Positive Peer Reporting and Positive Peer Reporting Combined With Tootling: A Comparison of Interventions

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POSITIVE PEER REPORTING AND POSITIVE PEER REPORTING COMBINED WITH TOOTLING: A COMPARISON OF INTERVENTIONS

by

Julie Christine Sherman

Abstract of a Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

August 2012
ABSTRACT

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by Julie Christine Sherman

May 2012

Positive Peer Reporting (PPR) and Tootling are interventions designed to improve children’s positive behavior and decrease peer rejection. Research is limited for both interventions, including dependent variables for appropriate behavior. The current study assessed PPR and a combination of PPR and Tootling for decreasing inappropriate behavior and increasing appropriate behavior. Behavior was also observed a second time to assess for generalization. Results showed that PPR and PPR with Tootling both reduced inappropriate behavior for four children referred for peer rejection and who exhibited inappropriate behavior in the classroom. There were no differences between the two interventions for inappropriate and appropriate behavior. Implications for school psychologists and educational professionals are discussed.
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A Dissertation
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ACKNOWLEDGMENTS

The writer would like to thank the dissertation director, Dr. Heather Sterling, and the other committee members, Dr. Brad Dufrene, Dr. Sterett Mercer, and Dr. D. Joe Olmi, for their assistance and support throughout the duration of this project. Special thanks also go to Erica Bachmayer and Aimee Maldonado for offering their time to conduct numerous observations over the course of the data collection process.
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CHAPTER I
INTRODUCTION

Positive social interactions are important for helping children develop social competence. Positive social interactions encourage appropriate social behaviors by providing children with examples of appropriate social skills and informing them which behaviors are not acceptable to their peers (Sebanc, 2003). Social competence is defined as “the degree to which a child can establish and maintain interpersonal relationships, gain peer acceptance, and make meaningful friendships” (Gresham, 2002, p. 1029).

Children who behave in a generally inappropriate manner are at a high risk for rejection from their peers (Pederson, Vitaro, Barker, & Borge, 2007; Rubin, Bukowski, & Parker, 2006). Likewise, children who exhibit behavior problems earlier in life often experience peer rejection in middle childhood. Waas and Graczyk (1999) established that children who exhibit academic-disruptive, aggressive-antisocial, and/or anxious-withdrawn behavior are at a higher risk for rejection than children not exhibiting those behaviors. Younger children reject academic-disruptive and aggressive-antisocial behaviors, and older children reject anxious-withdrawn behaviors. Aggressive and avoidant behaviors also increase the likelihood of peer rejection and decrease teacher preference for such students (Mercer & DeRosier, 2008).

Children who exhibit inappropriate and challenging behavior are also at a higher risk for behavioral and emotional disorder diagnoses (EMD) (Hester, Hendrickson, & Gable, 2009). These children may not receive the support they need in order to be successful in their school environment (Shores, Gunter, & Jack, 1993). They receive less encouragement and praise than children exhibiting appropriate behaviors. In addition, students who exhibit

...
inappropriate behaviors may experience academic difficulties as generally inappropriate behaviors may interfere with instructional time (Baker, Lang, & O’Reilly, 2009).

Several interventions have been developed and evaluated for children exhibiting inappropriate behaviors (Walker, Cheney, Stage, & Blum, 2005). Two interventions that hold promise for remediating social behavior deficits include Positive Peer Reporting (PPR) and Tootling. PPR and Tootling focus on decreasing negative interactions among peers by increasing prosocial behaviors. In PPR, peers report others’ behavior publicly to the class during a specified time. In Tootling, peers report others’ behavior privately by writing instances of prosocial behavior on notecards. Interventions such as PPR and Tootling improve the learning environment, reduce problem behaviors, and improve academic achievement, and, therefore, may be resourceful and efficient in decreasing and increasing a variety of behaviors in addition to those behaviors involving social interactions and development (Reinke, Splett, Robeson, & Offutt, 2009). Moreover, such interventions fit well into the ecology of classrooms and are consistent with preventative and targeted interventions within a Positive Behavioral Interventions and Supports (PBIS) framework (Morrison & Jones, 2007). In the following sections, a review of the literature will be presented.

Positive Peer Reporting

Positive Peer Reporting (PPR) is a peer-mediated social skills intervention designed to improve social relationships for children who are rejected by their peers (Skinner, Neddenriep, Robinson, Ervin, & Jones, 2002). Children increase their peers’ prosocial behaviors by publicly reporting and praising observed instances of peers engaging in prosocial behaviors. Typically, a time is selected and set aside at approximately the same time each day for implementation of PPR. A student is selected each day as the star of the
class, and at the selected time, the class voluntarily reports the star’s prosocial behaviors by using praise statements. The steps typically incorporated into PPR praise statements include: (a) looking at the person, (b) smiling, (c) saying what he or she did, and (d) telling the person he or she did a good job. Each time a student makes an acceptable praise statement and acknowledges the star’s behavior, the star is rewarded immediately with praise. To encourage the class to continue making praise statements, each student making an acceptable praise statement is also rewarded immediately with praise or a small item, such as a sticker or a pencil, or token that can later be exchanged for a classwide reward once a criterion (goal) is met.

Bowers, McGinnis, Ervin, and Friman (1999) implemented PPR in a group home setting. The participant was an adolescent Caucasian boy referred for negative interactions with peers and inappropriate behaviors, such as lying, stealing, and fighting. The authors observed the youth during the 90 minutes set aside for intervention time, with family-teachers judging whether social interactions were positive, negative, or neutral every five minutes. Positive behaviors were defined as pleasant interactions; negative behaviors were defined as unpleasant interactions; and neutral behaviors were defined as no interaction. The youth’s house parents also completed a checklist each day to determine the occurrence of problem behaviors. Members of the group home received points for reporting the youth’s positive behaviors. In addition, the participant could receive points for reporting his own positive behaviors. Points could be used in exchange for various privileges in the home. Peers were also asked to complete sociometric ratings pre- and post-intervention.

Bowers et al. (1999) evaluated the results using an AB design with a withdrawal probe. Negative interactions were high (36%) during baseline, and positive interactions were highly variable with a decreasing trend (61%). Both positive and negative interactions were
more stable during the PPR phase; negative interactions decreased to 22%, and positive interactions increased modestly to 73%. Neutral interactions remained low throughout the study. The Parent Daily Report Checklist (Chamberlain & Reid, 1987; Moore, Osgood, Larzelere, & Chamberlain, 1994; Patterson, 1964) scores indicated that problem behaviors occurred in the clinical range during baseline. During the PPR phase, problem behaviors decreased below the clinical range for 11 of the 12 data points. Peer ratings increased from 3.9 to 4.6 following the PPR phase, indicating that the target youth was rated as more accepted by his peers.

Bowers, Woods, Carlyon, and Friman (2000) replicated Bowers et al. (1999) with the goal of improving the social interactions of four adolescent boys in separate group homes. Each group home consisted of several children living with a couple who were trained in behavioral techniques (e.g., point systems). The children were selected because they were socially rejected by the other children with whom they lived. The youths in each group home were told that each week an individual would be chosen randomly to be the Most Valuable Person (MVP). A daily family meeting was held in which members were given the opportunity to report instances of the MVP’s prosocial behavior. Members who reported prosocial behaviors received points to be exchanged for privileges. Instances of positive, negative, or neutral interactions were then collected during the 10 minutes following the family meeting. All children living in the group home also rated how much they liked each of their peers on an 8-point Likert scale both before and after the study, with a higher score indicating greater approval.

The results were analyzed using an ABAB multiple baseline design across participants for three of the four participants (Bowers et al., 2000). A separate ABAB design was used for the first participant. An increase in positive interactions was observed for all
participants during treatment phases. The fourth participant’s inappropriate behaviors decreased moderately; inappropriate behavior did not change for the first and third participants, and inappropriate behavior increased slightly for the second participant. However, it should be noted that the participants had low levels of negative interactions before treatment. The second (2.7 to 3.7 for work, 3 to 3.7 for play) and fourth (2.7 to 4 for work, 3 to 5 for play) participants were rated as more likeable after the study than before the study. In addition, the first participant’s relative standing in the home increased, meaning that she was rated as more likeable than one or more of her peers as compared to before the study. The participants’ likeability improved as positive interactions increased, indicating that positive interactions are beneficial for reducing social rejection.

The Bowers et al. (2000) study had several limitations. The researchers did not specify which youth initiated or started the positive interactions. It is possible that the other youths in the group home may have been more motivated to receive points than the target student was affected by peers’ praise. Therefore, other family members may have approached the MVPs to initiate positive interactions more often than the MVPs approached their peers to initiate positive interactions. In addition, although all data were collected during PPR in an unstructured setting, the utility of PPR in less structured settings and during longer observation periods cannot be predicted from the study.

Jones, Young, and Friman (2000) conducted a PPR study in which three students were referred for disruptive behavior during cooperative learning activities and aggression towards other students. All participants were 13 years of age. The purpose of the study was to increase student cooperation as measured by increases in cooperative statements. Positive cooperative statements were defined as statements of collaboration, participation, or encouragement. The authors observed how often the target students made cooperative
statements to peers during 30-minute cooperative learning tasks. During intervention, the teacher selected a student each week to be the star of the class. The class was given the opportunity to provide compliments to the star during PPR, and each student making an acceptable compliment received points to be used in exchange for privileges. Cooperative statements continued to be monitored during cooperative learning activities during the intervention phase. All target students were allowed to be the star of the class for one week. One target student, however, was the star of the class for two consecutive weeks. The children’s peers were also asked to rate the students about how much they would like to spend their spare time with them before and after intervention.

The results were analyzed using a nonconcurrent multiple baseline design across participants and indicated that the target students increased their cooperative statements toward their peers (Jones et al., 2000). The first participant’s cooperative statements increased from 32% during baseline to 63.5% during intervention. The second participant’s cooperative statements increased from 25% to 48%, and the third participant’s cooperative statements increased from 20% to 53.5%. In fact, the target students made more cooperative statements toward their peers (54%) than peers made cooperative statements to the target students (46%). Peer ratings showed that the target students also increased their social status during the course of the study. All participants’ ratings doubled following intervention implementation, indicating they were more accepted by their peers. The teacher rated the intervention as acceptable.

The Jones et al. (2000) study had several limitations. Treatment for two of the children was only for one week, during cooperative learning activities in math. Because there were only three cooperative learning activities during each week, there were limited sessions available for interpretation of the intervention’s effects. One participant had only
two sessions during both baseline and intervention because of absences. Another limitation is that cooperation was only measured by observing cooperative statements. There are potentially more variables contributing to cooperation between students (e.g., sharing, appropriate behavior) than verbal statements of cooperation alone. Therefore, it is unknown whether or not a response class of cooperation actually increased. A third limitation is reactivity to the observers. Both the teachers and the students were aware of the study, therefore, possibly altering their behavior in the presence of the observers.

Moroz and Jones (2002) conducted a study to evaluate PPR with three socially withdrawn children. The children were identified for referral primarily because of their low rates of social interactions. The sessions were conducted during recess because an unstructured setting was more ideal for observing children’s natural social interactions. The authors aimed to increase the participants’ social involvement, which included being engaged in positive interactions with a peer or being involved in a structured game. Social involvement was observed three to four times each week during 30-minute recess periods. During PPR, a star was selected each day by the teacher, and then praised voluntarily by his or her peers. The students who gave acceptable praise statements received a sticker, or they received a popcorn party after filling a jar with cotton balls.

Moroz and Jones (2002) used a multiple baseline design across participants to evaluate treatment effects. The results indicated that PPR increased children’s social involvement during recess. However, there was some variability in the participants’ response to PPR. The first participant responded immediately to treatment, and her social involvement increased (8% to 36%). However, social involvement did not decrease when the intervention was withdrawn (81%). The second participant’s social involvement increased moderately from baseline during the intervention phase (53% to 82%) and
decreased during the withdrawal phase (46%). The third participant experienced a delayed increase in social involvement. That is, social involvement increased from approximately 5% to approximately 80% during the course of the PPR phase. One explanation for the variable results may be related to the setting in which data were collected. That is, participants may have had more opportunities for social involvement on some days than on other days due to the unstructured nature of recess.

