalas et al., 2008). One intervention that might improve communication and help the students and teachers know each other

personally is dialogue journaling (DJ; Regan et al., 2005). DJ provides a platform for students and teachers to form more positive STR as they communicate through positive written conversations that allow the teacher and students to get to know each other personally and allows space for both teacher and students to express genuine concern for one another.

Dialogue Journaling

DJ is an intervention that allows teachers and student to communicate with each other and thereby potentially strengthening the STR (Anderson et al., 2011; Grande, 2008; Kluwin & Kelly, 1991; Regan et al., 2005; Rodliyah, 2016; Werderich, 2006). DJ is non-graded, non-threatening, ongoing, personal, relevant, and interactive written conversation between the teacher and student (Hail, George, & Hail, 2013; Peyton, 2000). The teacher is an equal participant in a written conversation with the student without critiquing or correcting what the student writes (Staton, 1985). In DJ, the student writes to the teacher on a regular basis and the teacher regularly responds. The teacher and student may ask each other questions, start a new topic, or respond to questions and comments. In addition, DJ provides the teacher, as the more proficient writer, the opportunity to demonstrate quality-writing skills (Hail et al., 2013; Werderich, 2006).

DJ is based on Vygotsky's Social Development Theory (Vygotsky, 1978). Social Development Theory emphasizes the social aspects of learning and the importance of students sharing their thoughts through authentic conversations (Rueda, 1992). In DJ, these aspects of Social Development Theory are present as students and teachers engage in authentic communication as a means of helping students gain a deeper understanding of a topic and build social relationships (Hail et al., 2013). Further, DJ has an interactive focus that gives students the opportunity to practice social skills as well as their writing skills (Hail et al., 2013).

Dialogue Journaling for Student Teacher Relationships

DJ provides a potential platform for students and teachers to form positive STR. Anderson and colleagues (2011) conducted a single case study with two 8th grade boys with EBD. In this study, the students wrote in a dialogue journal where the teacher and the researcher used direct observation to record the students' positive and negative responses to the teacher as well as positive and negative interactions with the teacher initiated by the student. The results of this study showed that when the students were dialoguing with the teacher, the number of positive responses and interactions with the teacher improved. One of the students decreased their negative responses and negative interactions, but the other did not. They found that students responded better when the comments from the teacher were positive, encouraging, relevant to student's interests, and discussed personal experiences with the students.

Grande (2008) conducted a qualitative study with 30 pre-service teachers and 30 students with mild disabilities (i.e. LD, ADD, Asperger's syndrome) in the classrooms where the pre-service teachers were completing their field experience requirements. The pre-service teachers and the students wrote back and forth at least once a week for a semester. The pre-service teachers as well as their collaborating teacher noted that DJ was helpful in developing relationships between the pre-service teacher and the students. They noted that these relationships were stronger when the student and pre-service teacher wrote often and the focus remained on the student. DJ is a strategy that potentially can improve student writing skills as well as teacher student relationships (Hail et al., 2013; Naba'h, 2013; Regan et al., 2005). This is important since students with behavior difficulties often have more difficulty than their typical peers with writing (Mastropieri & Scruggs, 2014; Sreckovic, Common, Knowles, & Lane, 2014).

Dialogue Journaling for Writing

Research findings among students with behavior difficulties suggest that DJ improves

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students' attention to task, writing quality, and writing fluency (MacArthur, 1998, Regan et al.,

2005). Because the focus of the DJ is on the students and topics they are familiar with, and not

on grammar and form, students with disabilities may be more motivated to write in dialogue

journals than in other writing assignments (Gaustad & Messenheimer-Young, 1991). Regan and

colleagues (2005) conducted a single case multiple baseline across participants study to evaluate

the effectiveness of DJ for improving students' attention while writing, length of student writing,

and quality of student writing. This study was conducted with five students in the 6th grade. All 5

students increased their attention to task and writing quality, and 4 of the 5 students increased

their total number of words written. Improving writing skills with DJ is important for all

students, but it is even more critical for students with disabilities who are often significantly

behind their nondisabled peers in writing (Ennis, Harris, Lane, & Mason, 2014; Gage, Wilson, &

MacSuga-Gage, 2014; Mastropieri & Scruggs, 2014; Sreckovic, Common, Knowles, & Lane,

2014).

In addition to these benefits to the students, DJ may be beneficial to teachers because it

gives them an insight to what students are thinking as well as a deeper understanding of the

students writing ability (Hail et al., 2013). DJ provides teachers a means to help students to

clarify meaning, see another person's point of view, respond to questions, ask questions, make

comments, develop social skills, and exchange ideas (Hail et al., 2013).

DJ should be implemented over a substantial length of time. The more opportunities

students get to respond the more potential impact it has on improved STR (Anderson et al., 2011;

Grande, 2008; Kluwin & Kelly, 1991) and writing skills (Kluwin & Kelly, 1991; Nassaji &

Cumming, 2000). Research suggests that as students use DJ with their teachers, disruptive

behavior decreases (Regan et al., 2005) and positive interactions with the teachers increase

(Anderson et al., 2011).

Purpose

The primary purpose of this study was to determine the effect DJ has on STR as measured by student disruptive behaviors and teacher praise. The focus was on students with EBD in a therapeutic alternative middle school (Anderson et al., 2011; Regan et al, 2005; Rodliyah, 2016; Werderich, 2006). The secondary purpose was to determine the effect of DJ on students' writing skills (Hail et al., 2013; Naba'h, 2013). The following research questions were asked: (a) Is there a functional relation between the use of DJ and disruptive behavior of middle school students with EBD in a therapeutic school? (b) Is there a functional relation between the use of DJ and teacher praise directed toward middle school students with EBD from their teachers in a therapeutic school? (c) Is there a functional relation between the use of DJ and the length and quality of writing of middle school students with EBD in a therapeutic school? (d) Do middle school students with EBD in a therapeutic school and their teachers who participate in DJ perceive their relationships with each other to be of higher quality? Based on previous research, it was hypothesized that DJ would have a positive effect on decreasing disruptive behavior, increasing teacher praise, and increasing students and teachers perspective of the STR (Anderson et al., 2011; Regan et al, 2005; Rodliyah, 2016; Werderich, 2006) as well as, improving writing outcomes (Hail et al., 2013; Naba'h, 2013) of students with behavior difficulties in therapeutic schools.

Method

Setting

This study was conducted in a K-12 therapeutic school for students with behavioral difficulties in an urban district in the southeastern United States. The school served

approximately 100 students and nearly 100% of the students were African American. The school

provided comprehensive educational and therapeutic support services to students with

disabilities, ages 3–21, who require full time special education services for behavioral

difficulties. All students had an Individualized Education Plan. This study took place within the

two middle school classrooms. The middle school had approximately 16 students enrolled. A

typical classroom had eight students, a teacher, and a paraprofessional. There was a school

counselor, social worker, psychologist, and a crisis intervention team on campus.

Participants

Students. For inclusion in this study, student participants needed to (a) be in middle

school; (b) write a complete sentence (a group of related words that begin with a capital letter,

ends with a punctuation mark and contains a subject and verb) independently; (c) have an

Individualized Education Plan with an eligibility of EBD, LD or other health impaired (ADD);

(d) have at least one externalizing behavior goal in their IEP; (e) demonstrate at least five

disruptive behaviors in a 15 minute observation; and (f) score below 80% on the Gehlbach's

Teacher-student Relationship Positivity Scale (TSRPS). Permission slips were sent home and

returned for six participants. Six participants were desired for this study based on the *What

Works Clearinghouse* standards for single case design studies (Kratochwill et al., 2013).

Kratochill et al. indicated that three iterations of an intervention across time are required to meet

standards. Six students were recruited instead of three because students who attend therapeutic

schools often have poor attendance (Foley & Pang, 2006; Lehr et al., 2009; Wilkerson et al.,

2016) and often demonstrate sporadic behavior patterns. Two of the students did not receive the

intervention because they were absent for more than half of the study days and the study had to

end due to testing before we could get stable baseline for those two students. One student was absent 10 of the 16 days and the other student was absent for seven of the 16 days.

Demographic data were collected on the four remaining students (see Table 2.1). The four students who received intervention were three African American males and one African American female. All four students had an EBD eligibility for special education.

Student One, Keantay, was instructed to work on the computer during the observation time in baseline, intervention, and maintenance. However, according to observation data, Keantay was often out of his seat and walking around the room. When he was in his seat, he often sang aloud to music he was listening to on his headphones, arguing with the teacher about him watching YouTube videos, or talking to his neighbor. During two observations he became angry and cursed at the teacher, paraprofessional, and other students and left class without permission. During most classroom observations, Keantay appeared to be happy and social.

Student Two, Brendon, was usually instructed to work on the computer or on math worksheets during observations. During classroom observations, Brendon had days where he worked quietly, had appropriate conversations with the teacher and remained in his seat. During other classroom observations, Brendon was out of his seat, yelling at the teacher and other students, throwing things, and on three occasions, he left class without permission. On one of the days he was out of the classroom without permission he broke a window and was suspended from school for two days.

Student Three, Cailyn, was usually instructed to work on math on the computer or complete writing assignments during classroom observations. During classroom observations Cailyn often sat at a table in the back of the room by herself and colored or wrote, but rarely worked on the computer. She would also often sit with her head down. The disruptive behavior

that she was observed engaging in included, tapping on the desk, throwing pencils, hitting

students, screaming, threatening other students, walking around the room and talking to other

students, arguing with peers, and on three occasions she walked out of class without permission.

Student Four, Jimar was usually instructed to work on math worksheets or on the

computer during the observation period. During classroom observations, it was observed that

Jimar often worked quietly on the compute in the empty classroom next to his classroom under

paraprofessional observation. He was observed threatening the paraprofessional, yelling and

cursing at students as well as adults, talking to peers, arguing with adults, getting into the

teacher's desk without permission, hitting students, throwing things, and property destruction.

During four observations, he left the classroom without permission.

Teachers. Both middle school teachers agreed to participate in the study and allowed 15

minutes of daily class time for the students to write in their journals. They also agreed to respond

to the students' journal entries before the next journal writing session. Each teacher had two

students return permission slips and participated in the intervention. Both teachers were certified

in special education. Demographic data were collected on both teachers (see Table 2.2).

Teacher One was an African American female with a Specialist degree in special

education. She had worked in the AES for her entire 5-year career. She had taught both middle

and high school. During the observation period, Teacher One spent most of her time working on

her computer at her desk. One time she taught a math lesson to a small group of students and

during two other observations, she worked at her desk with a student one-on-one.

Teacher Two was an African American male with a master's degree and 20 years of

teaching experience. He has spent his entire 20 years at this AES and has taught both middle and

high school. During the classroom observations across baseline, intervention and maintenance,

he spent most of his time working on his computer at his desk. Twice he taught a lesson to the whole class and four times he followed students who left the classroom.

Design

A multiple baseline across participants study (Kazdin, 2011) was conducted concurrently with all students. Multiple baseline across participants was used because it allowed for a demonstration of a functional relation between DJ and disruptive behavior with a small number of students. Once the relationship was established, it was not ethically reversible or removable. Multiple baseline was used instead of multiple probe, because the students were writing everyday as part of the intervention and it was not difficult to collect daily observation data. Multiple probe would have been appropriate if students were being asked to write enough that it would have been fatiguing to probe their writing everyday (McKeown et al., 2016). The *What Works Clearinghouse's* highly rigorous single-case design standards were used for data collection and evaluation (Kratochwill et al., 2013). These standards include: (a) the researcher determined when and how the independent variable conditions changed; (b) interobserver agreement (IOA) data were collected at least once in each phase for at least 33% of sessions with a minimum of 80% agreement; (c) there were at least three attempts to demonstrate an intervention effect at three different points in time; and (d) there were a minimum of six phases with at least five data points in each phase to meet standards. A functional relation was determined through horizontal and vertical visual analysis (Kratochwill et al., 2013).

Independent Measures

Dialogue Journaling. In the DJ, the student wrote notes to the teacher in a composition notebook. The student was given an opportunity to write daily for 15 minutes and the teacher responded with a similar amount of writing. The teacher would respond to the students in the

journal at a time that was convenient for them prior to the next journal writing session. The

teacher and student were instructed to ask each other questions, start a new topic, or respond to

questions and comments (Staton, 1985).

Dependent Measures

      Disruptive Behavior. Disruptive behavior was the outcome used to make phase change

decisions. It was operationally defined as (a) unauthorized out-of-seat behaviors: including any

unauthorized movement within the classroom; (b) disruptive or non-task related noise (e.g.,

humming, tapping pencil, inappropriate demands or questions); (c) inappropriate gestures; (d)

disturbing others, including physical contact with another student, their property, and aggressive

behavior; and (e) talking without the teacher's permission (Radley, Dart, & O'Handley, 2016).

Observation data for disruptive behavior data were collected using duration data collection

(Kennedy, 2005). The data collection period was determined by observing each classroom for a

full school day and identifying the most disruptive academic period in each classroom. In

Teacher One's classroom this was from 10:00 – 11:00 and in Teacher Two's classroom the most

disruptive academic period was from 1:00 – 2:00. Data were collected during a class period that

did not include the journal-writing session in baseline, intervention, and maintenance. Duration

data were collected on each student for 10 minutes. The researcher used a stopwatch and started

the stopwatch when the student demonstrated disruptive behavior and stopped the stopwatch

when the student was not demonstrating disruptive behavior. The total number of seconds the

student engaged in disruptive during the 10-minute data collection period was recorded and

graphed (see Appendix A). There were 600 possible seconds the students could have

demonstrated disruptive behavior during each data collection period. The order in which students

were observed was selected randomly each day. Each student in each class was assigned a

number. Daily the numbers were put into a bag were pulled out of the bag. The order the

numbers came out of the bag was the order in which students were observed. Disruptive behavior

data were collected this way in the baseline, intervention, and maintenance phase at the same

time each day. Generalization data were collected in the same way during a different academic

class period with the same teacher. Disruptive behavior data were graphed for visual analysis and

mean scores and standard deviations were calculated across all students for each phase. In

addition, effect sizes were calculated and reported using non-overlap of all pairs (NAP; Parker &

Vannest, 2009). NAP was determined by comparing pairs of data from different phases. NAP is

the percent of all pairs where treatment phase improved over baseline and ties count as .5

(Pustejovsky, 2015).

   Teacher Praise. Teacher praise was operationally defined as any verbal statement or

gesture from the teacher to the target student or to the target student's group that expresses

approval of an academic task or behavior that was more that an acknowledgement of adequacy

or a correct answer. Examples would be "Great job," "Nice try," "Excellent Job on your

homework!" and non-examples would be "Yes, number 5 is correct," "It is your turn to read."

Frequency counts of teacher praise to the target students was counted and tallied during the same

session as disruptive behavior data collection in baseline, intervention, maintenance, and

generalization through researcher observation (see Appendix B). The teacher was assigned a

number as well as the students. The teacher's number was included in the random selection with

the students' number to determine when during the data collection period teacher praise was

measured. Teacher praise data were graphed for visual analysis and mean scores and standard

deviations were calculated across all students for each phase.

   Writing Length. Writing length was measured for each of the students journal entries

using total words written (TWW; McMaster & Espin, 2007). Based on the directions of AIMSweb, to obtain a TWW score, the researcher counted any letter or group of letters separated by a space as a word, even if the word is misspelled or was a nonsense word (Powell-Smith & Shinn, 2004). Writing length has a positive correlation to writing quality (Kent & Wanzek, 2016). TWW data were graphed for visual analysis and mean scores and standard deviations were reported.

Writing Quality. Writing quality was measured using an analytic rubric indicating the number and quality of elements students were taught to include in each journal entry. These elements were represented by the mnemonic TRADE (Jonsson & Svingby, 2007). The TRADE mnemonic was developed by the researcher to help the students remember to include all of the essential elements of the student response. TRADE stood for: T- Tell the teacher something about yourself, R- respond to the teachers questions; A- Ask the teacher at least one question; D – discuss something new; and E – enhance meaning with at least two creative word choices. The mnemonic was created based on the recommendation of Peyton (2000). The TRADE components rubric was used to measure the inclusion of each element of the TRADE mnemonic (see Appendix C). The questions were: (a) how many times did the student tell the teacher something interesting about him or herself?, (b) respond to the teachers questions, (c) ask the teacher questions, (d) discuss something new, and (e) use words that enhance meaning. All student entries in baseline and intervention were de-identified and then scored so that the scorer was blind to whether the entries were in baseline or intervention. Mean scores and standard deviations were reported.

Daily Rating Scale - Teacher. Daily teachers completed a researcher created Daily Rating Scale. The Daily Rating Scale measured: (a) How much did you enjoy helping the student

learn today? (b) How friendly was the student toward you today? (c) How much did you like the student's personality today? (d) Overall, how much did the student learn from you today? (see Appendix D). Teachers responded using a five point Likert scale 1 = not at all; 2 = slightly; 3 = somewhat; 4 = quite a bit; 5 = a whole lot. There were 20 total points possible per day. The teachers completed this measure daily during baseline, intervention and maintenance. Data were graphed for visual analysis and mean scores, and standard deviations were reported.

 Daily Rating Scale - Students. Students completed a researcher created Daily Rating Scale. The Daily Rating Scale measured: (a) How much did I enjoy learning from my teacher today? (b) How friendly was my teacher toward me today? (c) How motivated were you in your teacher's class today? (d) How much did you like your teacher today? (see Appendix E). The students responded using a five point Likert scale: 1 = not at all; 2 = slightly; 3 = somewhat, 4 = quite a bit; 5 = a whole lot. There were 20 total points possible. In previous research, adolescent student have been successful in identifying their feeling uses a five point Likert scale where the numbers were changed to faces (Gulur et al., 2009; Mellor, McCabe, Ricciardelli, & Ball, 2004). The students marked their answers on the scale by circling, checking, or coloring in the emotion that best described their answer to the questions. The students completed this measure daily during baseline, intervention and maintenance. The data were graphed for visual analysis and mean scores and standard deviations were reported.

 Gehlbach's Teacher-Student Relationships - Teacher. The teacher version of the Gehlbach's Teacher-Student Relationship scale (TSR; Gehlbach, Brinkworth, & Harris, 2012) was administered to both teachers (see Appendix F) pre- and post-intervention. Each teacher completed this assessment for each individual student. The TRS positively scale is a 5 point Likert scale ranging from 1 = not at all, 2 = slightly, 3 = somewhat, 4 = quite a bit, 5 = a

tremendous amount, and consists of nine items that assess how each teachers perceive the STR such as "How friendly is the student toward you?" The reliabilities were $\propto = .86$ pre-, .91 post-, and .72 change. The TSR negativity scale includes the same 5-point Likert scale as the positivity scale and contains five questions such as "How angry does this student make you feel?" The reliabilities for this scale were $\propto = .73$ pre, .74 post, and .24 change indicating strong reliability. The TRS was normed on 30 suburban middle school teachers (Gehlbach et al., 2012). Pre- and post-intervention percentage scores are calculated from raw scores and reported in the results section. There are no standard scores for this assessment so only raw scores and percentage scores are reported.

Gehlbach's Teacher-Student Relationships - Student. The student version of the Gehlbach's Teacher-Student Relationship scale was administered to each student prior to intervention as a screening measure and post intervention as an additional measure of the student's perception of the STR (see Appendix G). The researcher read the questions to each student in a private meeting outside the classroom. The TRS positivity scale consisted of nine items that assess how each student perceived the STR. The reliabilities were $\propto = .93$ pre, .95 post, and .82 change. The TRS was normed on 119 suburban middle school students (Gehlbach et al., 2012). In addition, Gehlbach and colleagues reported that an increase in positive TSR is correlated to improved self-efficacy (Cohen's $d = .58$) and an increase for effort the student expends in class (Cohen's $d = .49$). Pre- and post-intervention percentage scores were calculated from raw scores and reported in the results section. There are no standard scores for this assessment so only raw scores and percentage scores are reported. Pre- and post-text mean scores were compared to determine change in STR.

Demographics. Students' demographic data were collected using a demographic questionnaire (see Appendix H) that was completed by each student. The researchers read the questions and answers to each student in a private meeting outside the classroom. Additionally, the researcher recorded the primary special education eligibility for each student. This information was obtained from the classroom teacher. Each teacher also completed a demographic questionnaire (see Appendix I).

Treatment Fidelity. Fidelity was measured to determine as how well the intervention was implemented as it was designed (Dane & Schneider, 1998).

Adherence Fidelity. Adherence and exposure fidelity were measured. Adherence is the extent to which the components of a program are delivered as prescribed (Dane & Schneider, 1998). The primary researcher created a treatment fidelity instrument to measure teacher adherence to the essential components of DJ (see Appendix J). The primary researcher measured fidelity of the teachers' responses by reading each response and using the checklist to measuring the number of essential components of DJ the teacher included in each response. Teacher One included the essential components of DJ when she responded to the students with 73% fidelity and Teacher Two included the essential components with 70% fidelity. In addition, second researcher used the essential components fidelity checklist to score 39% of the teacher responses with 94% interobserver agreement (IOA).

Exposure Fidelity. Exposure fidelity is an index that includes the number of sessions implemented, the length of each session or the frequency that a program is implemented, sometimes known as dosage. The primary researcher collected exposure data for 30% (seven) of the sessions across all phases to ensure that during each session students were given 15 minutes to write in their journals. This was done by setting a timer when the teacher handed out the

journals and stopping the timer when the teacher asked the students to stop writing. One hundred percent (100%) of the seven sessions observed lasted for exactly 15 minutes. Both teachers set their own timer to time the sessions. In addition, IOA data wwere collected on 43% (three) of the exposure fidelity observations when a second researcher timed the sessions and 100% IOA was achieved.

Interobserver Agreement. IOA data were collected by a second researcher on 44% (11) of all disruptive behavior and teacher praise observations across baseline, intervention, and generalization phases (Brittle & Repp, 1984). First, the primary researcher trained the second researcher on the operational definitions of disruptive behavior and teacher praise as well as the duration and frequency recording sheets. Next, the primary and second researcher collected observation data in the classroom. Then, the two researchers compared the duration and frequency sheets. During training, the primary and second researcher reached 99% IOA for disruptive behavior and 100% for praise, then baseline data collection began. IOA data for duration were calculated by subtracting the difference in the number of seconds each researcher recorded then subtracting that number from the total number of possible seconds (600) and dividing by the total number of seconds possible (600). For example if researcher one recorded 345 seconds of disruptive behavior and the second researcher recorded 350 seconds of disruptive behavior, 345 was subtracted from 350 to get 5 seconds, then 5 seconds was subtracted from the total of 600 seconds to get 595 seconds of agreement. Then, 595 was divided by the total number of possible seconds (600) to get 99% agreement. IOA was recorded for 44% of disruptive behavior data across baseline, intervention, and generalization phases. An IOA of 98% was achieved. IOA for teacher praise was compared point-by-point (Brittle & Repp, 1984) for 44% of observation sessions across baseline, intervention, and generalization. IOA of 100% was

achieved. Next, the first researcher trained the second researcher on how to count the TWW.