One limitation of the Moroz and Jones (2002) was the limited number of PPR sessions per child. According to the authors, there were limited sessions because teachers were reluctant to pay more attention to one child than to the other children in the class. In addition, the authors did not examine any preexisting contingencies that occurred during recess. For example, the third participant may have experienced a delayed increase in social involvement because positive peer attention challenged a preexisting contingency of reinforcement for withdrawn behavior. In other words, reinforcement gained from social avoidance may have temporarily decreased the effectiveness of positive peer attention as reinforcement. The third participant’s delayed increase in social involvement also suggests that a number of other variables (e.g., teacher praise) may have been introduced and contributed to the results.

Lyons (2004) used PPR to decrease negative behaviors exhibited by aggressive children, increase positive behaviors exhibited by socially withdrawn children, and examine if changes in behavior generalized to settings which were not close in time to PPR. Two socially withdrawn children and two aggressive children participated in the study. All participants were in preschool, kindergarten, or first grade. Social behaviors were observed and coded as positive behavior, negative behavior, or no social behavior. In addition, positive behaviors were coded as peer initiated or target child initiated. For inclusion in the
study, socially withdrawn children had higher levels of no social behavior as compared to their levels of positive behaviors and negative behaviors, and aggressive children had higher levels of negative behaviors as compared to their levels of positive behaviors. Observations were recorded during the 30 minutes prior to PPR. Unique to this study, generalization probes were also collected weekly during lunch or during a group activity. During PPR, a student was selected as star of the class each day. The class had the opportunity to observe the selected student during the day and volunteer praise statements during the PPR session. Acceptable praise statements were rewarded with a paper star to put on a poster similar to the night sky. When the sky was filled with stars, the class received a reward.

Lyons (2004) used an ABA design to evaluate treatment effects. One socially withdrawn child (Josh) did not show increases in positive behaviors or decreases in negative behaviors; however, he initiated positive behaviors more often during the intervention phase than during baseline. The second socially withdrawn child (Beth) showed increases in positive behaviors (5% to 39%), with decreases in no social behavior (93% to 60%). Both aggressive children (Kris and Max) showed moderate increases in positive behaviors (9% to 34% and 16% to 24%, respectively) and moderate decreases in negative behaviors (36% to 16% and 28% to 7%, respectively). The withdrawal phase showed data similar to the intervention phase. However, the end of the school year allowed for only two data points to be collected in each withdrawal phase, limiting interpretation. The generalization probes replicated each phase of treatment, showing that the changes in behavior generalized to other settings.

There were several limitations to the Lyons (2004) study. Although follow up data were taken, there were only two observations, thus maintenance data must be interpreted with caution. The participants may not have received reinforcers frequently enough for the
intervention to provide them with maximum benefit. There may have been a larger treatment effect if the star received more positive statements during PPR or if there were more reinforcing rewards. In addition, both Kris and Josh were reprimanded for interacting with peers, meaning that both participants were discouraged from talking with other students during class time. The high occurrence of no social behavior for the participants may indicate that distinctions between socially withdrawn and aggressive children were minimal. Even though the aggressive children displayed higher levels of negative behaviors than positive behaviors, they could easily have been classified as withdrawn because their levels of no social behavior were higher than their levels of positive behaviors and negative behaviors. There was also a delay between the selected child’s positive behaviors and praise for those behaviors. It may have been more difficult to associate the positive behaviors with praise.

Johnson-Gros and Shriver (2006) examined the use of compliance training and PPR for increasing a child’s compliance levels and social interactions in his preschool classroom. Compliance and social interactions were observed during large group instruction in the morning and during lunch and recess in the afternoon. Compliance was defined as initiating compliance with a teacher request within five seconds. As in the Lyons (2004) study, social behaviors were recorded as positive behaviors, negative behaviors, or no social behavior. The compliance-training phase consisted of providing the target child with a reinforcing environment, delivering instructions effectively, praising the child upon compliance, and administering timeout contingent upon noncompliance to commands from his teacher. During the PPR and compliance phase, the teacher selected a star of the class each day, with the target child selected twice each week. The class reported positive behaviors after observing the selected student during center time. Each student making an acceptable
response was awarded a star to put on a poster similar to the night sky. The stars on the poster gave the class the opportunity to earn ice cream each week.

An A/B/B+C design was used to evaluate changes in compliance (Johnson-Gros & Shriver, 2006). Results indicated that compliance increased when compliance training was introduced (68% to 91% in the morning and 10% to 84% in the afternoon). Positive social interactions also increased moderately during the compliance training phase (1% to 11% in the morning and 3% to 9% in the afternoon). However, positive social interactions continued to remain at low levels until PPR was implemented. Negative social behaviors increased in the morning (0% to 13%) and decreased in the afternoon (34% to 4%) during the compliance training phase. The addition of PPR to the intervention package increased positive social interactions to a greater extent (67% in the morning and 64% in the afternoon), and the high levels of compliance were maintained (96% in the morning and 98% in the afternoon). Negative social behaviors were decreased to near zero levels in both settings.

One limitation to the Johnson-Gros and Shriver (2006) study was that there were only two observations conducted in each setting during the baseline phase, and positive behaviors appeared to be increasing. Nevertheless, the researchers decided that intervention should be implemented quickly because of concerns about aggression. In addition, the authors did not control for order effects in their research design. Compliance training was always followed by PPR, so the success of PPR for increasing compliance and social interactions may be due to prior exposure to compliance training. Therefore, even though the addition of PPR to the intervention package increased levels of positive social interactions to a greater extent than compliance training alone, it is not clear whether or not PPR presented alone was an appropriate intervention for increasing compliance.
Hoff and Ronk (2006) implemented PPR with a third and fourth grade special education classroom in which the students did not interact appropriately. The teacher expressed particular concerns about Tracy, a student with low levels of social interactions. The class received social skills training prior to the PPR intervention with no improvements; therefore, the teacher requested an intervention change. Observations were conducted during an unstructured morning free time period. The students went through a training session in which they first memorized compliments for practice. They then created a poster that displayed common compliment statements, with a word missing from each statement. The idea behind the poster was to increase the fluency with which the students could create compliments by determining how quickly they could fill in the blanks. During intervention, the teacher randomly chose a student each day to be the Most Valuable Person (MVP). The class was reminded who was the MVP that day by writing the MVP’s name on the board and placing a special toy on the MVP’s desk. The other students in the class were told to observe the MVP throughout the day for prosocial and appropriate behaviors. The Hoff and Ronk (2006) study differs from previous studies in that the class voluntarily complimented the MVP both during PPR and throughout the day. Each student making an acceptable compliment put a token in a box on the teacher’s desk and was praised by the teacher. For every 10 tokens in the box, the class put a square on a pyramid poster. When the poster had 120 squares, the class was awarded a cupcake party.

The results were analyzed using an ABAB withdrawal design. The Hoff and Ronk (2006) study supported previous PPR research by demonstrating an increase in positive social interactions among students. For the class, positive interactions occurred in a higher mean percentage of observed intervals during the PPR phase (26.14%) than during the baseline and withdrawal phases (16.23% and 17.43%, respectively). Negative interactions
remained low throughout the study. Tracy’s prosocial interactions with peers occurred for a mean of 2.08% of observed intervals during baseline and increased to a mean of 26.34% of observed intervals during the PPR phase. There were no data reported for Tracy during the withdrawal phase because of absences. Negative interactions remained low for Tracy throughout the study.

The researchers noted several limitations (Hoff & Ronk, 2006). First, the class participated in social skills training prior to intervention implementation. The increase in positive social interactions could be due to the sequence of social skills training and PPR implementation, not PPR alone. Second, data were not available for treatment integrity, so it is unknown whether or not the treatment was implemented consistently. The authors reported there were several occasions when the teacher did not draw a name or count the number of tokens, suggesting some problems with treatment integrity. Treatment effects may have been greater if treatment was consistently implemented with integrity. Even though there was an increase in social interactions for the class, the increase was not large. This could be because observations were in an unstructured setting, and therefore, the students may have had different opportunities for social interactions each day. Finally, the results may not generalize to many general education classrooms, as the class was small, with both a teacher and an assistant in the classroom. Many general education classrooms are larger and without an assistant, making it more difficult to focus on intervention implementation.

Overall, the literature base provides support that PPR is an effective intervention for decreasing negative interactions and increasing prosocial behavior among students. PPR is also beneficial in that it improves social status for aggressive or socially withdrawn children (Bowers et al., 1999; Bowers et al., 2000; Jones et al., 2000). One of the main limitations of
PPR research is that few researchers have examined whether or not behavior changes
generalized to other settings. Although the Lyons (2004) and Johnson-Gros and Shriver
(2006) studies indicated that behavior changes occurred in other settings as well as in the
PPR setting, further research is needed in this area. Further, no studies have investigated the
effectiveness of PPR for reducing generally inappropriate classroom behaviors. PPR may
have utility as a class wide intervention to support and maintain reductions in generally
inappropriate classroom behavior. This intervention is consistent with classwide support as
recommended by PBIS by providing additional supports to improve inappropriate behaviors
and encouraging success in school, work, and home settings (Morrison & Jones, 2007).
Adherence to a PBIS framework supports the idea that PPR could be useful in decreasing or
increasing a wide variety of behaviors in addition to increasing prosocial behaviors.

Tootling

Like PPR, Tootling is a class-wide intervention technique and has been defined in the
past as reporting the appropriate social behaviors of peers (Skinner, Skinner, & Cashwell,
1998). However, there are several components that distinguish PPR from Tootling
(Morrison & Jones, 2007). First, during PPR, students publicly report observed prosocial
behaviors. During Tootling, prosocial behaviors are reported privately and anonymously
through use of notecards. PPR only takes place at a certain time of day, and during Tootling,
students are allowed to report prosocial behaviors throughout the day by placing their
completed notecards in a shoebox. Peer praise is used as an independent variable in PPR
studies, with reported mild effects on social behavior (Morrison & Jones, 2007). Tootling
studies, on the other hand, have often used peer praise as a dependent variable with no direct
measure of behavioral change among participants. Finally, PPR is usually used to improve
the social interactions of individuals, whereas Tootling is usually used to improve the social interactions of a group or class.

As originally defined, Tootling can be viewed as the opposite of tattling (Skinner, Cashwell, & Skinner, 2000). Whereas tattling is described as informing someone about inappropriate behavior, Tootling is described as informing someone about appropriate behavior. During a training session, the class is given the opportunity to report instances of appropriate social behavior, and they are given feedback on any examples they provide. During intervention, the class is given access to notecards on which to write instances of other students’ appropriate behaviors. The students are instructed to drop their completed notecards in a marked shoebox, and when the amount of class tootles reaches a certain number, the class is given a reward. Public posting (e.g., cotton balls in a jar, stars in the night sky, or an icon climbing a ladder) of the number of class tootles is used to provide feedback to the class on the number of tootles made daily. When the class achieves their goal of a set number of tootles, the class is awarded a prize, and the number of class tootles returns to zero (e.g., the jar is emptied of cotton balls or the stars are removed from the night sky).

Skinner et al. (2000) conducted the first Tootling study with a general education fourth grade classroom. The authors used an interdependent group contingency to increase children’s reporting of prosocial behaviors, and measured the number of tootles obtained each day. During intervention, students were provided with notecards on which to write instances of their peers’ prosocial behaviors. Acceptable tootles indicated that a student did something to help another student. The tootles included the student who helped, what he or she did to help, and the student who was helped. The students placed these cards in a shoebox throughout the day. When a student wrote the same instance of helpful behavior
multiple times, the behavior was counted once. When several students wrote the same instance of helpful behavior, all tootles were considered to be valid. A poster showed an icon moving up the rungs of a ladder in order to illustrate to the class their progress in achieving their goal. When the class completed 100 tootles that met all requirements, they received an extra 30-minute recess session. The next goal for the class was 150 tootles, and the reward for reaching this goal was watching a movie.