They practiced on example writing samples and achieved 100% IOA. Then, after all journal

entries were de-identified, the second researcher counted the words for 30% of the journal entries

to calculate TWW and 100% IOA was achieved. In addition, a second researcher was trained to

score the journal entries used the TRADE rubric on journal entries that were not being scored for

IOA and 100% IOA was reached (see Appendix C). Then, the second researcher used the

TRADE rubric to independently score the last three journal entries in baseline and the last three

journal entries for each student in interventions. The difference in the scores reached by the first

researcher and second researcher were subtracted from the 18 total possible points and then

divided by 18 to reach an IOA of 99%. Finally, the first researcher trained the second researcher

on how to score the Treatment Acceptability Rating Form-Revised (TARF-R), a social validity

measure. Then, the two researchers scored the TARF independently and achieved 100% IOA.

    Social Validity. The TARF-R (Reimers, Wacker, Cooper, & DeRaad, 1992), a 20-

question seven point Likert scale assessment, were administered to teachers to assess social

validity. The TARF-R has an internal consistency of .92 and includes items focusing on problem

severity and understanding of the intervention (Reimers et al., 1992). In addition short private

interviews were conducted with the teachers and students. The teacher's were be asked the

following questions; 1) What is your overall opinion of DJ?, 2) Was it was easy to implement?,

Why or why not?, 3) How did DJ impact your relationship with the students?, and 4) Do you

plan to continue to use the intervention in the future? Why or why not? The students were

interviewed and asked the following about DJ: 1) What is your opinion of DJ?, 2) Do you feel

like your relationship with the teacher changed? If so, how?, 3) Would like to continue DJ with

the teacher? Why or why not?, and 4) Do you prefer DJ or traditional journaling? Why?

Procedures

Approval to conduct research was obtained by the university and school's Institutional Review Board. Consent was obtained from parents and teachers as well as assent from students. The entire class received composition notebooks to use as journals and wrote in their journals for 15 minutes each day, Monday-Friday. Data were only be collected for students with signed consent and assent.

Teacher Training. The day before the first student entered intervention, both teachers attended a training, which lasted about 45 minutes, conducted by the primary researcher. At this training, the teachers were given a copy of the essential components of DJ and the teacher and the researcher reviewed each component and its definition (see Appendix J). The primary researcher then modeled a high quality initial note for the teachers using the essential components of DJ checklist. Next the teachers worked together to create an initial note that contained all of the essential components of DJ. Finally, to ensure mastery, each teacher wrote an initial note that contained all of the essential components of DJ independently. Then, all three of these steps were repeated creating a response to a sample student note. The primary researcher observed the teachers as they worked and was there to provide remediation if it had been necessary, but both teachers achieved mastery by writing a response that contained all of the components of DJ the first time. In addition to the training on the writing, the teachers were instructed to address behavior and other distractions during the data collection session just as they would during any other class period. Once the teachers were trained the first student entered baseline. Procedural fidelity data were collected using a Teacher Training Fidelity Checklist (see Appendix K). The researcher and the teacher both initialed the checklist as each step of the training was completed to insure the training procedures were implemented with fidelity.

Procedural fidelity for both teachers' training was 100%.

Student Training. Prior to intervention, the primary researcher met with each student individually and explained the DJ procedures. The students were instructed to have a conversation with the teacher by writing notes about topics that interested them. Then, the students were trained to use the TRADE mnemonic checklist as mentioned earlier (see Appendix L). Prior to entering intervention, each student was given a TRADE mnemonic to staple in the front of his or her journal. The primary researcher then modeled how to write a response using the TRADE mnemonic. Next, the teacher and student worked together to complete an essay using the TRADE mnemonic, and finally, the student used the TRADE mnemonic to write or dictate a response that contained all of the components of the TRADE mnemonic independently. The primary researcher provided remediation and encouragement until the student was able to write or dictate a journal response that contains all of the TRADE components independently. The primary researcher informed the students that their entries would not be graded or corrected and that they were free to write about topics that interested them. They were also informed that if they wrote about anything that put them or others at risk, their writing would be shared with the appropriate adults in the building. Once the students were able to write or dictate a response that contained all of the components of the TRADE mnemonic they entered intervention. Procedural fidelity was collected using a Student Training Fidelity Checklist. The researcher checked off each step of the training as they were completed for each student. The researcher used the fidelity checklist to ensure all of the components of the training were implemented with fidelity (see Appendix M). Procedural fidelity for the student training was 100% for all students.

Baseline. Prior to baseline, students and teachers completed the Gehlback's Teacher-Student Relationship scale (Gehlbach et al., 2012). The students and teachers also completed the

Daily Rating Scale each day during baseline, intervention, and maintenance. The scale was placed in a folder that the researcher gave to the students to complete at the beginning of the data collection session. The teachers were given a folder with a scale for each student that was present that day and the teachers returned the completed scale the next day. The scales were kept confidential between the researcher and each students or teachers. Daily during baseline, the entire class was given the option to write to a prompt provided from Journal Buddies (http://journalbuddies.com/journal_prompts__journal_topics/middle-school-writing-prompts-pt3/) or to a topic of their choosing. The Journalbuddies.com prompts were chosen because they were created intentionally to appeal to middle school students and the website is easy for teachers to access. A different writing prompt was provided every day in the order they appeared on the website. Each teacher instructed the class to either read the prompt and write a response or write about any topic that interested them in their journals. The teacher told the students that they had 15 minutes to write and set a timer to go off when the journal writing session was over. All students in the participating classrooms were asked to either write to the prompt or to a topic of their choosing during baseline, but data were only collected on the students who returned signed consent and assent forms to participate in the study.

Student disruptive behaviors and teacher praise were observed during the most disruptive academic segment of the day that did not include the journal writing session. In addition, writing length was measured for each entry and a TRADE components rubric was used to score the last three journal entries for each student in baseline and the last three journal entries for each student in intervention. Students entered intervention based on the stability and predictability of their baseline disruptive behavior data. Each student needed at least five data points in baseline (Kratochwill et al., 2013). The first student had stable and predicable baseline data entered

intervention after five baseline data points (Horner, Swaminathan, Sugai, & Smolkowski, 2012). The rest of the students remained in baseline until visual analysis of the previous participant intervention data showed improvement over baseline data and visual analysis of the next student's baseline data revealed a stable or predictable pattern (Horner et al., 2012).

      Intervention. The DJ intervention was implemented over approximately 4 weeks for 16 sessions. On the day prior to each intervention phase day, the teacher wrote an initial note in the student's DJ. The teacher was reminded to use the essential components of DJ checklist provided by the researcher to make sure they included all of the essential components in the initial not and each response. The teacher's initial note and responses included questions, comments and information for the students to respond to. At the beginning of the journal writing session the student in intervention was instructed to read the teachers note and respond to it. The student was encouraged to use the TRADE mnemonic in the front of their journal to complete the response to the teacher. Before the next writing session, the teachers was asked to use the essential components checklist to respond to the student's comments and questions continuing to keep the student's interests and topics in the forefront of the conversation. Daily during intervention, observation data were collected on disruptive behavior and teacher praise.

      Based on observation data, Brendon should have entered intervention first. For the first four baseline data points, he was disruptive for over 80% of the observation session and was trending upward. However, on the day of the 4th data point he was suspended. Rather than wait for Brendon to return, Keantay was entered into intervention. Keantay's disruptive behavior was lasting for nearly half of the observation session and was trending upward. When Brendon returned to school after being suspended he was disruptive for the full observation period. Additionally, Jimar was suspended during the study and after returning to school, he was

disruptive for the full 10-minute observation period twice.

Maintenance. Ten days after the DJ intervention ended, disruptive behavior, teacher praise, TWW, as well as student and teacher daily ratings of STR data were collected for five more journal-writing sessions (Tate et al., 2016). During these sessions, the students were instructed to write to a prompt or a topic of their choice as in baseline. Data were collected and recorded in the same manner as during baseline.

Generalization. Generalization data were collected for disruptive behavior once each week for each student with at least one generalization data point in both baseline and intervention. Students in Teacher One's class were observed in the afternoon for generalization during social studies. Students in Teacher Two's class were observed in the morning for generalization during math class. Generalization data were graphed for visual analysis.

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Results

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Disruptive Behavior

The mean number of seconds of disruptive behavior during the 10-minute observation period for Keantay during baseline was 224 seconds ($SD = 69.56$) or 37% of the observation and decreased to 180 seconds ($SD = 52.74$) or 30% of the observation during intervention and 101 seconds ($SD = 48.28$) or 17% of the observation during maintenance. Brendon's mean during baseline was 504 seconds ($SD = 75.31$) or 84% of the observation and decreased to 78 seconds ($SD = 11.81$) or 13% of the observation in intervention and 65 seconds ($SD = 27.20$) or 11% of the observation in maintenance. Cailyn's mean during baseline was 408 seconds ($SD = 100.63$) or 68% of the observation and decreased to 98 seconds ($SD = 82.74$) or 16% of the observation in intervention and was 60 seconds ($SD = 43.92$) or 10% of the observation in maintenance. Jimar's mean during baseline was 330 seconds ($SD = 227.97$) or 55% of the observation and

decreased to 234 seconds ($SD = 242.84$) or 39% of the observation in intervention and was 66 seconds ($SD = 3.54$) or 11% of the observation in maintenance (see Figure 2.1). Visual analysis indicated a functional relation between DJ and disruptive behavior. There was a level and trend change for all four students. Keantay's data were increasing in baseline to the point where he was disruptive for nearly half of the last three data collection sessions. When he began intervention his data started to trend downward and leveled off with a level change and remained there through maintenance. Brendon's disruptive behavior had increased to where he was disruptive for the entire data collection session for the last two data point during baseline and dropped immediately in intervention and remained low through maintenance. Cailyn's disruptive behavior was trending upward and dropped immediately in intervention and continued to trend downward and maintained at a decreased level through maintenance. Jimar began baseline low and was trending upward throughout baseline until he was disruptive for the entire period he had a slight decrease once intervention was be began and then had a delayed substantial decrease which maintained through maintenance. The data collected during generalization were consistent with the data collected during baseline and intervention. Effect sizes were determined by calculating the non-overlap of all pairs (NAP; Parker & Vannest, 2009). The logical range for the NAP was 0–100%. An NAP of 50% or less indicates a zero effect (Parker & Vannest). NAP was the preferred measure of effect size for this study because the phase length does not affect the magnitude. Effect sizes were as follows: for Keantay the NAP (SE) was 72% (0.18), 95% confidence interval (CI) [36% - 92%]; for Brendon the NAP (SE) was 100% (0.00), 95% CI [100% - 100%]; for Cailyn the NAP (SE) was 100% (0.00), 95% CI [100% - 100%]; and for Jimar the NAP (SE) was 62% (0.20), 95% CI [27% - 88%]

Teacher Praise

The mean number of times Teacher One praised Keantay during the 10-minute observation period during baseline was .2 times ($SD = .45$) decreased to 0 times ($SD = 0.00$) during intervention and 0 times ($SD = 0.00$) during maintenance. The mean number of times Teacher Two praised Brendon during baseline was 0 times ($SD = 0.00$) and 0 time ($SD = 0.00$) during intervention and .2 times ($SD = 0.00$) in maintenance. The mean number of times Teacher One praised Cailyn during baseline was 0 times ($SD = 0.00$) and 0 times ($SD = 0.00$) in intervention and 0 times ($SD = 0.00$) in maintenance. The mean number of times Teacher Two praised Jimar during baseline was .11 times ($SD = .33$) and .33 times ($SD = .58$) during intervention and 0 times ($SD = 0.00$) in maintenance. Visual analysis indicated that there was not a functional relation between DJ and teacher praise (see Figure 2.2)

Writing

Total Words Written. The means for TWW were as follow: Keantay 12 words ($SD = 17.01$) during baseline and improved to 13 words ($SD = 18.42$) in intervention and decreased to 8 words ($SD = 14.43$) in maintenance; Brendon 6 words ($SD = 13.33$) during baseline and improved to 19 words ($SD = 15.42$) in intervention and 15 words ($SD = 9.99$) in maintenance; Cailyn 18 words ($SD = 35.03$) during baseline and improved to 49 words ($SD = 16.25$) in intervention and to 15 words ($SD = 16.92$) in maintenance; Jimar 9 words ($SD = 9.40$) during baseline and decreased to 2 words ($SD = 3.46$) in intervention and to 10 words ($SD = 13.44$) in maintenance (see Figure 2.3). Visual analysis indicated that there was no functional relation between DJ and TWW. However, despite the lack of a functional relation there was an effect of a level change for TWW for both Brendon and Cailyn.

TRADE Components. The means scores from the TRADE components rubric were as follows: Keantay 1.2 points ($SD = 1.79$) during baseline and decreased to 0.6 points ($SD = 0.89$)

in intervention; Brendon 0.3 points ($SD = 0.82$) during baseline and improved to 1.3 points ($SD = 0.95$) in intervention; Cailyn 0.2 points ($SD = 0.44$) during baseline and improved to 3.2 points ($SD = 4.44$) in intervention; Jimar 0.3 points ($SD = 0.46$) during baseline and decreased to 0.0 points ($SD = 0.00$) in intervention (see Figure 2.4). When the students wrote they often answered the teachers questions but rarely incorporated any other parts of the trade component into their writing.

Student Teacher Relationships

Daily Rating Scale – Teachers. Teacher One's mean ratings on the Teachers Daily Rating Scale of the Student Teacher Relationship for her relationship with Keantay during baseline was 14 points or 70% ($SD = 3.63$) this remained the same at 14 points or 70% ($SD = 1.41$) in intervention and 14 points or 70% ($SD = 1.15$) during maintenance. Teacher One's mean ratings for her relationship with Cailyn during baseline was 10 points or 50% ($SD = 4.81$) and improved to 11 points or 55% ($SD = 0.71$) in intervention and 13 points or 65% ($SD = 1.00$) in maintenance. Teacher Two's mean rating for his relationship with Brendon during baseline was 10 points or 50% ($SD = 5.53$) and improved to 16 points 80% ($SD = 3.63$) in intervention and 20 points or 100% ($SD = .55$) in maintenance. Teacher Two's mean rating for his relationship with Jimar's mean during baseline was 10 points or 50% ($SD = 4.28$) and decreased to 9 points or 45% ($SD = 4.04$) in intervention and improved to 13 or 65% ($SD = 0.71$) in maintenance. Visual analysis did not indicate a functional relation between DJ and the teachers' rating of the STR on the Teacher Daily Rating Scale of the Student Teacher Relationship (see Figure 2.4). Teacher Two perceived his relationship with Brendon to improve and his relationship with Jimar to get worse. Teacher One perceived her relationship to stay the same with both Cailyn and Keantay.

Daily Rating Scale – Students. Keantay's mean rating on the Students Daily Rating

Scale of the Student Teacher Relationship of his relationship with Teacher One during baseline was 13 points or 65% (*SD* = 4.02) this remained the same at 13 points or 65% (*SD* = 1.41) in intervention and was 15 points or 70% (*SD* = 0.58) during maintenance. Cailyn's mean ratings of her relationship with Teacher One during baseline was 10 points or 50% (*SD* = 4.04) and improved to 15 points or 75% (*SD* = 1.87) in intervention and 14 points or 70% (*SD* = 1.41) in maintenance. Brendon's mean rating of his relationship with Teacher Two during baseline was 14 points or 70% (*SD* = 5.25) and improved to 17 points 85% (*SD* = 5.68) in intervention and 20 points or 100% (*SD* = 0.55) in maintenance. Jimar's mean rating of his relationship with Teacher Two during baseline was 13 points or 65% (*SD* = 5.69) and improved to 15 points or 75% (*SD* = 1.00) in intervention and 15 or 75% (*SD* = 0.00) in maintenance. Visual analysis did not indicate a functional relation between DJ and the students' rating of the STR on the Student Daily Rating Scale of the Student Teacher Relationship (see Figure 2.5). Brendon and Cailyn both increased their rating of the STR from baseline to intervention. Keantay and Jimar did not increase or decrease their rating of the STR from baseline to intervention.

Gehlbach's Teacher Student Relationship Scale. Based on the percentage scores calculated from the raw scores three of the four relationship scores on the Gehlbach's Teacher-student Relationship Scale–Teacher Version (Gehlbach et al., 2012) improved from pre to post test (See Table 2.3). In addition, three of the four students post test scores improved by 15 percentage points or more. Jimar's score decreased from pre to post intervention (see Table 2.4).

Social Validity. Social validity data were analyzed to generate support for or a lack of support for the intervention. In addition, the data were analyzed for agreement and disagreement between teachers and students as to their support for the intervention. Both teachers completed the TARF – R (see Appendix M). Teacher One rated DJ on the TARF – R 140 points out of a

total 140 points indicating that she found the intervention to be 100% acceptable. Teacher Two rated DJ on the TARF-R 120 points out of a possible 140 points indicating that he found DJ to by 86% acceptable in for his classroom. Overall, the teachers' response was positive (see Table 2.5). They both had positive things to say about DJ and they both intend to continue using the strategy. Interestingly Teacher One state that DJ helped improve her relationship with the students but according to her responses on The Gehlbach's Teacher-Student Relationship Scale her relationship with Keantay actually got worse. However, Teacher Two stated that he did not feel like the relationships changed much, but both he and the Brendon rated their relationship better on Gehlbach's Teacher-Student Relationship scale after the intervention.

Three of the students were interviewed, Jimar refused to be interviewed. All three student had overall positive responses to DJ and they all felt like it helped them have better relationships with the teacher. They had mixed feeling about whether they wanted to continue DJ or not (see Table 2.6)

Discussion

The purpose of this study was to determine the effects of DJ on the disruptive behavior, teacher praise, writing length, writing quality, and teacher and student perceptions of the teacher-student relationship with middle school students in a therapeutic school.

Research Question One was: Is there a functional relation between the use of DJ and disruptive behavior of middle school students with EBD in a therapeutic school? The results of this study revealed that there was a functional relation between DJ and disruptive behavior. This was not consistent with prior research that found an increase in positive responses and interactions between the student and teacher during the DJ but mixed results related to decreasing negative responses and interactions between the student and teacher (Anderson et al.,

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2011). This is consequential because most students who attend therapeutic alternative schools are there because they demonstrate high levels of disruptive behavior (Brown et al., 2012; Carver et al., 2010; Gagnon & Barber 2015). In addition, students who demonstrate high levels of disruptive behavior often have relationships with their teachers that are coercive and have high levels of conflict and neglect (Birch & Ladd, 1998; Howes, 2000; Sutherland & Oswlad, 2005) which can have a negative impact on students' academic, social and behavior outcomes. The student participants in this study demonstrated disruptive behavior for more than half of the observation session in baseline. This made it difficult for academic instruction to take place in the classroom. Not only was their behavior interfering with their own learning but it also made it difficult for other students to learn. When DL was implemented with these students the levels of disruptive behavior quickly decreased which created a foundation for teachers to provided academic instruction and further strengthen STR.

Next, Research Question Two was: Is there a functional relation between the use of DJ and teacher praise directed toward middle school students with EBD from their teacher in a therapeutic school? There was no functional relation between DJ and teacher praise. This was not supported by previous research that found that as conflict decreased in the STR, closeness and positive interactions between the teacher and student increased (Pianta, 1999). This is relevant because of the 14 studies that implemented interventions to improve STR, all of the studies that had a praise component resulted in an improvement in the STR (Anderson et al., 2011; Baroody, Rimm-Kaufman et al., 2014; Eisenhower, Taylor, & Baker, 2016; Kirkhaug et al., 2016; Mautone et al., 2012; O'Connor, McCormick, Cappella, & McClowry, 2014; Ray, 2007; Ray et al., 2008; Rimm-Kaufman & Chiu, 2007; Thompson, 2014; Tsai & Cheney, 2012). The only study that implemented an intervention involving direct interaction between students

and teachers that did not incorporate praise was the only intervention that had no impact on STR (Fabiano et al., 2010). Teacher praise is a crucial component of positive STR, but teachers may need more training on not only the importance of teacher praise, but also on what teacher praise looks like. The teacher participants in this study were informed through the consent process that teacher praise would be measured during each observation session. Even though teachers knew praise was being measured, only four teacher praise statements were made to the target students across baseline, intervention, and maintenance. This may indicate that the teachers were not sure how to praise students. In addition, the teaching environment was not conducive to teacher praise. According to field notes, during the 21 academic sessions of observation the two teachers were only observed providing academic instruction five times; twice Teacher One was observed providing math instruction to an individual student, and another time she was observed providing math instruction to a group of two students. Teacher Two was observed providing social studies instruction to the whole class twice. During most of the observations, the teachers were at their desks on their computers and only interacted with the students to verbally correct behavior so there was little opportunity for teacher praise. This is consistent with prior research that found that teachers tend to spend substantially less time instructing students with high levels of disruptive behavior. Often when teachers do interact with these students, it tends to be in neglectful and coercive ways that increase the likelihood of more disruptive behavior (Sutherland & Oswald, 2005). This can make it difficult to change the trajectory of the STR.

The third research question asked: Is there a functional relation between the use of DJ and the length and quality of writing of middle school students with EBD in a therapeutic school? There was no functional relation between writing length or writing quality and DJ found. These results are not consistent with prior research in DJ for students with EBD in a traditional

school, which did reveal a functional relation between DJ writing skills (Regan et al., 2005). The students wrote so few words that it was difficult to determine whether they learned the components of TRADE or not. Three of the students refused to write anything multiple times during intervention. This could be due to the fact that characteristics of EBD, such as a lack of attention to task (Mastropieri & Scruggs, 2014), often make writing one of the most significant deficits for students with EBD (Sreckovic et al., 2014). Students with behavior disabilities often perform more than a full standard deviation below their peers (Gage et al., 2014). Explicit writing instruction may have been needed before the students were willing to write. DJ provided an authentic writing experience. Except for teaching the TRADE mnemonic to students, there was no writing instruction. Students were instructed that they could write about anything that interest them and were encouraged to ask and respond to questions. They were also informed the writing was an opportunity to express themselves and that it would not be graded (Staton, 1985). The students may have needed writing instruction such as Direct Instruction (White et al., 2014) or SRSD (Sreckovic et al., 2014) prior to or during the DJ intervention. Additionally, the one student that did write substantially more in intervention than in baseline was the only female student. This is consistent with previous research that found that females tend to write more than males (Scheiber et al., 2014).