The results were analyzed with an ABAB withdrawal design (Skinner et al., 2000). There was little observed change in the number of tootles from baseline to the first intervention phase; however, a confound may have affected the results. That is, the principal withheld daily recess until some missing books were returned or located. It is possible the students doubted whether or not they would be rewarded for reaching their Tootling goal until the teacher reassured them that the principal agreed to allow the children recess as their reward. Despite the small change in behavior during the first treatment phase, there was a decrease in tootles during the withdrawal phase and an increase in tootles during the second intervention phase, indicating the treatment effectively increased the number of tootles. The researcher considered the intervention to be accepted by the teacher because she continued implementing the Tootling intervention after the study was over.

Cashwell, Skinner, and Smith (2001) replicated Skinner et al.’s (2000) research with second grade students. Once again, the purpose of the study was to increase children’s tootling behaviors, with the authors measuring the number of tootles turned in by the end of each day. Prior to intervention implementation, students were given the opportunity to give both written and verbal examples of prosocial behaviors. Students wrote down their peers’ prosocial behaviors on notecards throughout the day and placed them in a shoebox. As in the Skinner et al. (2000) study, a poster was displayed showing an icon moving up a ladder to
indicate the students’ progress in reaching their end goal. During baseline, the teacher read each tootle and tallied the number of responses that included all of the requirements at the end of the day. During intervention, the class was rewarded when 100 tootles met the requirements. They met their goal and received 20 minutes of extra recess time. Their second goal of 150 tootles resulted in a trip to a special playground, and their third goal of 200 tootles resulted in watching a movie.

As in the Skinner et al. (2000) study, Cashwell et al. (2001) used an ABAB withdrawal design to evaluate the effects of the intervention. The results showed that Tootling was high in the beginning of the first intervention phase. The initial increase in tootles may be because the reward contingency was novel. There were notable decreases in tootles following the class receiving an award, with more frequent responding as students neared the next goal, consistent with a fixed ratio schedule of reinforcement. In other words, the children may have adjusted their number of tootles based on access to the reward. Changing the number of tootles required for reinforcement may help to maintain the children’s high rate of responding. However, the general pattern of behavior across phases indicated that group reinforcement and displaying progress in achieving each goal was successful in increasing tootles. Acceptability was not formally measured; however, the authors reported that the teacher continued the intervention several weeks after the study was over. The teacher also indicated that Tootling was a useful way for children to practice their writing.

One limitation of the Cashwell et al. (2001) study was the variability in Tootling behaviors throughout the study. Tootling decreased on the two days when a substitute was present. Also, the variability in Tootling may be because different activities occurred on different days. Therefore, there may have been fewer opportunities to observe prosocial
behaviors on certain days. The results also showed that Tootling increased reports of prosocial behaviors. Although Tootling behaviors increased, the effect of Tootling on social relationships was not measured. An increase in reporting behavior does not mean that social interactions were increased.

Cihak, Kirk, and Boon (2009) conducted a study that differed from previous Tootling studies in that it aimed to decrease generally inappropriate behaviors as opposed to increase number of tootles. The participants were a third grade classroom of 19 students. Three students had a learning disability, and one student had a diagnosis of Attention Deficit/Hyperactivity Disorder (ADHD). The classroom teacher collected data for disruptive behavior by making a mark next to the child’s initials exhibiting each disruptive behavior. Disruptive behavior included out of seat behavior, talking out, and any physical contact with other students that interfered with studying. One instance of behavior was recorded when a student engaged in two disruptive behaviors concurrently. Two instances of disruptive behavior were recorded when a student engaged in two disruptive behaviors successively. During a training session, all students practiced giving verbal and written examples of prosocial behaviors. During intervention, the students wrote observed prosocial behaviors on notecards throughout the day and placed them in a clear container on the teacher’s desk before transitions. The teacher read all tootles to the class at the end of the school day. Daily tootles and cumulative tootles were recorded on a poster. The class received extra recess time a total of eight times when they reached their predetermined goal of 75 tootles.

Cihak et al. (2009) used an ABAB withdrawal design to evaluate the results. Tootling reduced disruptive behaviors from an average of 23.2 to 3.5 incidents per day, with no incidents of disruptive behavior during the last three sessions. The authors concluded that the reduction in disruptive behaviors may be related to the matching law theory. Matching
law theory (Herrnstein, 1961, 1970) hypothesizes that the time allocated to a behavior is related to the available reinforcement for that behavior. In many cases, reinforcement is simultaneously available for appropriate and inappropriate behaviors on different schedules, and as a result, individuals distribute their behaviors to match the schedule of reinforcement. Behaviors reinforced more frequently occur more often, and behaviors reinforced less frequently occur less often. Tootling may produce a higher schedule of reinforcement for appropriate behaviors than inappropriate behaviors, thus changing the frequency in which they occur.

The authors (Cihak et al., 2009) added to previous research by formally measuring treatment acceptability with a rating scale and measuring disruptive behavior directly. However, Cihak et al.’s (2009) study also had several limitations. It is unknown whether the results were due to the reward contingency (recess time) or to the increase in social reinforcement through Tootling. Unlike other Tootling studies, both the reward contingency and Tootling were introduced to the class at the same time. As a result, disruptive behavior may have decreased because of the contingency, because of Tootling, or because of both the contingency and Tootling. As in previous studies, external validity was limited because social relationships were not measured. Even though disruptive behavior decreased, social relationships may not have improved.

Both the Skinner et al. (2000) and Cashwell et al. (2001) studies measured children’s reporting of prosocial behaviors instead of directly observing the children’s prosocial behaviors. The purpose in increasing children’s prosocial behaviors is to improve social relationships for children who are neglected or rejected by their peers. Even though the Cihak et al. (2009) study measured disruptive behavior directly, replication is necessary to increase external validity. No Tootling studies have included measures of social
relationships or asked students in the class to complete social ratings. Therefore, the results of these studies only show that Tootling increased the number of tootles for second, third, and fourth grade classrooms. They do not indicate that prosocial behaviors or social relationships improved.

**PPR and Tootling**

Morrison and Jones (2007) attempted to integrate some features of the Tootling intervention in PPR by adapting PPR for use as a class wide intervention in which every student in the class had the opportunity to receive praise each day. The authors sought to use PPR as a class wide intervention to reduce both social isolation and the number of items endorsed on the Critical Events Index (CEI) (Walker & Severson, 1992), a checklist of problem behaviors indicative of behavior disorders. Two third grade classrooms participated in the study (13 students in Ms. Bean’s class and 14 students in Ms. Dawn’s class). One student in Ms. Bean’s class was diagnosed with a Cognitive Disability, and one student in Ms. Dawn’s class was diagnosed with an Emotional Disturbance. The children in the class were asked to nominate three peers he or she would like to play with three times prior to intervention implementation and two times during intervention implementation. Isolated children were nominated by one or less of their peers. During the beginning of PPR, the teacher distributed numbered notecards to each student in the class. The teacher randomly selected a number by using a carnival style wheel and read a chance card to that student. Chance cards had statements such as “give a praise statement to the student to the right of you” or “receive a praise statement from a student with a number greater than your number.” Both students giving and receiving acceptable praise statements were rewarded. Chance cards were then read to students in sequential order until time for lunch. The teacher completed the CEI for the entire class at the end of each day. In addition, observers
completed the CEI during transition periods and lunch approximately six times each month to assess for generalization.

PPR as a class wide intervention was evaluated using a multiple baseline design across classrooms. The results of the Morrison and Jones (2007) study indicated that the number of problem behaviors endorsed on the CEI during class time decreased during intervention. The number of problem behaviors was reduced by one episode per day in Ms. Bean’s class, and approximately three episodes per day in Ms. Dawn’s class. Likewise, the number of critical maladaptive behaviors was reduced by 10 episodes per day during transition periods and lunch. The intervention also reduced the number of socially isolated children in the classrooms from 5 to 1.5 children. The other children in the class may have become conditioned to associate the socially isolated children with reinforcement. The class may have been less motivated to engage in negative interactions because they received rewards for engaging in and reporting prosocial behaviors.

The Morrison and Jones (2007) study had several limitations. First, there were no interobserver agreement (IOA) data collected to determine the accuracy of the number of critical events endorsed by the teacher. There were more critical maladaptive events endorsed during transition periods and lunchtime than during class time. The discrepancy between scores may be due to a variety of reasons. There may have been variations between the teachers and observers in defining the behaviors on the CEI. Teachers and observers observed the students in different settings, which may have caused changes in the students’ behaviors. Also, there may have been variations in the teachers’ and observers’ observation procedures. However, the number of critical events decreased by 26 percentage points, both as observed by the teachers in the classrooms and as observed by the observers during transitions and lunch. Second, an overlap in data across phases in Ms. Bean’s classroom
precluded the ability to attribute results confidently to the intervention. Third, there were several weeks when data were not collected. Therefore, caution must be used in interpretation of the results. Fourth, both teachers added components to the intervention, such as teaching students to accept feedback and rewarding incidental peer praise for prosocial behavior. Even though both additions are valuable tools for improving student behavior, incorporating additional intervention components decreases the ability to attribute results to the intervention alone. Finally, the adaptations for using PPR as a class-wide intervention have not been evaluated with other classes or populations.

Present Study

As noted previously, PPR and Tootling share several characteristics. However, there are unique components to each intervention. Students report prosocial behaviors publicly in PPR and privately in Tootling. Prosocial behaviors are reported at a certain time of day in PPR and throughout the day in Tootling. Finally, PPR has traditionally been used to increase the prosocial behaviors of an individual, and Tootling has been applied to increase the prosocial behaviors of a group.

Overall, results from past PPR studies have indicated that PPR is effective for decreasing children’s negative interactions and increasing prosocial behaviors with a variety of populations. Bowers et al. (2000) implemented PPR with four adolescents (10-16 years old) in a group home, and Moroz and Jones (2002) implemented PPR (2002) with three elementary school students (7-10 years old, one student was in special education). Hoff and Ronk (2006) implemented PPR in a third and fourth grade special education classroom (all students had IQ scores in the Mild range of Mental Retardation), and Johnson-Gros and Shriver (2006) implemented PPR with a 4-year-old boy in preschool. Likewise, results from Tootling studies have indicated that Tootling is effective for increasing children’s reporting
of peers’ prosocial behaviors or reducing disruptive behavior. Tootling was implemented in second through fourth grades. In the Cihak et al. (2009) study, three students had specific learning disabilities, and one student had ADHD.

There are several consistent criticisms for both interventions. For example, few researchers have examined whether or not behavior changes generalized to other settings. Furthermore, no studies have investigated the effectiveness of PPR in reducing generally inappropriate behaviors. The authors of studies in which Tootling served as the primary intervention did not indicate whether or not any appropriate behaviors increased as those behaviors were not observed directly. The authors also did not measure improvements in children’s social relationships. There are currently no studies that have combined the PPR and Tootling interventions. The Morrison and Jones (2007) study is the only study to date that has adapted PPR as a class-wide intervention, an important aspect of Tootling. The authors found that the intervention decreased critical maladaptive behaviors and the number of isolated children. As only two studies have examined generally inappropriate behaviors (Cihak et al., 2009; Morrison & Jones, 2007), more research needs to be conducted.

Children who engage in inappropriate behaviors may be at increased risk for a variety of problems including social rejection from peers (Pederson et al., 2007; Rubin et al., 2006), loss of academic instruction time (Baker et al., 2009), and diagnosis of behavioral disorders (Hester et al., 2009). Several interventions have been developed for children who exhibit inappropriate behaviors, including social skills groups and social counseling (Walker et al., 2005). However, in order for interventions to be successful in the natural environment, children must be able to use new skills in other settings (Haring & Eaton, 1978). Using desired skills in school and work environments promotes success in those areas. Many interventions do not address generalization as a goal of treatment (Skinner et al., 2002). PPR
and Tootling are two interventions that use the natural environment to encourage the application of necessary skills to other activities. That is, both interventions use peer praise and approval to promote appropriate, functional behaviors.

Both PPR and Tootling also fit well with services recommended by PBIS models. For example, PPR and Tootling can be used in the classroom to teach expectations and provide supports for all students. In addition, both interventions can target students with more specific needs such as social skills training, by increasing structure and contingent feedback. PPR and Tootling interventions are advantageous to teachers as they are relatively easy to implement. They decrease negative behaviors and increase positive behaviors of the class without requiring teachers to manage individualized interventions for multiple children.

Studies indicate that a minimal daily investment on the part of teachers may encourage students to engage in positive social interactions, which compete with pre-existing, peer-mediated contingencies such as peer rejection where peer approval has the potential to reinforce antisocial behavior (Morrison & Jones, 2007; Jones et al., 2000).

In the present study, PPR and Tootling were used to decrease inappropriate behaviors and replace them with appropriate behaviors, though not specifically target behaviors. Both interventions are designed for children in need of additional supports and are likely to improve any generally inappropriate classroom behavior exhibited by children at risk for peer rejection. Participating children increase the amount of attention they give to their peers for appropriate behavior, and as a result, decrease the amount of attention they give to their peers for inappropriate behavior. Appropriate behavior may also increase due to modeling/observational learning. Students watch as their peers receive rewards for appropriate behavior, and in order to be rewarded themselves, the students may increase their own appropriate behavior.
PPR and Tootling show similar success in decreasing inappropriate behaviors and increasing appropriate behaviors. It is possible that the addition of Tootling components to the PPR intervention may decrease students’ inappropriate behaviors more than either intervention alone. The current study compared PPR alone to a combination of PPR and Tootling in an attempt to determine which intervention was more effective. No studies to date have combined these two procedures. PPR was chosen as the comparison for the combination condition due to a more extensive and supported literature base. In addition, only one Tootling study (Cihak et al., 2009) measured behavior directly. Tootling may even be viewed as a modification of PPR. The current study provided children with the opportunity to praise a specified student by reporting his or her appropriate behaviors through PPR or Tootling, with Tootling being modified as an individual intervention. In past studies, students reported behaviors publicly at a certain time of day in PPR. A Tootling component allowed students who may feel uncomfortable with PPR to earn rewards by reporting appropriate behaviors anonymously and throughout the day. Student behaviors were also recorded during a second learning activity to account for generalization of intervention effects.

This study addressed the following research questions:

1. Will PPR alone decrease children’s inappropriate behavior?
2. Will the combination of PPR and Tootling decrease children’s inappropriate behavior?
3. Will the combination of PPR and Tootling be more effective for decreasing children’s inappropriate behavior than PPR alone?
4. Will children’s appropriate behavior increase as inappropriate behavior decreases?
5. Will the effects of the intervention generalize to other settings in the school?
CHAPTER II

METHOD

Participants and Setting

The participants included four children who were referred for inappropriate classroom behavior and social difficulties by the principal. Each participating child was selected from a different general education elementary school classroom in third to sixth grade, and no participants had severe disabilities or were in special education. In addition, the children’s teachers participated by implementing the proposed interventions. Therefore, the researcher obtained informed consent from both teachers and parents (see Appendices A and B). The children went through a screening session to determine whether or not they meet participation criteria (see Procedures section). The study was conducted in a rural school in a southeastern state. The school was in its fourth year of PBIS implementation and received an overall SET score of 98.2, thus participating teachers had prior experience with interventions targeting social behavior. Specific characteristics of each participant are reported in the following section.

Deandra

Deandra was a 9-year-old African American female student referred by the principal for disruptive behavior in the classroom and problems relating to other students. When asked about Deandra’s behavior, her teacher reported that Deandra engaged in verbal bullying during class and had problems paying attention when the teacher gave directions. She rated the severity of these behaviors as 8 out of 10, and stated that they happened most often in the morning and when there was another student talking. In the past, Deandra’s teacher reported she had previously tried reminding Deandra to stay on task and praising Deandra when she raised her hand before speaking. Her teacher also gave students eagle
bucks (i.e., tokens awarded to students for good behaviors and exchanged for prizes) and points for following classroom rules. Deandra attended a fourth grade classroom of 19 students (10 girls, 9 boys). At the time of the study, Deandra’s teacher had four years of experience teaching elementary school; however, this was her first year teaching fourth grade.

*Jayden*

Jayden was a 9-year-old African American male student in the fourth grade. His class consisted of 19 students (8 girls, 11 boys). According to his teacher, Jayden often shouted out when answering questions, talked to other students at inappropriate times, and wandered around the classroom during instruction. His teacher stated that, as a result of these behaviors, she often had to reteach him lessons because he had problems focusing on his work. The teacher rated the severity of his behaviors as 5 out of 10, also stating that the severity varied depending on Jayden’s mood. Jayden’s behaviors were reported to occur throughout the day and in all settings without obvious antecedents. In the past, his teacher had tried a sticker chart to reward his appropriate behavior. She also reported moderate success in decreasing his behaviors with a behavior checklist. For the behavior checklist, Jayden’s teacher tracked inappropriate behavior with tallies and used the number of tallies as a means of determining punishment. Jayden’s teacher was in her first year of teaching and implementing behavior interventions.

*Adriana*

Adriana was an 11-year-old Caucasian female student referred by the principal for socially inappropriate behavior and social exclusion. Adriana’s teacher expressed concern about Adriana’s maturity level as compared to her peers. She was described as passive-aggressive. She did not complete her work and copied answers from other students.
According to her teacher, other students openly told her that they disliked her and did not want to work with her. She often left her seat without permission to talk to the teacher or look at things. Her teacher also stated that she argued with others and asked questions without raising her hand. Her teacher reported that the behaviors occurred in all settings at school. Her behaviors were rated as 5 out of 10 and occurred most often during transitions and when someone said something about her behavior. Procedures to address Adriana’s behavior, in the past, included being “kind to her,” reprimanding the class, and encouraging her to work by herself. Adriana attended a sixth grade classroom of 15 students (4 girls, 11 boys). Her teacher had 23 years of experience in the school system; however, she had 7 years of teaching experience. She taught Kindergarten for half of a year and then was moved to teach fifth and sixth grade.

Faye

Faye was an 8-year-old African American female student referred for concerns related to negative social interactions and off task behavior. She attended a third grade classroom of 22 students (9 girls, 13 boys). When asked about Faye’s behavior, her teacher reported that Faye did not complete her assignments, and she wandered around the room to talk to other students or play with things. She often put things in her mouth during individual and group classwork, “grossing out” her classmates. According to her teacher, Faye’s behavior was not manageable because she required constant attention to stay on task. Her behaviors occurred most often in the late afternoon before recess. In the past, Faye’s teacher had tried a variety of procedures to improve her behavior, including tallies for inappropriate behavior, praise, stickers, eagle bucks, time out, taking away recess time, and silent lunch. Faye’s teacher had three years of experience teaching third grade at the time of the study.
Materials and Measures

Problem Identification Interview

To better understand each child’s behavior, a problem identification interview (PII) (modified from Kratochwill & Bergan, 1990; see Appendix C) was conducted with each child’s teacher. The PII provided the following information: (a) identification of problem behaviors; (b) assessment of behavior and how often behavior occurs; (c) identification of factors that influence behavior; and (d) identification of goals or acceptable levels of behavior. Although no psychometric properties are reported for the PII, it is a commonly used instrument in behavioral consultation (Zuckerman, 2005).

Treatment Acceptability

A modified Intervention Rating Profile-15 (IRP-15) (Martens, Witt, Elliott, & Darveaux, 1985; see Appendix D for PPR and Appendix E for PPR plus Tootling) was administered as a measure of general acceptability and consists of 15 statements used to determine teachers’ acceptability of each intervention. Each statement on the IRP-15 is rated for extent of agreement on a 6-point Likert scale, with higher scores indicating greater agreement and treatment acceptability. The IRP-15 is a one-factor instrument with general acceptability as the factor (Martens et al., 1985). The cut-off for an “acceptable” treatment is usually set at 52.50. The IRP-15 is reported to have high internal consistency, .98 using Cronbach’s alpha (Martens et al., 1985). The author modified the wording of the original instrument by inserting the names of the implemented interventions. Previous research has suggested that modifying the wording of the IRP-15 does not affect its psychometric properties (Freer & Watson, 1999).
Child Behavior Scale

Teachers completed the Child Behavior Scale (CBS) (Ladd & Profilet, 1996; see Appendix F) to assess how each child behaved with his or her peers. The scale consists of 59 items rated on a 3-point Likert scale (1 = doesn’t apply, 2 = applies sometimes, 3 = certainly applies). Thirty-five items are separated into six subscales: (a) aggression (7 items; range = 7 - 21), (b) prosocial behavior (7 items; range = 7 - 21), (c) asocial behavior (6 items; range = 6 - 18), (d) anxiety (4 items; range 4 - 12), (e) peer rejection (7 items; range 7 - 21), and (f) hyperactivity (4 items; range 4 - 12). The remaining 24 items are filler items intended to prevent respondents from classifying the subscales and intentionally endorsing problematic behavior in those areas. The CBS is scored by averaging children’s scores across the items in each subscale. A higher score indicates that a behavior occurs more frequently and identifies areas that are hypothesized to increase interpersonal risk and competence as compared to other children at their grade level. Ladd (2010) provided separate standard deviations for each subscale and grade that may be used to interpret scores.

All six subscales have been reported to have internal consistency reliability in the moderate to high range (.54 - .83) using Cronbach’s alpha (Ladd & Profilet, 1996). Construct validity correlations between the CBS and the Child Behavior Profile-Teacher Report Form (CBP-TRF) (Achenbach, 1991) were stronger for closely related behaviors (e.g., asocial with peers correlated with withdrawn behavior) than they were for different behaviors (e.g., anxious-fearful correlated with aggressive behavior), suggesting that the CBS is different than the CBP-TRF, but still measures the same constructs. In addition, concurrent and predictive validity showed that CBS scores were positively related to both current and future classroom peer acceptance (Ladd & Profilet, 1996).
Dependent Variables and Data Collection

The primary dependent variable was inappropriate behavior. Inappropriate behavior was operationally defined for each child based on the concerns of his or her teacher. Deandra’s behaviors of concern were off task and inappropriate vocalizations. Jayden and Adriana’s behaviors included off task, out of seat, and inappropriate vocalizations. Faye’s behaviors included off task, out of seat, and playing with objects. Inappropriate vocalizations were defined as any academically irrelevant vocalization or verbal noise made by the child, including humming, making unusual vocal noises, speaking, whispering, or making noises with one’s teeth. Out of seat was defined as no part of the buttocks or legs making contact with the seat, and off task was defined as removing eye contact from the task at hand to engage in some other behavior for three or more seconds. Playing with objects was defined as touching or manipulating any object in the room besides the table, chair, pencil, or materials needed for the academic task at hand; this could include the child’s clothing, walls, light switches, toys, curtains, and so forth.

The secondary dependent variable was appropriate behavior. Appropriate behavior was operationally defined for each child based on the behaviors his or her teacher wanted to improve. For all participants, appropriately engaged behavior was defined as engaging in any of the following behaviors at the point of observation: (a) looking at the teacher during instruction; (b) working with a peer when instructed to do so; (c) reading silently or writing to complete assignments when instructed to do so; (d) participating in a teacher-approved activity following the completion of work; or (e) talking with the teacher about academic work.

Both inappropriate behaviors and appropriate behaviors were measured during 20-minute observations using a 10-second partial interval recording procedure (see Appendix
Behavioral data were collapsed into the broad labels of “inappropriate behavior” and “appropriate behavior” to better measure how PPR and PPR with Tootling affect behavior as a whole. The researcher conducted 20-minute observations when inappropriate behavior was most likely to occur. Generalization probes were conducted once each week during a second learning activity in which students had opportunity to interact with each other. The second learning activity was separate in time from when intervention data were collected. For example, if intervention data were collected in the morning, generalization data were collected in the afternoon. The primary researcher and/or trained data collectors were present in the classroom during sessions to observe and collect data.