The final research question asked: Do middle school students with EBD in a therapeutic school and their teachers who participate in DJ perceive their relationships with each other to be of higher quality? There was no functional relation between teacher or student perceptions of the teacher-student relationship and DJ. This is not consistent with prior research student-teacher relationships (Anderson et al., 2011). Anderson and colleagues found that student teacher relationship were more positive during dialogue journaling. The teachers had mixed results based

on their rating of on the TSR Daily Rating Scale, Gehlbach Teacher-student Relationship Scale –

Teacher Version (Gehlbach et al., 2012), and social validity scales. Only one teacher rated their

relationships with one student as more positive after intervention than prior to intervention. One

reason for this may be that the students rarely wrote back to the teachers. The research suggest

that as one-on-one interactions increase between teachers and students the teacher's perspective

of the STR improves (Anderson et al., 2011; Eisenhower et al., 2016). However, in this study,

the teachers were reaching out to the students, but the students were not responding. This lack of

an interaction may be why the teacher did not perceive the relationships as improving. Also,

research suggests that teachers have difficulty building relationships with students who

demonstrate high levels of disruptive behavior that have high levels of closeness and low levels

of conflict (Decker et al., 2007; Murray & Greenberg, 2001: Sutherland & Oswald, 2005).

Students' disruptive behavior may need to remain low for more time before teachers begin to

change their representational model of the relationship. Once this happens the teacher may begin

to perceive the relationships as more positive and interact more positively with the students

(Pianta, 1999).

Even though there was not a functional relation between DJ and the students perception

of the STR, three of the students did have higher average scores on the STR Daily Rating Scale,

three students had improve raw and percentage scores on the Gehlbach Teacher-Student Relation

Scale – Student Version (Gehlbach et al., 2012) and all three students who completed the social

validity interviews said that they felt like their relationship with the teacher improved. This may

be because even though the students were not writing back the teachers continued to write to the

students daily and included praise and positive feedback as well as personal antidotes from their

lives. Prior research suggests those students who feel a personal connection with their teachers

perceive their relationships to be more positive (Capern & Hammond, 2014). Research also suggests that praise and positive feedback improve students' perspectives of STR (Anderson et al., 2011; Tsai & Cheney, 2012). Capern and Hammond (2014) reported that even more than their peers, students with EBD wanted to be known, regarded as individuals, and treated with affection by their teachers. Students with EBD reported feeling supported by teachers who made efforts to know them personally, demonstrate genuine concern, and positively communicate with them (Capern & Hammond, 2014; Markham, Young, Sweeting, West, & Aveyard, 2012). According to field notes these kinds of interactions were not taking place between students and teachers in the classroom, but the teachers were including these components in their DJ with the students. Additionally, according to field notes as the students disruptive behavior decreased the teachers' corrective criticism decreased. This decrease as well as the increase in positive communication could have led to improve student perspective of the STR (Capern & Hammond, 2014).

Students who attend therapeutic schools often to have deeply engrained negative representational models of STR take a substantial time to change (Kleiner et al., 2002). This may explain why there was some improvement in the overall STR from both the teacher and students' perspective the data did not show a functional relation between STR and DJ. More time may have been need to adjust the students' representational model and for the students' perspective of the STR to improve (Kluwin & Kelly, 1991; Nassaji & Cumming, 2000).

<div align="center">**Limitations and Future Directions**</div>

A limitation in this study was dosage (Power et al., 2005). Poor attendance, disruptive classroom environments, and poor student engagement limited the dosage of the DJ intervention. This is consistent with previous research conducted in therapeutic schools (Klenier et al., 2002;

Lehr & Lange, 2003). Attendance was a problem in this study from the beginning. Two students never entered intervention because they missed so many days of school that they never achieved stable baseline before the study had to end due to state standardized testing. The students who entered intervention also had poor attendance Cailyn and Brendon both missed 14% of the days during the study and Keantay and Jimar each missed 38% of the days during the study. Jimar missed an entire week of school because his mother went on a cruise and he did not have transportation to school. Student engagement also limited the dosage as students would usually read the teachers' notes but often would not write or write very little during the journal writing session. Due to this unpredictable behavior, future research in therapeutic schools may want to scale up to multiple AES so that there are enough students to conduct a group design study over a quarter or semester so that all of the students have more opportunities to participate in the DJ and thereby increase dosage (Kluwin & Kelly, 1991; Nassaji & Cumming, 2000).

A second limitation in this study was a lack of teacher instruction. According to field notes, over the course of the 21 observation sessions in each of the two classrooms there were only five observations of teachers instructing students. These observations were taking place in a math and a social studies block. The lack of teacher-led instruction may have led to an increase in disruptive behavior.

The third limitation in this study is that the students rarely wrote in response to the teachers during baseline or intervention. This made it difficult for teachers to carry on a meaningful conversation. Most of the conversations were one way with the teacher doing all of the writing. This may have led to decreased teacher perspective of STR as well as lower writing scores for the students. Future research may want to incorporate a writing instruction element prior to beginning the DJ intervention.

The fourth limitation is that the teachers wrote notes to the students even when the students did not respond the previous days note. The students in this study engaged in less disruptive behavior even though they did not actively engage in writing responses to the teachers. Cailyn and Brendon increased the number of words written but overall the students wrote very little. A discussion with the teachers revealed that the students were reading what the teachers wrote on most days, but refusing to write. The teachers reported that the students enjoyed the extra attention provided by the teachers' notes, but not enough to write back. Future research should examine the effects of teachers simply writing notes to students as a means of providing extra attention would decrease disruptive behavior (Anderson et al., 2011; Eisenhower et al., 2016).

Additionally, the teachers in this study knew they were being observed and that teacher praise data was being collected. However, over the course of 21 observations in each of the two classrooms a target student was only praised four times. Future researchers should provide teachers with explicit instruction on how to provide praise to students prior to beginning a study of DJ.

Conclusion

DJ is intended to be a platform for authentic communication between teachers and students. It gives them an opportunity to communicate regularly about things that are of personal interest to the student. It also allows the teacher and students to become more familiar with each other's life outside of school, and build a more positive relationship (Peyton, 1999; Hail et al., 2013). Previous research has found that as STR improve disruptive behavior decreases and teacher praise, and academic performance improves (Mihalas, Morse, Allsopp, & McHatton, 2009; Murray & Malmgren, 2005). A functional relation was found between DJ and disruptive

behaivor, but not teacher praise or writing skills. Previous research has found that techers interact less positively with students who demonstate high levels of disruptive behavior (Sutherland & Oswald, 2005). In addition, students who demonstrate high levels of disruptive behavior are behind their typically developing peers in writing (Sreckovic et al., 2014). The hope is that if DJ continues to decrease the students' disruptive behavior, teacher praise and writing quality will improve. Future research that is longer in duration and gives students more opportunities to DJ with the teacher and more time with lower levels of disruptive behavior is warranted.

Table 2.1

Student Demographic

Student Name	Sex	Racial/Ethnic Group	Grade	Age	Disability
Brendon	M	African American	6th	11	EBD
Cailyn	F	African American	8th	14	EBD
Jimar	M	African American	6th	12	EBD
Keantay	M	African American	7th	13	EBD

Table 2.2

Teacher Demographics

	Teacher 1	Teacher 2
Sex	Female	Male
Racial/Ethnic Group	African American	African American
Grade Teaching	$6^{th} - 8^{th}$	$6^{th} - 8^{th}$
Years Teaching	5	20
Years in AES	5	20
Years in Education Setting	5	20
Highest Level of Education	Specialist	Masters
Current Certifications	Special Education. K-12	EBD, English Language Arts, Social Studies
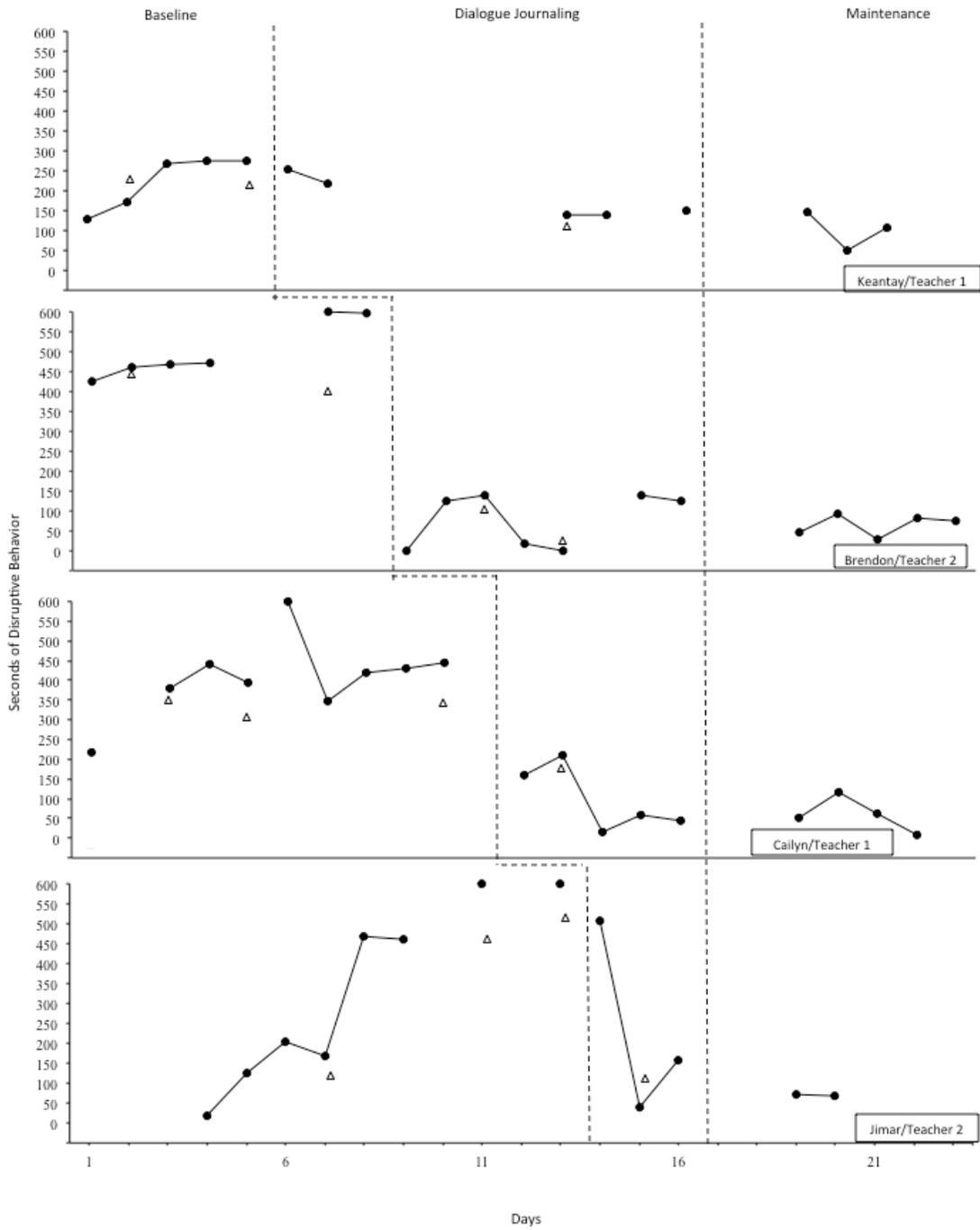
Δ   = Data points during generalization phase