Design and Data Analysis

The researcher used two multiple baseline designs across participants (MBL) to evaluate treatment effects. Two children participated in each MBL series. Counterbalancing of treatment conditions across MBL pairs was used as a control for order effects. The first MBL participants went through the following phase sequence: Baseline, PPR, and PPR with Tootling. The second MBL participants went through the following phase sequence: Baseline, PPR with Tootling, and PPR. Initially, a phase change was implemented for the first participant in each MBL following a stable or increasing trend in inappropriate behavior. A phase change was implemented for the second participant following a treatment effect for the first participant or at least three sessions without a treatment effect. The subsequent phase change was made in a similar manner. The researcher used visual analysis of level, trend, and the variability around level and trend to evaluate the effectiveness of the interventions. The intervention showing the most change in level in the direction intended, accounting for variability and trend, was considered to be the most effective intervention. In addition, the researcher assessed for treatment effects during a second learning activity as a
measure of generalization. Finally, the researcher calculated teachers’ ratings on each
subscale of the CBS as a measure of teachers’ perceptions of target children’s social behavior
with their peers. Scores that increased or decreased by a standard deviation were considered
meaningful.

Procedures

Screening

The researcher interviewed teachers using the PII in order to obtain information
regarding each child’s inappropriate and desired behaviors. In addition, a direct observation
screening session was conducted. In order to qualify for participation in the study, referred
children had to exhibit inappropriate behavior for a minimum of 20% of the observed
intervals. Children who met the screening criteria continued with the study. There were no
children who failed to meet the screening criteria.

Baseline

The researcher conducted 20-minute observations for each child when the
inappropriate behavior was most likely to occur and during a second learning activity. The
occurrence of inappropriate and appropriate behaviors was recorded for each interval. The
teachers were instructed to deal with instances of inappropriate behavior as they normally
would. Teachers were asked to complete the CBS for each target student at the outset of the
baseline phase.

Teacher Training

The teachers were trained using both didactic and direct training methods before each
intervention phase. Written instructions (scripts), practice with implementing the
intervention and recognizing acceptable praise statements, and feedback were included in the
training.
The researcher described PPR to each participating teacher prior to intervention implementation and provided a script for both training for the class and PPR implementation (see Appendices H and I). Each teacher chose a time at approximately the same time every day for PPR to occur, with the other children in the class having the opportunity to observe the selected student throughout the day. The researcher was present on the days when the target student was chosen to be the star of the class. To reduce reactivity, the researcher was also present on a number of days when other children in the class were chosen to be the star of the class.

All children in the class participated in a training session in which the teacher introduced PPR. Training occurred one day before intervention implementation. The training session lasted approximately 30 minutes, thus minimizing the loss of instructional time, and no complications were noted. PPR was described to the class as the opposite of tattling (Lyons, 2004). The teacher told the class that a random student would be chosen to be the star of the class each day. The teacher also told the class that they would have the chance to observe the selected student and praise him or her for appropriate behavior. The class was given an example of an acceptable praise statement. The teacher rehearsed the four steps required for an acceptable response, which was displayed on a poster board. The steps included: (a) looking at the selected student; (b) smiling; (c) describing something good that he or she said or did prior to PPR; and (d) praising the behavior by telling the selected student he or she did a “good job.” The class was then given the opportunity to give their own praise examples. The teacher praised acceptable examples and provided feedback for unacceptable or vague examples.
The teacher rewarded the class for making acceptable praise statements. Each child making an acceptable praise statement received a token of the teacher’s choice. Teachers told their classes that they would have the opportunity to fill a jar with neon-colored cotton balls. To reduce the likelihood of a participant receiving more tokens and praise in the combined condition than in the PPR alone condition, the number of tokens distributed was limited to a set daily maximum criterion determined through consultation with the researcher. Once the class achieved a certain number of tokens, the children received a reward. The number of tokens to receive the reward was determined by the teacher, and all potential rewards were selected through teacher consultation. The teacher gave the class an option of several items to choose from, such as a party, movie time, or extra recess. The children in the class were given the opportunity to make suggestions as well. The item with the greatest number of votes was the reward for the class.

On the first day of implementation, the teacher selected a student to be the star and announced the student’s name to the class. Although the class was informed that the drawing was random, it was not truly random. The teacher was provided with a schedule of the days that the target student was chosen as the star of the class. The target student was chosen at least twice a week, with the other children in the class being chosen the other three days of the week. The teacher had a shoebox containing slips of paper with the names of all of the children in the class. On the days when the target child was selected, the teacher palmed a slip of paper with the target child’s name (i.e., hid it in her hand), and on the other three days of the week, the teacher drew from the shoebox with the names of all of the children in the class.

Throughout the day, the children in the class observed the selected student for instances of appropriate behavior. In order to keep the children focused on observing the
star, approximately every hour, the teacher verbally reminded the class to look for the star’s appropriate behavior. During the beginning of PPR, the teacher reviewed the steps for acceptable praise statements with the class. The children voluntarily gave the star praise statements. The teacher praised any acceptable response and gave the child a token. The researcher was present on the first day of PPR to ensure it was implemented correctly and provide any feedback necessary. The teachers completed the IRP-15 at the end of the intervention phase to measure the acceptability of the PPR intervention and completed the CBS for each target student. The researcher also asked teachers and students what they liked about PPR.

The researcher conducted 20-minute observations on the days when the target student was chosen to be the star of the class. Observations occurred when inappropriate behavior was most likely to occur. Intervention effects were also assessed through at least one 20-minute observation each week during a second learning activity in which students had opportunity to interact with each other. Observing the stars’ behavior during a second learning activity allowed the researcher to determine whether or not PPR decreased inappropriate behavior and increased appropriate behavior in a setting other than that in which inappropriate behavior was most likely to occur.

**PPR and Tootling**

The combination of PPR and Tootling consisted of components of both interventions. The children had the opportunity to praise the star of the class through PPR or Tootling, with Tootling being modified as an individual intervention. The class wrote tootles only for the star’s behavior instead of writing tootles for any child in the class engaging in appropriate behavior. The teacher was provided with a script for both training and intervention implementation (see Appendices J and K). Training occurred one day before
intervention implementation. The teacher provided an example of an acceptable praise statement and encouraged the class to give their own examples of praise statements. The teacher praised acceptable examples and provided feedback for unacceptable or vague examples.

During intervention, the teacher announced the star of the class at the beginning of the day. The children in the class observed the selected student throughout the day for appropriate behavior and wrote down the instances on notecards. The teacher reminded the children approximately every hour to look for the star’s appropriate behavior. The children had the opportunity to praise the star of the class publicly during PPR or privately by Tootling. The teacher reviewed the steps for acceptable praise statements with the class before each PPR session. Verbal responses had to include the four steps of PPR to be considered acceptable, and acceptable written responses indicated the student who engaged in the appropriate behavior and what he or she did.

The children in the class participated in PPR by voluntarily reading praise statements aloud to the selected student. The teacher praised any acceptable response and gave the child reading the praise statement a token. The children also had the option of participating in Tootling by placing their notecards in a marked shoebox throughout the day. Acceptable tootles indicating the star’s appropriate behaviors were read by the teacher at the end of the PPR time and praised. A token was rewarded to the class for each acceptable tootle. Multiple reports by one student of the same behavior were only counted once. However, multiple students who reported the same behavior each received credit for reporting the behavior instance.

In order to account for variability in reinforcement between conditions, the number of tokens delivered was limited to the criterion specified in the PPR alone condition. If in the
PPR alone condition the class was allowed 10 tokens a day, a maximum of 10 tokens was allowed per day in the PPR and Tootling condition. To prevent the possibility that one type of peer praise would be more reinforcing than the other, teachers were instructed to modify the amount of PPR statements and tootles daily. For instance, on the first day, five tootles and five PPR statements would be allowed, and on the second day, three PPR statements and seven tootles would be allowed. The teacher told the class how many statements and tootles were permitted for that day immediately before PPR time. Once the class achieved a certain number of tokens as determined through consultation with the teacher, the children received a reward.

The researcher was present on the first day of intervention to ensure it was implemented correctly and provide any feedback necessary. Teachers completed the IRP-15 at the end of the intervention phase in order to determine teacher acceptability of the PPR and Tootling combination. The researcher asked teachers and students what they liked about the intervention. The teachers also completed the CBS for each target student.

The researcher observed the target student for 20 minutes on the days when the target student was chosen to be the star of the class. Observations occurred when inappropriate behavior was most likely to occur. The researcher also observed the students at least one time each week for 20 minutes during a second learning activity in which the students were allowed to interact with each other. This allowed the researcher to determine whether the combination of PPR and Tootling decreased inappropriate behaviors and increased appropriate behaviors in another setting or activity.

Observer Training

Graduate students were trained as data collectors. The researcher explained and reviewed operational definitions of each child’s inappropriate and appropriate behaviors.
The researcher also discussed the observation schedule and answered any questions. Independent observers practiced observing and recording these behaviors. Interobserver agreement (IOA) had to reach a minimum of 90% agreement for three separate sessions before observers were allowed to collect data independently. The researcher provided any necessary feedback and retraining.

Interobserver Agreement

The researcher measured interobserver agreement (IOA) for a minimum of 30% of the direct observations in each phase. IOA was calculated separately for inappropriate behavior and appropriate behavior. IOA was calculated for total agreement by dividing the number of agreements on the occurrence and nonoccurrence of behavior by the number of agreements and disagreements of the occurrence and nonoccurrence of behavior and then multiplying by 100. Reliability for each observation was established when IOA was 80% or above. If IOA was less than 80%, the observer was retrained in observation techniques.

The mean percentage of IOA during observations for Deandra’s inappropriate behavior was 92% (range = 84% - 98%), and the mean percentage of IOA for her appropriate behavior was 94% (range = 82% - 100%). The mean percentage of IOA during observations for Jayden’s inappropriate behavior was 94% (range = 92% - 96%), and the mean percentage of IOA for his appropriate behavior was 92% (range = 88% - 98%). For Adriana’s observations, IOA for inappropriate behavior ranged from 82% to 94%, with a mean percentage of 88%. Adriana’s mean IOA for appropriate behavior was 91% (range = 80% - 96%). The mean percentage of IOA for Faye’s inappropriate behavior was 93% (range = 90% - 95%), and the mean percentage of IOA for appropriate behavior was 95% (range = 94% - 97%).
Procedural and Treatment Integrity

A checklist was developed for both the training and intervention components (see Appendices L, M, N, and O). The teacher was provided with a copy of the checklist as a reminder of the procedures. If implementation fell below 90%, the researcher provided additional corrective feedback to improve intervention implementation. The researcher completed the checklist for the training session and approximately 30% of the intervention sessions.

All of the participating teachers conducted the training sessions in their classrooms with 100% integrity. The percentage of treatment integrity for Deandra’s teacher was 100% for both intervention phases. Jayden’s teacher’s percentage of procedural integrity was 97% (range = 92% - 100%) in the PPR phase and 100% in the PPR with Tootling phase. The average percentage of treatment integrity for Adriana’s teacher was 88% (range = 75% - 100%) in the PPR with Tootling phase and 92% (range = 83% - 100%) in the PPR alone phase. The average percentage of procedural integrity for Faye’s teacher was 92% (range = 83% - 100%) in the PPR with Tootling phase and 96% (range = 92% - 100%) in the PPR alone phase. A trained observer also completed the checklist with the researcher for 30% of the treatment integrity observations in order to measure treatment integrity IOA. Treatment integrity IOA was 100% for all observations.
CHAPTER III
RESULTS

Dyad 1

Figure 1 shows the percentage of intervals during which Deandra and Jayden demonstrated inappropriate and appropriate behavior during baseline, PPR, and PPR with Tootling phases in both intervention and generalization settings. There was a scheduled break in the school year during which data were not collected. The break occurred between sessions 9 and 10 for both students.