Figure 2.1 Intervention outcomes: Disruptive Behavior
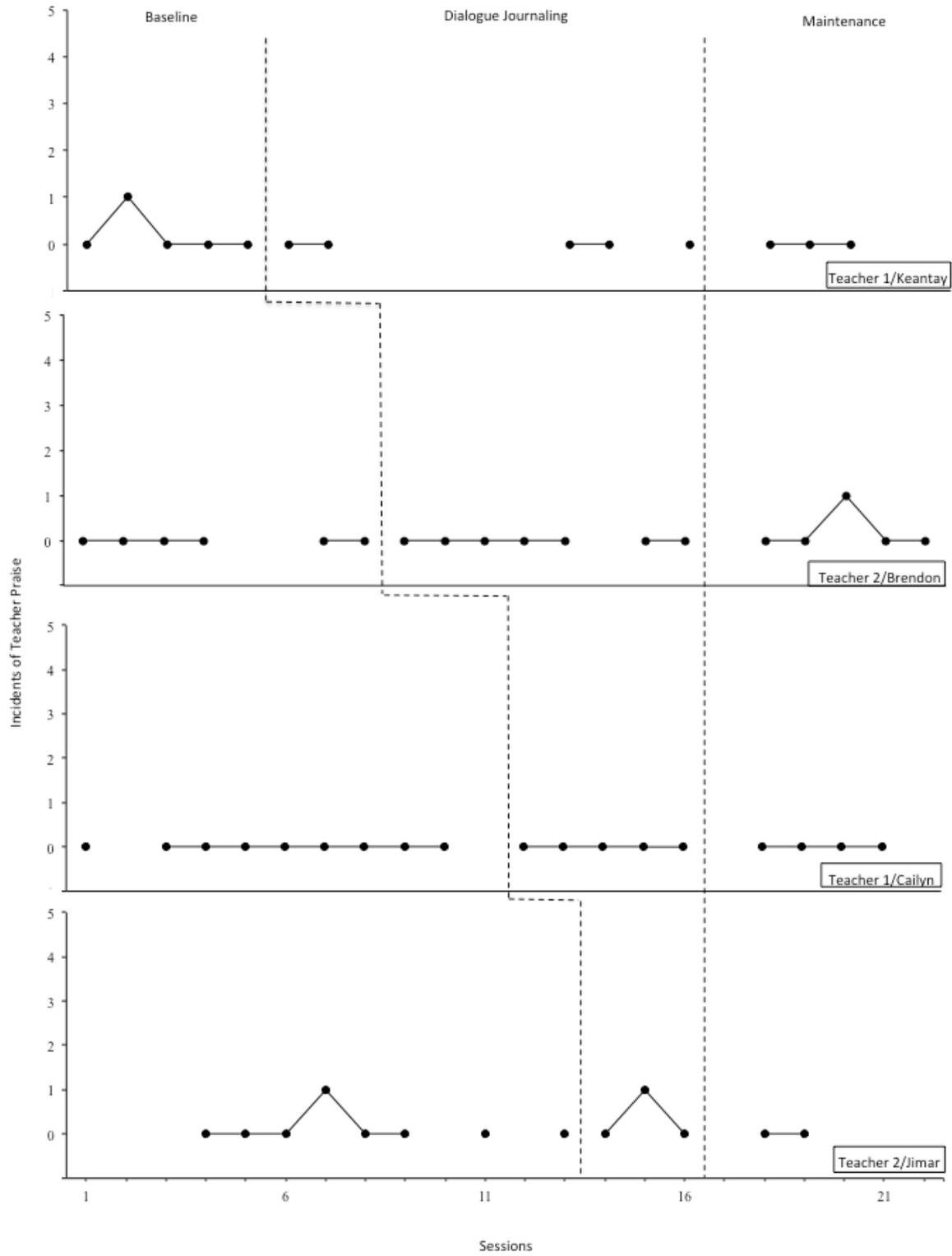
Figure 2.2 Intervention outcomes: Teacher praise
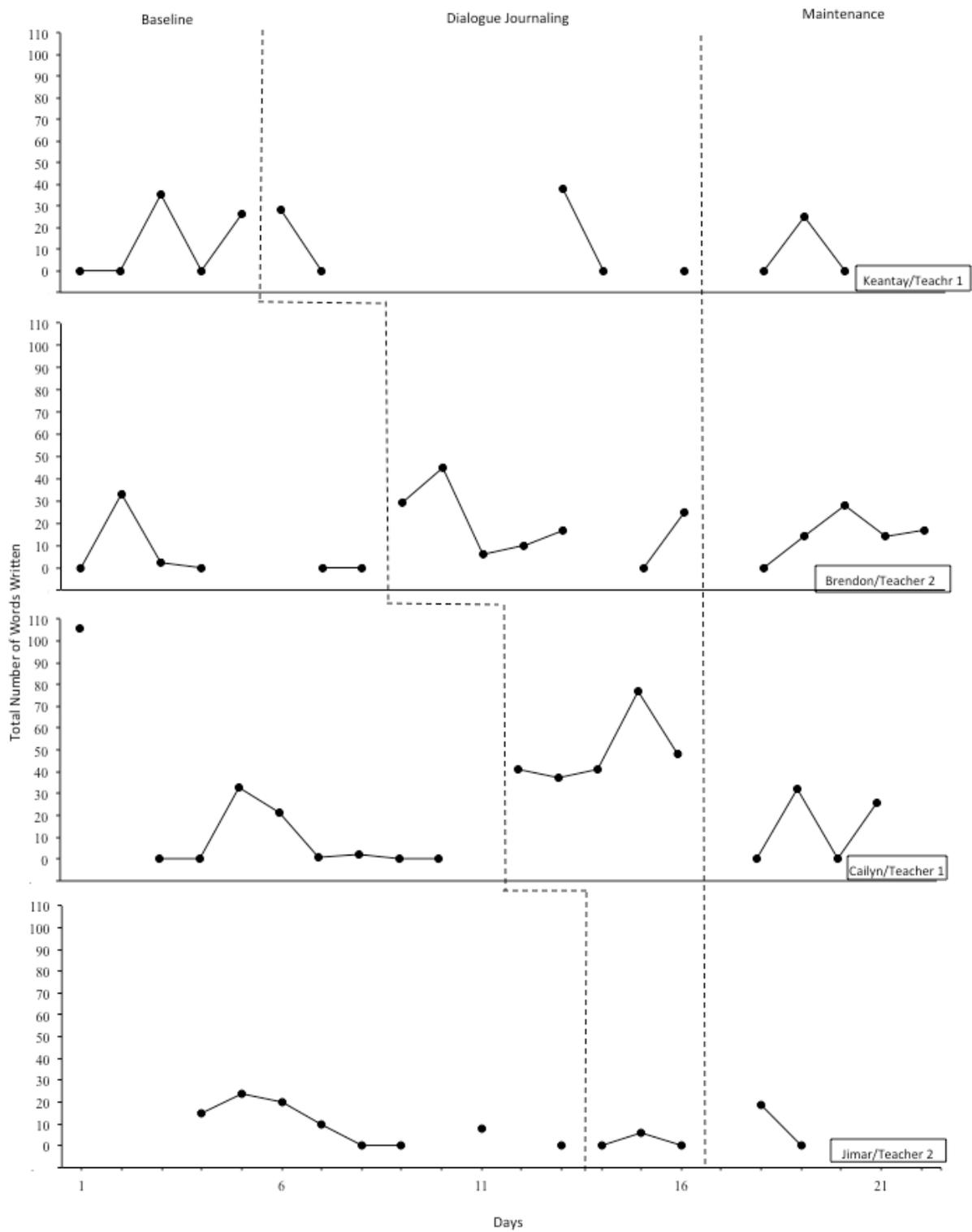
Figure 2.3 Intervention outcomes: Total Words Written
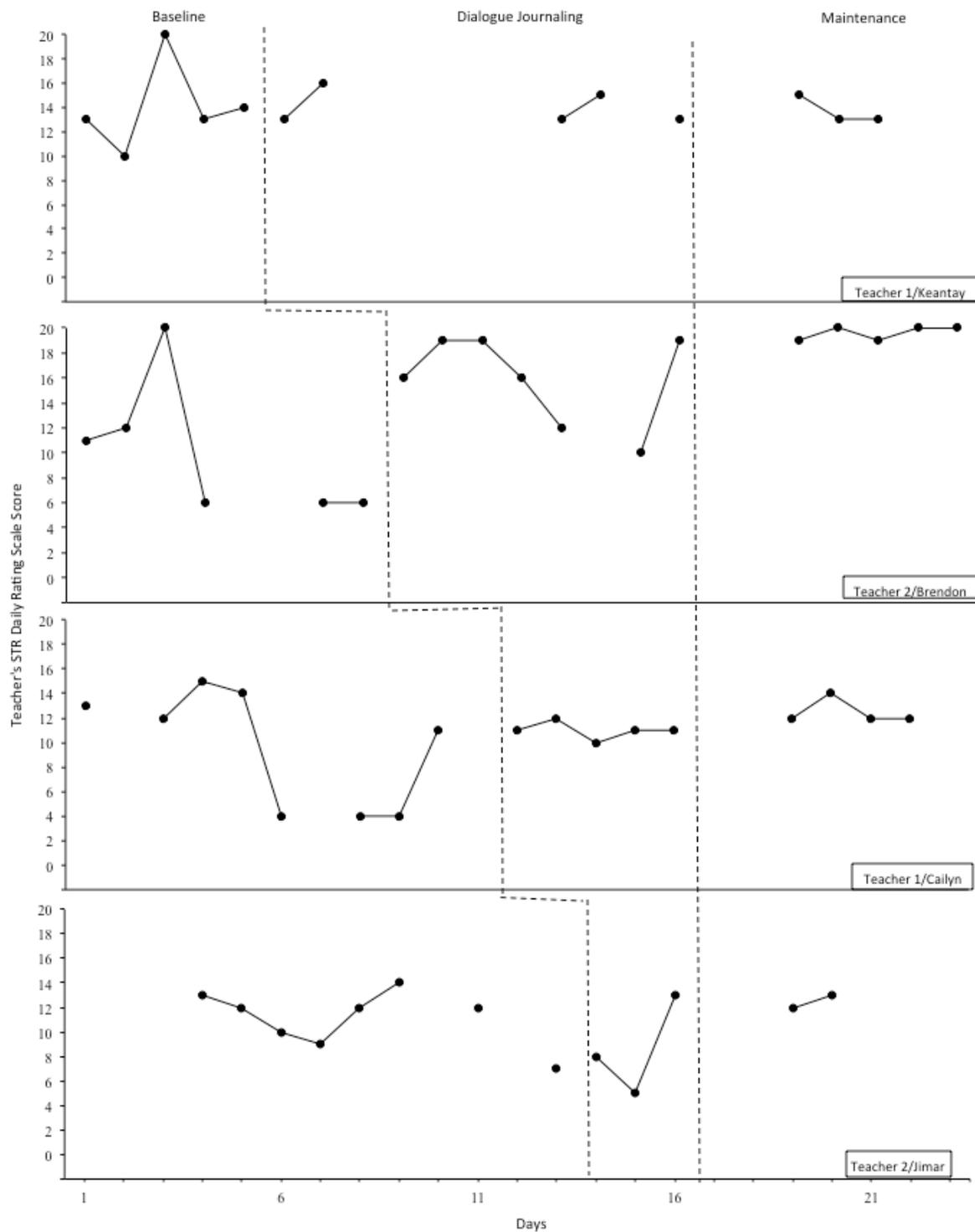
Figure 2.4 Intervention outcomes: Teacher Daily Rating Scale of the Student Teacher
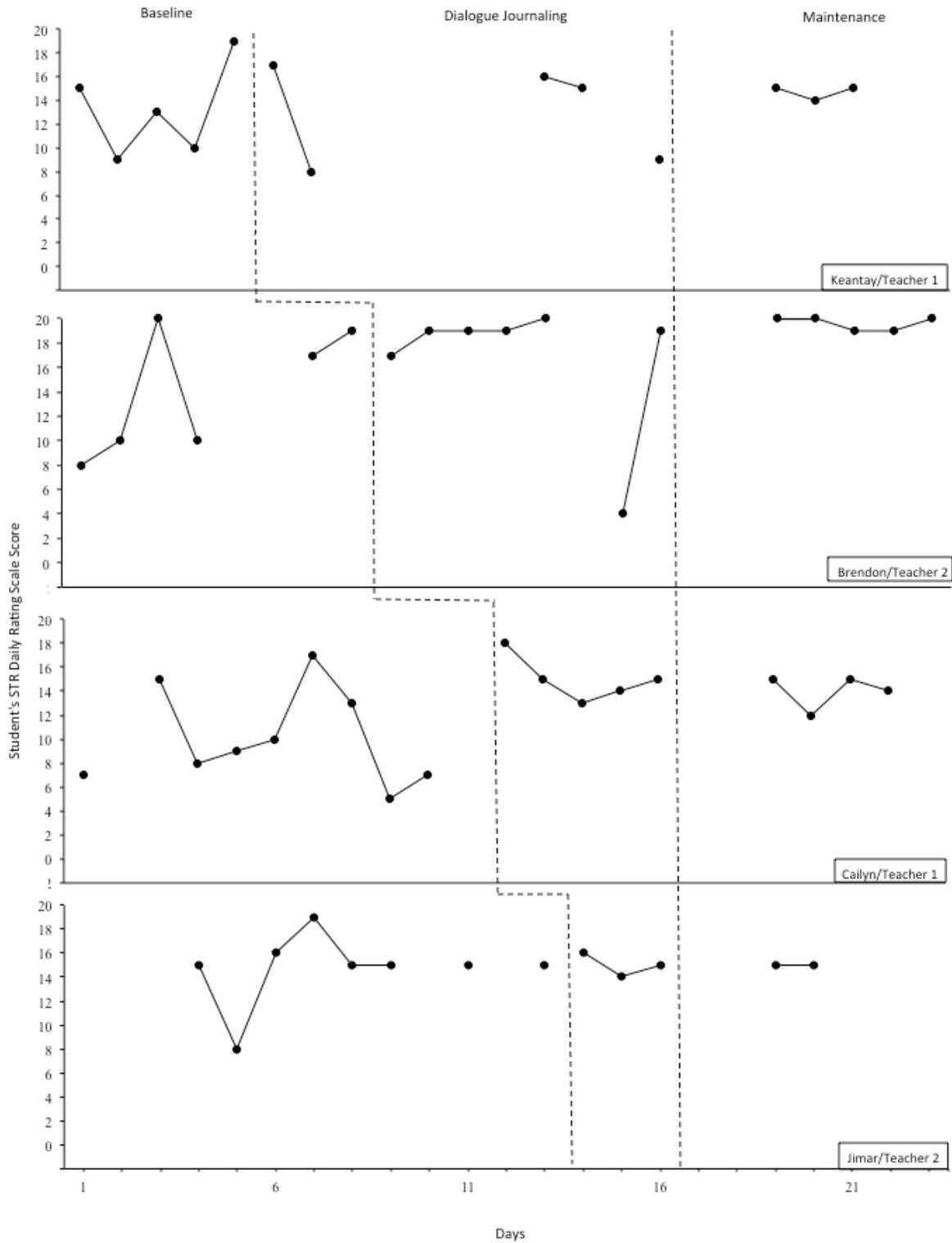
Relationship

Figure 2.5 Intervention outcomes: Student Daily Rating Scale of the Student Teacher Relations

Table 2.3

Teacher-Student Relationship Scale – Teacher Version

Teacher-Student	TSR Pre Raw Score	TSR Pre Percentage	TSR Post Raw Score	TSR Post Percentage
Teacher One – Keantay	46/70	66%	43/70	61%
Teacher One – Cailyn	45/70	64%	49/70	70%
Teacher Two – Brendon	40/70	57%	51/70	86%
Teacher Two - Jimar	31/70	44%	33/70	47%

Note. TSR = Teacher –Student Relationship Scale

Table 2.4

Teacher-Student Relationship Scale – Student Version

Student - Teacher	TSR Pre Raw Score	TSR Pre Percentage	TSR Post Raw Score	TSR Post Percentage
Keantay - Teacher One	53/70	76%	49/70	70%
Cailyn - Teacher One	23/70	33%	48/70	69%
Brendon - Teacher Two	46/70	66%	61/70	87%
Jimar - Teacher Two	42/70	60%	53/70	75%

Note. TSR = Teacher –Student Relationship Scale

Table 2.5

Teacher Social Validity Interviews

Question	Teacher One	Teacher Two
What is your overall opinion of DJ?	I think it is a good tool to not only get students to improve on their reading and writing, but also to help teachers build a better rapport with the students.	I think it's a great process once the students become engaged.
Was it easy to implement? Why or why not?	Initially it was very challenging, however it got better once I started revealing semi-personal information to the students about my teenage son and I. They were more inclined to continue with the process.	No, the students were reluctant to write. Students followed other students and would only write if the other students wrote.
How did DJ impact your relationship with the students?	Yes, it helped me build a better rapport with the students.	Sadly, it didn't change much because there wasn't enough time and the process wasn't able to take affect.
Do you plan to continue using the intervention in the future? Why or why not?	Yes, I will definitely use this intervention.	Yes! I think it's a great way to breakdown walls and build trust.

Table 2.6

Student Social Validity Interviews

Question	Brendon	Cailyn	Keantay
What is your opinion of DJ?	I don't know	It's alright,	It was okay
Do you feel like your relationship with your teacher changed? If so how?	Yes, it got better. He talked to me and did not say mean things and I did not disrespect him.	Yes, good,	Yes, she told me things about her son and my relationship got better.
Would you like to continue DJ with the teacher? Why or why not?	Yes, but I don't know why.	No, I don't know why.	Yes, because I started to like it.
Do you prefer DJ or traditional journaling? Why?	Both.	Traditional journaling, because I like it.	DJ because it gives me more details about her (the teacher).

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APPENDICES

Appendix A

Duration of Disruptive Behavior Recording Sheet

Teacher: _____ Student: _____

Date	Beginning Time	Ending Time	Seconds of Disruptive Behavior

Appendix B

Frequency Count Recording Sheet

Teacher: _____ **Interval Length (in Minutes):** __**15**__ **Behavior:** _____Teacher Praise_____

Observation Date: _____ **Beginning Time:** _____

Ending Time: _____

Student	B/I/M/G	Tallies for 15 Minute Observation

Note: B – Baseline, I – Intervention, M – Maintenance, G - Generalization

Appendix C

TRADE Scoring Rubric

	Scoring Criteria		Earned
1	SOMETHING INTERESTING		
	Tells the teacher something interesting about him/herself	0 = 0 1 point = 1 2 points = 2 3 points = 3 4 points = 4+	
2	RESPONDS		
	Responds to the teacher's questions	0 = none 1 point = some 2 points = all	
3	QUESTIONS		
	Asks the teacher questions	0 = 0 1 point = 1 2 points = 2 3 points = 3 4 points = 4+	
4	DISCUSS		
	Discusses something new with the teacher	0 = 0 1 point = 1 2 points = 2 3 points = 3 4 points = 4+	
5	ENHANCED MEANING		
	Uses at least two creative words that enhance meaning (*exhausted, surprised, awesome, fantastic, nerve-wracking*)	0 = 0 1 point = 1 2 points = 2 3 points = 3 4 points = 4+	
SCORER:_____ STUDENT ID:_____		**TOTAL** *Do not include numbers in bolded boxes*	**18**

Appendix D

Teacher Name _____ Student Name_____
  Date_____

Teacher Daily Rating Scale of the Student-Teacher Relationship

1 - Not at all   2 - Slightly   3 - Somewhat 4 - Quite a bit 5 - A tremendous amount

1. How much did you enjoy helping the student learn today?   1 2 3 4 5

2. How friendly was the student toward you today?   1 2 3 4 5

3. How much do you like the student's personality today?   1 2 3 4 5

4. Overall, how much did the student learn from you today?   1 2 3 4 5

Total   _____

Percentage Score   _____

Appendix E

Fake Name _____   Date_____

Student Daily Rating Scale Of the Student-Teacher Relationship
Circle the **face** that best answers the question about your teacher in this class.

How much did you enjoy learning from your teacher today?

| Not at all | Slightly | Somewhat | Quite a bit | A Whole lot |

How friendly was your teacher towards you today?

| Not at all | Slightly | Somewhat | Quite a bit | A Whole lot |

How motivated were you in your teacher's class today?

| Not at all | Slightly | Somewhat | Quite a bit | A Whole lot |

How much do you like your teacher today?

| Not at all | Slightly | Somewhat | Quite a bit | A Whole lot |

Appendix F

Teacher-student relationship scale: Teacher

Answer the following question with a number 1-5

1 - Not at all 2 - Slightly 3 - Somewhat 4 - Quite a bit 5 - A tremendous amount

Positivity subscale

1. How much do you enjoy helping _____ learn?   1 2 3 4 5

2. How friendly is _____ toward you?   1 2 3 4 5

3. How often do you say something encouraging to _____?   1 2 3 4 5

4. How respectful is _____ towards you?   1 2 3 4 5

5. How excited would you be to have _____ again next year?   1 2 3 4 5

6. How motivating does _____ find the activities that you plan for class?   1 2 3 4 5

7. How caring is _____ towards you?   1 2 3 4 5

8. How much do you like _____ personality?   1 2 3 4 5

9. Overall, how much does _____ learn from you?   1 2 3 4 5

Negativity Scale

10. How often does _____ ignore something you say?   1 2 3 4 5

11. During class, how often does _____ talk when you are talking?   1 2 3 4 5

12. How often do you say something that offends _____?   1 2 3 4 5

13. How unfair are you to _____ in class?   1 2 3 4 5

14. How angry does _____ make you feel during class?   1 2 3 4 5

Total   _____

Percentage Score   _____

(Gehlbach et al., 2012)

99

Appendix G

Gehlback's Teacher-student relationship scale: Student

Answer the following question with a number 1-5

1 - Not at all   2 - Slightly   3 - Somewhat   4 - Quite a bit   5 - A tremendous amount

Positivity Subscale

1. How much do you enjoy learning from your teacher?   1 2 3 4 5

2. How friendly is your teacher toward you?   1 2 3 4 5

3. How often does your teacher say something encouraging to you?   1 2 3 4 5

4. How respectful is your teacher towards you?   1 2 3 4 5

5. How excited would you be to have your teacher again next year?   1 2 3 4 5

6. How motivating are the activities that your teacher plans for class?   1 2 3 4 5

7. How caring is your teacher towards you?   1 2 3 4 5

8. How much do you like your teacher's personality?   1 2 3 4 5

9. Overall, how much do you learn from your teacher?   1 2 3 4 5

Negativity Subscale

10. How often do you ignore something your teacher says?   1 2 3 4 5

11. During class, how often do you talk when your teacher is talking?   1 2 3 4 5

12. How often does your teacher say something that offends you?   1 2 3 4 5

13. How unfair is your teacher to you in class?   1 2 3 4 5

14. How angry does your teacher make you feel during class?   1 2 3 4 5

Total   _____

Percentage Score   _____

(Gehlbach et al., 2012)

Student Demographics

Directions: Please CIRCLE ALL answers directly on this form.