Deandra

According to Deandra’s teacher, Deandra exhibited inappropriate behavior primarily in the morning when school started. Therefore, the researcher conducted observations in the first 20 minutes of the school day during language arts class. Her class received a reward on sessions 11 and 17 for meeting the criterion of 100 positive statements. Probes to assess for generalization were collected in Deandra’s afternoon math class.

Deandra’s inappropriate behavior showed an increasing trend in the baseline phase and occurred an average of 33% of observed intervals (range = 24% - 45%). Inappropriate behavior decreased immediately when PPR was introduced ($M = 18\%$; range = 17% - 18%) and remained low throughout the phase. When PPR with Tootling was introduced, slight initial decreases in inappropriate behavior were observed; however, mean levels ($M = 14\%$; range = 8% - 18%) of observed inappropriate behavior overlapped substantially with the PPR alone phase. Both intervention phases showed minimal variability in inappropriate behavior.

Generalization data mirrored the results from intervention. Inappropriate behavior decreased from 36% of intervals during baseline to 13% of intervals during PPR. Deandra’s behavior
Figure 1. Deandra and Jayden’s Percentages of Inappropriate and Appropriate Behavior.
remained low during the PPR with Tootling phase with Deandra exhibiting inappropriate behavior for an average of 10% of the observed intervals (range = 7% - 12%).

Deandra’s appropriate behavior was also observed during language arts and math classes. Deandra’s appropriate behavior increased from an average of 80% (range = 73% - 85%) during baseline to an average of 91% of intervals (range = 84% - 98%) when her teacher implemented PPR. There was a decreasing trend in appropriate behavior during both baseline and PPR. Appropriate behavior remained high and stable in the PPR with Tootling phase for an average of 92% of the observed intervals (range = 87% - 97%). Similar to treatment specific data, Deandra’s generalization data for appropriate behavior increased slightly from 88% of intervals in the baseline phase to 91% of the observed intervals in the PPR phase. Appropriate behavior was maintained in the PPR with Tootling phase, and she engaged in appropriate behavior an average of 92% of the observed intervals (range = 90% - 97%).

Jayden

Jayden’s teacher reported that his inappropriate behavior occurred throughout the day and in all settings, without obvious antecedents. Jayden’s behavior was observed in the morning at approximately 9:00 a.m. during math class. This time was selected because Jayden was habitually tardy to school, and more academic activities took place during the morning. His class received a reward on sessions 12 and 18 for meeting the criterion of 100 positive statements.

Jayden engaged in inappropriate behavior an average of 42% (range = 29% - 73%) of intervals in baseline. Baseline levels were generally stable in baseline with the exception of the last datum, in which there was a large increase in inappropriate behavior. Inappropriate behavior decreased immediately when PPR was introduced and remained stable throughout
the phase ($M = 23%; \text{ range} = 18\% - 26\%)$. Behavior levels remained consistent when PPR with Tootling was introduced ($M = 22\%; \text{ range} = 17\% - 27\%$), with a decreasing trend at the end of the phase. The researcher conducted generalization probes in Jayden’s afternoon language arts class. Jayden’s inappropriate behavior in his language arts class decreased from 42\% of observed intervals in baseline to an average of 10\% of intervals in PPR (range = 7\% - 12\%). In the PPR with Tootling phase, Jayden’s level of inappropriate behavior increased to an average of 19\% of observed intervals (range = 14\% - 23\%); however, inappropriate behavior remain lower than that observed in baseline.

Jayden’s appropriately engaged behavior was also observed. Jayden’s appropriate behavior averaged 70\% of the observed intervals in baseline with an overall decreasing trend (range = 37\% - 85\%). When PPR was introduced, appropriate behavior increased immediately and was slightly variable throughout the phase ($M = 88\%; \text{ range} = 78\% - 96\%)$. Appropriate behavior stabilized in the PPR with Tootling phase, with Jayden engaging in appropriate behavior for an average of 90\% of observed intervals (range = 88\% - 93\%). Jayden’s generalization data for appropriate behavior increased from 63\% in baseline to an average of 96\% of the observed intervals in PPR (range = 94\% - 98\%). Appropriate behavior decreased slightly in the PPR with Tootling phase to an average of 88\% of the observed intervals (range = 82\% - 94\%), but was consistent with the levels observed in the morning observation time.

**Dyad 2**

Figure 2 shows the percentage of intervals during which Adriana and Faye demonstrated inappropriate and appropriate behavior during baseline, PPR with Tootling, and PPR phases in both intervention and generalization settings. There was a scheduled
break in the school year during which data were not collected. The break occurred between sessions 6 and 7.

Adriana

Adriana’s teacher reported that Adriana was most likely to engage in inappropriate behavior following transition times and when teachers or students talked about or bullied her about her behavior. Therefore, Adriana’s behavior was observed after she transitioned to social studies, the classroom where she was teased most often, according to her teacher. Her class received a reward on sessions 11, 17, and 22 for meeting the criterion of 100 positive statements.

Inappropriate behavior was relatively stable in baseline for an average of 38% of the observed intervals (range = 34% - 46%). There was a small change in inappropriate behavior when PPR with Tootling was introduced, and Adriana’s inappropriate behavior decreased gradually over the course of the phase ($M = 20%$; range = 14% - 30%). Data from the PPR alone phase showed Adriana’s inappropriate behavior level decreased slightly further from the PPR plus Tootling phase ($M = 12%$; range = 8% - 20%). The researcher collected generalization probes in Adriana’s language arts class; data were similar to the intervention data. Her inappropriate behavior during baseline was 42% of observed intervals. Percentage of inappropriate behavior during language arts class was reduced in the PPR with Tootling and PPR phases. Adriana engaged in inappropriate behavior for 27% of intervals in PPR with Tootling (range = 26% - 27%) and 14% of intervals in PPR (range = 5% - 23%).

Adriana’s appropriate behavior was also observed following the transition to social studies. Adriana engaged in appropriate behavior for an average of 80% of observed intervals in baseline. The data showed an increasing trend with percentages of appropriate
Figure 2. Adriana and Faye’s Percentages of Inappropriate and Appropriate Behavior.
behavior ranging from 62% of the observed intervals to 94% of intervals. There was a gradual decreasing trend in inappropriate behavior during the PPR with Tootling phase, and Adriana’s level of appropriate behavior increased to an average of 92% of intervals (range = 83% - 100%). Appropriate behavior remained at high levels in the PPR phase ($M = 96$%; range = 88% - 100%). Adriana’s generalization data for appropriate behavior increased from 77% of intervals in baseline to an average of 96% of intervals in PPR with Tootling (range = 93% - 99%). Her appropriate behavior was maintained at a high level in the PPR alone phase with an average of 90% of intervals (range = 82% - 97%).

**Faye**

As reported by her teacher, Faye’s inappropriate behavior occurred most often at the end of the day before recess. Therefore, Faye’s behavior was observed in the hour before recess at approximately 1:00 p.m. during math class. Her class received a reward on sessions 15 and 22 for meeting the criterion of 100 positive statements.

Faye engaged in inappropriate behavior an average of 50% of intervals during baseline (range = 31% - 63%), and there was an increasing trend over the phase. Her inappropriate behavior decreased immediately to an average of 19% of observed intervals in the PPR plus Tootling phase, with moderate variability. Faye’s PPR with Tootling data ranged from 11% of the observed intervals to 30% of intervals. Inappropriate behavior remained low in the PPR phase ($M = 19$%; range = 17% - 24%) without much variability. Generalization observations were conducted in the morning while students were practicing reading comprehension. Inappropriate behavior occurred for an average of 40% of the observed intervals (range = 35% - 44%). Similar to the observations for intervention, there was a decreasing trend in inappropriate behavior. Faye’s inappropriate behavior during reading comprehension decreased during PPR with Tootling to average 13% of observed
intervals (range = 8% - 17%) and increased in the PPR alone phase to 21% of observed intervals (range = 10% - 33%).

Faye’s appropriate behavior increased across phases. In baseline, Faye’s appropriately engaged behavior showed a decreasing, albeit variable, trend \((M = 62\%; \text{range } = 47\% - 77\%)\). The percentage of intervals with appropriate behavior increased immediately in the PPR with Tootling phase and remained high throughout the phase \((M = 90\%; \text{range } = 82\% - 100\%)\). Appropriate behavior decreased slightly to an average of 87% of intervals in the PPR alone phase \((\text{range } = 77\% - 94\%)\). Faye’s generalization data for appropriate behavior averaged 78% in baseline \((\text{range } = 72\% - 83\%)\) and increased to an average of 94% in PPR with Tootling \((\text{range } = 87\% - 100\%)\). The percentage of appropriate behavior decreased in the PPR alone phase to 88% of intervals \((\text{range } = 76\% - 100\%)\).

Treatment Acceptability

Teachers rated PPR and the combination of PPR and Tootling for acceptability on the IRP-15. The average score for the PPR alone intervention was 75 \((\text{range } = 67 - 86)\), and the average score for the PPR with Tootling intervention was 69 \((\text{range } = 58 - 82)\). The average rating for items about PPR was 5, and the average rating for items about PPR with Tootling was 4.6. The results suggest that the participating teachers found both interventions to have a high level of general acceptability, and three of the teachers continued to use PPR when the study was concluded. All four teachers stated a preference for PPR alone due to fewer steps involved and because students played with the notecards during instruction. The students also stated that it was more interesting to hear their peers give positive statements, as opposed to the teacher reading them.
Child Behavior Scale

Teachers also rated the target students on a measure of aggression, prosocial behavior, asocial behavior, anxiety, peer rejection, and hyperactivity (see Table 1). Scores that increased or decreased by a standard deviation were considered meaningful. However, it should be noted that there were only three weeks between each rating. Deandra’s scores on the CBS did not indicate any differences for the subscales. Her prosocial behavior remained at an average rating of 1.9, and peer rejection remained at an average rating of 1.6. Jayden’s behavior generally improved during PPR implementation and dropped in PPR with Tootling, as rated by his teacher. His aggression and hyperactivity scores decreased in PPR by at least one standard deviation as compared to baseline scores. However, compared to PPR, aggression, asocial behavior, peer rejection, and hyperactivity increased by at least one standard deviation when Jayden’s teacher introduced PPR with Tootling.

Adriana’s hyperactive behavior decreased in PPR with Tootling and increased in the PPR alone phase. Similar to Deandra’s data, there were no changes in prosocial behavior or peer rejection. Faye’s behavior changed from baseline to PPR with Tootling and was maintained in PPR. Compared to baseline, aggression and asocial behavior decreased in PPR with Tootling. Her anxiety and prosocial behavior increased from baseline to the PPR with Tootling phase.
Table 1

Average CBS Subscale Ratings

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<th>Conditions</th>
<th>Baseline</th>
<th>PPR</th>
<th>PPR + Tootling</th>
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<tr>
<td>Aggressive with Peers</td>
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<td>1.9</td>
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<tr>
<td>Hyperactive-Distractible</td>
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<td>1.8</td>
<td>1.3</td>
</tr>
<tr>
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<td>1.3</td>
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<td>1.9</td>
<td>1.9</td>
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<tr>
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<td>2.8**</td>
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<td>1.7</td>
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<tr>
<td>Hyperactive-Distractible</td>
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Note. * indicates scores decreased by one standard deviation or more
** indicates scores increased by one standard deviation or more
CHAPTER IV
DISCUSSION

Positive social interactions encourage the development of peer relationships and social competence by providing children with examples of appropriate social skills and positive feedback when they use those skills (Sebanc, 2003). PPR and Tootling are well-supported interventions designed to decrease social rejection and generally inappropriate behavior by reporting and praising appropriate behaviors (Bowers et al., 1999; Bowers et al., 2000; Hoff & Ronk, 2006; Johnson-Gros & Shriver, 2006; Jones et al, 2000; Lyons, 2004; Moroz & Jones, 2002). Despite the effectiveness of PPR and Tootling, there are several consistent criticisms throughout the literature. For example, few researchers have assessed the generalization of behavior changes to other settings. Children must be able to practice new skills in other settings, such as work and school, in order to be successful in the natural environment (Haring & Eaton, 1978). In addition, no studies have investigated the effectiveness of PPR for reducing generally inappropriate behaviors. Studies in which Tootling served as the primary intervention did not include direct observations of children’s appropriate behaviors, and therefore, could not conclude that there were increases or decreases in appropriate behaviors. The authors also did not measure improvements in children’s social relationships or social behaviors with their peers. These limitations were addressed in the current study.