1. What is your sex? Circle only <u>ONE</u> answer.

    A. Female   B. Male

2. What is your age in years? Circle only <u>ONE</u> answer.

    A. 10   B. 11   C. 12   D. 13   E. 14   F. 15

    G. 16   H. 17   I. 18

3. What is your racial/ethnic group? Circle only <u>ONE</u> answer.

    A. American Indian   B. Black/African American   C. Hispanic

    D. Asian   E. White/Caucasian   F. Multi racial/ethnic

4. What grade are you currently in? Circle only <u>ONE</u> answer.

    A. 6th   B. 7th   C. 8th

Teacher Demographics

Directions: Please CIRCLE ALL answers directly on this form.

1. What is your sex? Circle only <u>ONE</u> answer.

    A. Female   B. Male

2. What is your racial/ethnic group? Circle only <u>ONE</u> answer.

    A. American Indian   B. Black/African American   C. Hispanic

    E. Asian   E. White/Caucasian   F. Multi racial/ethnic

3. What grade are you currently teaching? Circle all that apply.

    A. 6th B. 7th C. 8th

4. How many years have you been teaching? Circle only <u>ONE</u> answer.

    A. 1 - 5   B. 6 - 10   C. 11 - 15   D. 16 -20   E. 21 - 25

    F. 26 – 30   G. 31 or more

5. How many years have you been teaching in an AES? Circle only <u>ONE</u> answer.

    A. 1 - 5   B. 6 - 10   C. 11 - 15   D. 16 -20   E. 21 - 25

    F. 26 – 30   G. 31 or more

6. How many years have you worked in an educational setting? Circle only <u>ONE</u> answer.

    A. 1 - 5   B. 6 - 10   C. 11 - 15   D. 16 -20   E. 21 - 25

    F. 26 – 30   G. 31 or more

7. What is your level of education? Circle only <u>ONE</u> answer.

    A. Bachelors B. Masters C. Specialist D. Doctoral

8. In what areas do you currently hold a teaching certificate (i.e. Special Education, Middle

School Science etc.) _____

Appendix J

Essential Components of the Teacher's Response

Each of these components needs to be included in each response to the student. Check off each

component to ensure it is included in your response.

	Essential Components	
1.	The student is at the forefront of the dialogue– It is the student's agenda that is driving the communication	
2.	My response is unique to the student.	
3.	My response is positive and encouraging, not criticizing or complaining.	
4.	I shared at least one personal experience with the student	
5.	I responded to the student as an equal, not as a teacher with power over them.	
6.	I made suggestions not demands in my response	
7.	I included at least one specific praise about the student's behavior or schoolwork	
8.	I asked the student at least two questions.	
9.	The length of my response is similar to the length of the student's writing.	
10.	The grammar, spelling and punctuation of my writing are correct.	

Operational Definitions of the Essential Components of the Teacher's Response

1. The student is at the forefront of the dialogue– It is the student's agenda that is driving the communication – The teacher's responses and questions are to the specific topics brought up by the student. If the teacher starts a new topic it is related to something brought up by the student.

2. My response is unique to the student. – The teacher's responses are and questions are directed to the specific student and not to a generic student.

3. My response is positive and encouraging, not criticizing or complaining – the response does not contain any criticisms or complaints

4. I shared at least one personal experience with the student – The teacher shares what they describe as something about themselves

5. I responded to the student as an equal, not as a teacher with power over them – The teacher does not take an authoritarian tone in the response

6. I made suggestions not demands in my response - The teacher may make suggestions or recommendations as a friend would make, but they do not make demands of the student.

7. I included at least one specific praise about the student's behavior or schoolwork – the praise is specific not general ("You worked hard and paid attention in class today", instead of "Good job")

8. I asked the student at least two questions. - The teacher asks a minimum of two questions

9. The length of my response is similar to the length of the student's writing. – The teacher's response is about the same length as the students. If the student writes half a page the teacher writes about half a page not a full page.

10. The grammar, spelling and punctuation of my writing are correct – All of the grammar, spelling, and punctuation are correct.

Teacher Training Fidelity Checklist

Trainer _____ **Teacher** _____   **Date** _____

2.	Teacher was given a copy of the DJ essential components checklist.	
2.	The trainer modeled how to use the DJ essential components checklist to write an initial note that contained all 10 essential components of DJ.	
3.	Working with the other teacher, the teacher wrote an initial note using the DJ essential components checklist that contained all 10 essential components of DJ.	
4.	The trainer provided remediation if all the essential components of DJ were not in the initial notes.	
5.	The teacher used the DJ essential components checklist to write an initial note that contained all 10 essential components of DJ independently.	
6.	The trainer modeled how to use the DJ essential components checklist to write a response that contained all 10 essential components of DJ.	
7.	Working with the other teacher, the teacher wrote a response using the DJ essential components checklist that contained all 10 essential components of DJ.	
8.	The trainer provided remediation if all the essential components of DJ were not in the response.	
9.	The teacher used the DJ essential components checklist to write a response that contained all 10 essential components of DJ independently.	
10.	The teacher was instructed to deal with behavior and other distractions during the data collection session just as they would during any other class.	

TRADE

Use this checklist to make sure you have all of the components of TRADE in your response to the teacher

_____ **T** – Tell the teacher something interesting about yourself

_____ **R** - Respond to the teacher's questions

_____ **A** - Ask the teacher at least one question

_____ **D** - Discuss something new with the teacher

_____ **E** - Enhance meaning with at least **two** creative word choices.

Operational Definitions of TRADE

1. Tell the teacher something interesting about yourself – The student says something about him or herself.

2. Respond to the teacher's questions – The student answers all of the teachers questions

3. Ask the teacher at least one question – The student asks the teacher a question about anything.

4. Discuss something new with the teacher – The student brings up a subject or topic that was not in the teacher's response.

5. Enhance meaning with at least **two** creative word choices. - The student uses two words that enhance the meaning of the writing (i.e. the baseball game was nerve-wracking rather than the baseball game was close).

Appendix M

Student Training Fidelity Checklist

Trainer _____ **Student** _____ **Date** _____

1.	The student was instructed to have a conversation with the teacher by writing notes about topics that interest them.	
2.	A copy of the TRADE mnemonic was stapled in the front of the student's journal.	
3.	The TRADE mnemonic was explained to the student and students were able to tell the trainer what each letter stand for while looking at the mnemonic in the front of the journal.	
4.	The trainer modeled how to write a note to the teacher using the TRADE mnemonic components.	
5.	The trainer and the student wrote a note to the teacher together that contained all of the TRADE mnemonic components.	
6.	The trainer answered any questions and provided remediation when necessary.	
7.	The student used the trade mnemonic to write or dictate a note to the trainer that contained all the components of the TRADE mnemonic.	
8.	The trainer informed the student that his or her entries would not be graded or corrected and that they were free to write about anything that interests them.	
9.	The trainer informed the student that if they write about anything that puts them or others at risk it would be shared with the appropriate adults in the building.	

Appendix N

TARF-R TEACHER FORM
Graphic Organizer

Treatment Acceptability Rating Form – Revised (TARF-R: Reimers & Wacker, 1988)
Modified for the Using a Using Dialogue Journaling to Increase Student-teacher relationships and decrease disruptive behaviors of Students
Teacher Form

Teacher: _____   Date: _____

Directions: Please complete the items listed below as they pertain ONLY to dialogue journaling for each student. These items should be completed by placing a check mark on the line under the question that best indicates how you feel about the use of this math strategy.

1. How clear is your understanding of the dialogue journaling?

_____   _____   _____   _____   _____   _____ _____
Not at all   Neutral   Very clear
clear

2. How acceptable do you find the dialogue journaling to be for the student?

_____   _____   _____   _____   _____   _____ _____
Not at all   Neutral   Very

3. How willing are you to use the dialogue journaling in the future?

_____   _____   _____   _____   _____   _____ _____
Not at all   Neutral   Very

4. Given the students' behavior problems, how reasonable do you find the dialogue journaling strategy?

_____   _____   _____   _____   _____   _____ _____
Not at all   Neutral   Very

5. How costly (e.g. resources, time) will it be to carry out dialogue journaling instruction in your classroom?

_____   _____   _____   _____   _____   _____ _____
Not at all   Neutral   Very

6. To what extend do you think there might be disadvantages in using dialogue journaling?

_____   _____   _____   _____   _____   _____   _____
Not at all   Neutral   Many are
likely

7. How likely is dialogue journaling instruction to make permanent improvements in student's behavior performance?

_____ _____   _____   _____   _____ _____ _____
Unlikely   Neutral   Very likely

8. How much time will be needed each day for you to carry out dialogue journaling in your classroom?

_____   _____   _____   _____   _____ _____ _____
Little time   Neutral   Much time
will be needed   needed

9. How confident are you that dialogue journaling strategy will be effective?

_____   _____   _____   _____   _____ _____ _____
Not at all   Neutral   Very
confident

10. Compared to other students who struggle with behavior, how serious are the students' problems in your classroom?

_____   _____   _____   _____   _____ _____ _____
Not at all   Neutral   Very serious
Serious

11. How disruptive will it be to your classroom (in general) to use dialogue journaling?

_____   _____   _____   _____   _____ _____ _____
Not at all   Neutral   Very
disruptive

12. How effective is dialogue journaling likely to be for the student?

_____   _____   _____   _____   _____ _____ _____

Not at all   Neutral   Very effective

13. How affordable is dialogue journaling instruction for your classroom?

_____   _____   _____   _____   _____ _____ _____

Not at all   Neutral   Very
                                                                                                             affordable

14. How much do you like the procedures in dialogue journaling?

_____   _____   _____   _____   _____ _____ _____

Do not like   Neutral   Like them
them at all   very much

15. How willing will other teachers be to help carry out dialogue journaling instruction?

_____   _____   _____   _____   _____ _____ _____

Not at all   Neutral   Very willing

16. To what extent are undesirable side-effects likely to result from dialogue journaling?

_____   _____   _____   _____   _____ _____ _____

Not likely   Neutral   Many side-
                                                                                                            effects are
                                                                                                            likely

17. How much discomfort is the student likely to experience during dialogue journaling?

_____   _____   _____   _____   _____ _____ _____

No discomfort   Neutral Very much
at all   discomfort

18. How severe are the students' behavior difficulties in your classroom?

_____   _____   _____   _____   _____ _____ _____

Not at all   Neutral   Very severe
severe

19. How well would dialogue journaling fit into your classroom curriculum?

_____   _____   _____   _____   _____ _____ _____

Not at all   Neutral   Very well
Well

20. How willing would you be to change your classroom routine to implement dialogue journaling?

_____   _____   _____   _____   _____ _____ _____

Not at all   Neutral   Very willing
Willing

A