Together, PPR and Tootling studies indicate that a minimal daily investment on the part of teachers may encourage students to engage in positive social interactions, which compete with pre-existing, peer-mediated contingencies such as peer rejection where peer approval has the potential to reinforce antisocial behavior. The primary purpose of the current study was to expand upon previous research by comparing PPR alone and PPR plus
Tootling for reducing the generally inappropriate behavior and increasing the generally appropriate behavior of children at risk for social rejection by their peers. PPR and Tootling are both similarly effective for improving children’s behavior, and the researcher hypothesized that adding Tootling components to the PPR intervention would reduce inappropriate behavior more than either intervention alone. This was the first study to combine the PPR and Tootling interventions. The combination of Tootling and PPR components allowed for potential benefits to students, school psychologists, and educational professionals. For example, in addition to voicing positive statements, students were given the opportunity to report positive behaviors anonymously. It was hypothesized, albeit not directly measured, that providing this option may increase participation for students who are uncomfortable with public reporting. Students also had the option of reporting positive behaviors during PPR time or throughout the day. The option to report behaviors throughout the day may help students to verbalize more salient, appropriate behaviors that occurred earlier in the day. In PPR, on the other hand, it was hypothesized that the reported behaviors occurred closer in proximity to PPR time.

Overall, results showed that both PPR and PPR with Tootling reduced inappropriate behavior. There were no observed differences between the two treatments, regardless of ordering of treatments, suggesting that the interventions were equally effective. For three of the four participants, large, immediate changes in inappropriate behavior were shown when either intervention was introduced initially. Adriana’s data, on the other hand, showed a gradual decreasing trend when PPR with Tootling was introduced. For all participants, the decreases in inappropriate behavior were maintained in the second treatment phase.

The second aim of the current study was to determine whether or not appropriate behavior increased as inappropriate behavior decreased. For three of the four target students,
inappropriate behaviors were replaced with more appropriate behaviors. Regardless of which intervention was implemented first, appropriate behavior had large, immediate increases with the implementation of intervention for Deandra, Jayden, and Faye. Adriana’s data showed an increasing trend for appropriate behavior in baseline, thus data interpretation is somewhat limited. For all participants, appropriate behavior remained high and stable in the second intervention phase, suggesting that both treatments were equally effective.

The third aim of the current study was to assess for generalization of PPR and PPR plus Tootling. The results indicated that the reductions in inappropriate behavior and increases in appropriate behavior generalized across settings. The data collected showed the same general patterns as treatment for all phases: baseline, PPR, and the combination of PPR and Tootling. In other words, the target students decreased their levels of inappropriate behavior and increased their levels of appropriate behavior during the referred class and a second learning activity. This study was able to program for generalization because the participants’ classmates remained constant throughout the study, and it is possible that the classmates’ presence developed into a discriminative stimulus, or signal, for appropriate behavior.

The CBS data indicated that two participants (one participant from each dyad) did not evidence any changes in teacher ratings of prosocial behavior or peer rejection. These results suggest that changing the order of treatments did not have an effect on CBS data. Also, no studies indicate that the CBS is sensitive to changes within three weeks. Jayden’s peer rejection rating increased when the PPR plus Tootling phase was introduced, and his prosocial behavior ratings remained the same as baseline. Jayden’s aggression and asocial behavior ratings also increased in the PPR plus Tootling phase. Faye’s prosocial behavior rating increased and remained high when intervention was implemented, and her peer
rejection ratings remained at baseline levels. Her aggression and asocial behavior ratings decreased when intervention was implemented, and her anxiety rating increased.

Despite the intervention effects observed, there are some limitations to the current study. One potential limitation is that all inappropriate and appropriate behaviors were aggregated instead of being measured individually. As a result, it is not possible to know relative levels in baseline for each of the referred behaviors. For example, it is possible that inappropriate vocalizations accounted for a high percentage of baseline inappropriate behavior, and out of seat behavior was not an occurring problem. In addition, the effects on any one behavior in the response class of inappropriate behavior are unknown for either intervention. PPR might have decreased inappropriate vocalizations to a low level, while off task behavior could have remained at high levels and unchanged from baseline.

Data are also limited in that the target students’ peers or teachers may have reinforced appropriate behavior immediately following its occurrence. During one observation in Adriana’s classroom, a classmate said, “Thank you, Adriana, for cleaning up my mess.” Therefore, immediate praise may have contributed to the study results. The availability of praise in each phase is unknown because it was not measured. Nonetheless, immediate praise for appropriate behavior is recognized as a positive collateral benefit of treatment.

The study is further limited in that the researcher did not directly observe peer interactions. Instead, the researcher relied on teachers’ ratings of sociometric status in order to measure peer acceptance. Self-report is biased because it relies on the reporter’s perception of events. Thus, reported scores may have been a result of perceived social status rather than actual peer acceptance. Because CBS data have convergent validity with behavioral observations (Ladd & Profilet, 1996), changes in perception of sociometric status might be because teachers observed changes in inappropriate behavior. That is, the teacher
could have perceived that the class liked the target student more because inappropriate behavior decreased, or the teacher could have perceived that the class liked the target student less because inappropriate behavior increased. For example, Deandra’s teacher did not perceive any behavior changes and, therefore, Deandra’s scores on the CBS did not indicate any differences for the subscales. Jayden’s teacher reported that Jayden’s behavior worsened in the combination phase, and her ratings indicate that peer rejection increased during that phase. Jayden’s teacher’s perception was not accurate when compared with the data, however. His behavior remained stable when the combination phase was introduced. In addition, teachers could have based their ratings on the target students’ interactions at the time they were completing the scales instead of basing their ratings on improvement in peer interactions during intervention implementation. Another possibility is that teachers based their ratings on how they were feeling at the time they were completing the scales. A frustrated teacher might rate a student differently and perceive the situation in a different way as compared to a teacher who was more composed. Teachers might maintain that sociometric status was unchanged by intervention because they attended to inappropriate behaviors more than appropriate behaviors.

Data were not collected for the number of tootles written or read each day. Tootles were available for every observed session of PPR plus Tootling. Nonetheless, the number of tootles likely varied from day to day. Classmates may have written fewer tootles for some students than others. For example, it might be considered socially unacceptable to praise someone whom you do not like. It is also possible that the response effort was greater for writing tootles than making verbal statements. In other words, students may have found it easier to say things aloud than to write them down on notecards, resulting in more statements than tootles.
Generalization probes were only collected once each week and during one other learning activity. Because the data were very limited, it was not possible to visually analyze phase trends and compare them to intervention data. There were also no observations of behavior at other times of the day or during more unstructured activities such as recess, meaning that no statements can be made about behavior during those classes. Future studies should assess for generalization more frequently and across different times and settings.

Two of the participating teachers reported difficulty with the notecards used in the PPR with Tootling condition, limiting both internal and external validity. In this condition, as originally designed, notecards were to be distributed at the beginning of class, and students were to be allowed to write instances of good behavior on them whenever it occurred. Notecards could be placed in the designated shoebox at any time during the day. Jayden and Faye’s teachers stated that several students were playing with notecards during class instead of paying attention to instruction. To solve this problem, Jayden’s teacher required that students only get a notecard when they intended to write something good that the star said or did and that they immediately put the completed notecard in the shoebox. When Faye’s teacher caught students playing with notecards, she withheld notecards from those select students for the rest of the day until a few minutes before PPR time. Therefore, distribution of notecards in these two classrooms was different than distribution of notecards in the other two classrooms.

An additional limitation to external validity is the number of positive statements each target student received from his or her peers. Each time that students, including targets, were chosen as the star, they received a maximum of six positive statements. Although there were decreases in inappropriate behavior for the target students, it is possible that additional praise would produce even greater behavior changes. Two teachers were worried about loss of
instructional time to implement PPR and allowed only a short time period for PPR. Also, as mentioned before, the number of positive statements was held constant for the PPR alone condition and the PPR with Tootling condition to provide experimental control.

Despite limitations, there are several strengths to the current study. An important contribution of this study was the measurement of generally appropriate behaviors and generally inappropriate behaviors. Appropriate behaviors were not observed directly in previous Tootling studies, and many PPR studies focused on improving prosocial behaviors. Previous studies also focused on decreasing specific inappropriate behaviors. Another strength is that the target students were not chosen to be the star of the day throughout the entirety of either of the interventions phases. Even though the target students were chosen more often than their classmates, the other students were also selected to be the star. Therefore, the target students were not reinforced daily for their appropriate behaviors. However, behavioral data were consistent, which may suggest generalized behavior change. PPR and Tootling use the natural environment and peer support to encourage the generalization of necessary skills to other activities. Furthermore, teachers may find interventions that can be used with an entire class to be more attractive than interventions used only with individual students (Jones et al., 2000). The participating teachers implemented the treatments with high integrity and rated both interventions as highly acceptable. Three teachers planned to continue implementing PPR when the study was concluded, and students reported that they enjoyed getting compliments and earning rewards. Improvements in children’s social behavior were also measured with the CBS.

The current data indicate that the interventions of PPR and the combination of PPR and Tootling were equally and immediately successful for reducing inappropriate behavior and increasing appropriate behavior of children referred for peer rejection and inappropriate
behavior. Large changes in behavior were observed for inappropriate behavior across settings. Previous research suggests that both PPR components and Tootling components are effective in decreasing inappropriate behaviors and increasing prosocial behaviors. Morrison and Jones (2007) is the only study to date that has adapted PPR as a class wide intervention, an important aspect of Tootling. Also, only two studies have examined generally inappropriate behaviors (Cihak et al., 2009; Morrison & Jones, 2007). The researcher combined components of both interventions in an effort to determine whether the combination would produce further decreases in inappropriate behavior than PPR alone. The results indicated that the addition of the Tootling component did not produce additional changes in behavior relative to PPR alone. This investigation, however, was the first study to develop a combination of PPR and Tootling as a behavior intervention; other combinations of the two interventions may result in greater improvements.

School psychologists and educational professionals should consider using PPR alone as an intervention for students who are rejected by their peers and exhibit inappropriate behavior. Treatments that are simple, precise, and brief are more likely to be implemented with consistency and integrity than those that are not (Peterson, Homer, & Wonderlich, 1982). PPR is advantageous to teachers as it includes fewer steps for implementation than PPR plus Tootling. PPR also improves student behavior without requiring teachers to manage individualized interventions for multiple children. Future research should replicate this study in secondary education classrooms.
APPENDIX A

TEACHER CONSENT FORM

Title of Study: Positive Peer Reporting and Positive Peer Reporting Combined with Tootling: A Comparison of Interventions

Purpose of Study: Your permission in requested for participation in a study that is investigating the effects of an intervention called Positive Peer Reporting and its combination with another intervention called Tootling.

Who can participate: Children in primary school and their teachers can participate in the study. Additionally, the children must exhibit behavior that is inappropriate and/or disruptive to the classroom.

Methods and Procedures: You will be interviewed in order to obtain information regarding a specific student’s inappropriate behaviors. Inappropriate behaviors will be observed to determine qualification for the study. If criteria are not met, you may request services through an alternative intervention. You will be asked to implement the intervention Positive Peer Reporting (PPR) and an intervention combining PPR with Tootling if you agree to participate in the study. In PPR, students will have the opportunity to report their classmates’ appropriate behaviors publicly during PPR time. In the combination of PPR and Tootling, students will have the option of reporting their classmates’ appropriate behaviors publicly during PPR time or privately by writing the behaviors on notecards throughout the day. The primary researcher will train you in implementing PPR and the combination of PPR and Tootling. In consultation with the primary researcher, you will select a PPR implementation time. Implementation times will be on a daily basis at approximately the same time each day. You will be trained to implement all procedures with all materials necessary to implement the interventions. You will conduct a training session with your class before each intervention during which you will explain the intervention. During intervention, you will randomly select a “star” of the class each day. The class will have the opportunity to earn rewards for reporting the star’s appropriate behaviors observed throughout the day. Students will be told that they will receive a token for positive statements. Once they earn a certain number of tokens, the class will earn a reward. You will also be asked to rate each student’s likeability by his or her peers before and after each intervention. The researcher and trained graduate students will conduct observations during the PPR time, the time when inappropriate behavior is most likely to occur, and during a learning activity. Inappropriate behaviors of concern and appropriate behaviors you wish to improve will be observed and recorded. It is unknown how many sessions it will take to clearly see which intervention decreases inappropriate behavior the most.

Benefits: Your benefits by participating in this study may include observed improvements in student behavior and learning a unique intervention designed to improve student behavior.

Risks and Discomfort: There are few anticipated risks associated with participation. Initially, you may be uncomfortable with the time spent implementing PPR in your classroom. There may also be discomfort from implementing a new procedure in the classroom. To reduce discomfort, the primary researcher will provide training, materials,
and will be available to answer any questions you may have. In the event that inappropriate behavior increases, you may be retrained.

**Confidentiality of Records:** All information obtained during this study will be kept confidential, meaning that your name and the names of children in your class as well as any other identifying information will be withheld from all persons not connected with the study. In the event that data taken from this investigation are used for presentation publications, no identifying information will be released. Participant records will be maintained for three years after the last contact with the participant. Outdated material will be disposed of by paper shredding.

**Voluntary Participation:** Your participation in this study is voluntary. You may withdraw from this study at any time without penalty, prejudice, or loss of benefits. Whereas no assurance can be made concerning results that may be obtained (as results from investigational studies cannot be predicted), the researcher will take every precaution consistent with the best scientific practice. Alternative services may be delivered at your request.

**Teacher’s Consent:** I have had the purpose and procedures of this study explained to me and have had the opportunity to ask questions. I am voluntarily signing this form to participate under the conditions stated. I have also received a copy of this consent. If I have any questions about this study, I can contact Julie Sherman or Dr. Heather Sterling-Turner at (601) 266-5255. This project and this consent form have been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Institutional Review Board Office, The University of Southern Mississippi, Box 5147, Hattiesburg, MS 39406-5147, (601) 266-6820.

_________________________________  ____________________________
Signature of Teacher  Date

_________________________________  ____________________________
Signature of Investigator  Date
APPENDIX B

PARENTAL CONSENT FORM

Title of Study: Positive Peer Reporting and Positive Peer Reporting Combined with Tootling: A Comparison of Interventions

Purpose of Study: Your permission is requested for your child to participate in a study that is investigating the effects of an intervention called Positive Peer Reporting and its combination with another intervention called Tootling.

Who can participate: Children in primary school can participate in the study. Additionally, the children must exhibit behavior that is inappropriate and/or disruptive to the classroom. Your child’s teacher nominated your child as a student who may qualify for participation.

Methods and Procedures: Your child’s inappropriate behaviors will be observed to determine his/her qualification for the study. Your child’s teacher will be asked to implement the intervention Positive Peer Reporting (PPR) and an intervention combining PPR with Tootling if you agree to allow your child to participate in the study. In PPR, students will have the opportunity to report their classmates’ appropriate behaviors publicly during PPR time. In the combination of PPR and Tootling, students will have the option of reporting their classmates’ appropriate behaviors publicly during PPR time or privately by writing the behaviors on notecards throughout the day. The teacher will randomly select a “star” of the class each day. During a predetermined time of the day, the class will have the opportunity to earn rewards for reporting the star’s appropriate behaviors observed throughout the day. The researcher and trained graduate students will conduct observations during the PPR time, the time when inappropriate behavior is most likely to occur, and during a second learning activity. Inappropriate behaviors of concern and appropriate behaviors the teacher wishes to improve will be observed and recorded. It is unknown how many sessions it will take to clearly see which intervention decreases inappropriate behavior the most. The teacher will complete measures regarding his/her perceptions of the intervention and students’ social status in the classroom.

Benefits: Your child may benefit by participating in this study because the intervention may improve your child’s behavior.

Risks and Discomfort: There are few anticipated risks associated with participation. All children in the class will participate in PPR. Therefore, no one child will be singled out. In the event that no positive statements are provided during PPR, the teacher will model positive statements and encourage the class to participate. Your child’s behavior may worsen as a result of this study. In this event, the teacher will be retrained.

Confidentiality of Records: All information obtained during this study will be kept confidential, meaning that your child’s name and any other identifying information will be withheld from all persons not connected with the study. Some circumstances may obligate us to release information about you and your child, such as if you child reports that he or she plans to harm him or herself or others, if the child reports abuse, if we are ordered by the court to release information, or if there is a medical emergency in which the release of
information is important to ensure your child’s or another person’s safety. In the event that data taken from this investigation are used for presentation publications, no identifying information will be released. Participant records will be maintained for three years after the last contact with the participant. Outdated material will be disposed of by paper shredding.

**Voluntary Participation:** Permission for your child’s participation in this study is voluntary. You may withdraw your child from this study at any time without penalty, prejudice, or loss of benefits. Because we are teaching an intervention to the classroom teacher, he or she may elect to continue using the intervention. However, at your request we would not include any data associated with your child in the present investigation. Whereas no assurance can be made concerning results that may be obtained (as results from investigational studies cannot be predicted), the researcher will take every precaution consistent with the best scientific practice.

**Parent’s Consent:** I have had the purpose and procedures of this study explained to me and have had the opportunity to ask questions. I am voluntarily signing this form to participate under the conditions stated. I have also received a copy of this consent. If I have any questions about this study, I can contact Julie Sherman or Dr. Heather Sterling-Turner at (601) 266-5255. This project and this consent form have been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Institutional Review Board Office, The University of Southern Mississippi, Box 5147, Hattiesburg, MS 39406-5147, (601) 266-6820.

Name of Child ___________________________ Age ___________________________

Signature of Parent ___________________________ Date ___________________________

Signature of Investigator ___________________________ Date ___________________________
APPENDIX C

PROBLEM IDENTIFICATION INTERVIEW FORM

Student: _____________________ Teacher (s): ____________________________

School: _____________________ Age: _____ Sex: M F Date: __________

1. Describe target child’s behavior problems in order of severity and give examples.

2. How manageable is the problem behavior?

3. In what settings does the problem behavior occur?

4. Goals for the problem behavior (what would you like to see happen)

5. Tell me about what happens before the behavior occurs. After the behavior occurs?

6. Intervention attempts, degree of success, reasons for failure
   a. What procedures have you tried in the past to deal with this student's problem behavior?
   b. What, if anything, have you done to deal with similar behavior problems in the past?
   c. What’s worked? What hasn’t?

7. Rules and typical procedures carried out in the classroom (constraints and assets)

8. Reinforcers - used now and potentials for future (e.g., praise, activities, or notes sent home)

9. Any data collected presently?

10. Ask teacher for any additional comments or questions
APPENDIX D

INTERVENTION RATING PROFILE-15 (IRP-15)

Please respond to each of the following statements thinking about the intervention you read/were recommended. Please then circle the number associated with your response. Be sure to answer all statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Slightly Disagree</th>
<th>Slightly Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPR was an acceptable intervention for the child’s problem behavior</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Most teachers would find the PPR intervention appropriate for behavior problems in their classroom</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>PPR was effective in changing the child’s problem behavior</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I would suggest the use of the PPR intervention to other teachers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>The child’s behavior problem was severe enough to warrant the use of PPR</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Most teachers would find PPR suitable for the problem behavior described</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I would be willing to continue the use of PPR in the classroom setting</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>PPR did not result in negative side effects for the child</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>PPR would be appropriate for a variety of children</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>The PPR intervention was consistent with those I have used in the classroom setting</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>PPR was a fair way to handle the child’s problem behavior</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>PPR was reasonable for the problem behavior described</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I liked the procedures used in the PPR intervention</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>PPR was a good way to handle this child’s behavior problem</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Overall, PPR was beneficial to this child</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
# APPENDIX E

## INTERVENTION RATING PROFILE-15 (IRP-15)

Please respond to each of the following statements thinking about the intervention you read/were recommended. Please then circle the number associated with your response. Be sure to answer all statements.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Slightly Disagree</th>
<th>Slightly Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPR/Tootling was an acceptable intervention for the child’s problem behavior</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Most teachers would find the PPR/Tootling intervention appropriate for behavior problems in their classroom</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>PPR/Tootling was effective in changing the child’s problem behavior</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I would suggest the use of the PPR/Tootling intervention to other teachers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>The child’s behavior problem was severe enough to warrant the use of PPR/Tootling</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Most teachers would find PPR/Tootling suitable for the problem behavior described</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I would be willing to continue the use of PPR/Tootling in the classroom setting</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>PPR/Tootling did <em>not</em> result in negative side effects for the child</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>PPR/Tootling would be appropriate for a variety of children</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>The PPR/Tootling intervention was consistent with those I have used in the classroom setting</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>PPR/Tootling was a fair way to handle the child’s problem behavior</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>PPR/Tootling was reasonable for the problem behavior described</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I liked the procedures used in the PPR/Tootling intervention</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>PPR/Tootling was a good way to handle this child’s behavior problem</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Overall, PPR/Tootling was beneficial to this child</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
APPENDIX F

CHILD BEHAVIOR SCALE

Student: ____________________________ Date: __________
Teacher: ____________________________ School: _________

Please consider the descriptions contained in each of the following items below and rate the extent to which each of these descriptions applies to this child, particularly in the context of his or her behavior with peers. For example, circle 3- “certainly applies” if the child often displays the behavior described in the statement, circle 2- “applies sometimes” if the child occasionally displays the behavior, and circle 1- “doesn’t apply” if the child seldom displays the behavior. Please circle only one response per item.

1- Doesn’t apply 2- Applies sometimes 3- Certainly applies

<table>
<thead>
<tr>
<th></th>
<th>Restless. Runs about or jumps up and down. Doesn’t keep still</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Squirmy, fidgety child</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Destroys own or others’ property</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Fights with other children</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Not much liked by other children</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Is worried. Worries about many things</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Irritable; quick to “fly off the handle”</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Appears miserable, unhappy, tearful, or distressed</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
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<tr>
<td></td>
<td>Has twitches, mannerisms, or tics of the face and body</td>
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<tr>
<td>1</td>
<td>2</td>
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<tr>
<td></td>
<td>Is disobedient</td>
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<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Has poor concentration or short attention span</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Tends to be fearful of new things or new situations</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Fussy or over-particular</td>
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<tr>
<td>1</td>
<td>2</td>
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<td></td>
<td>Tells lies</td>
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<tr>
<td>1</td>
<td>2</td>
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<tr>
<td></td>
<td>Has speech difficulty</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
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<tr>
<td></td>
<td>Bullies other children</td>
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<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Inattentive</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
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<tr>
<td></td>
<td>Doesn’t share toys</td>
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<tr>
<td>1</td>
<td>2</td>
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<td></td>
<td>Cries easily</td>
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<td>1</td>
<td>2</td>
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<td></td>
<td>Blames others</td>
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<tr>
<td>1</td>
<td>2</td>
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<td></td>
<td>Gives up easily</td>
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<tr>
<td>1</td>
<td>2</td>
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<td></td>
<td>Inconsiderate of others</td>
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<tr>
<td>1</td>
<td>2</td>
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<tr>
<td></td>
<td>Kicks, bites, or hits other children</td>
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<td>1</td>
<td>2</td>
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<td></td>
<td>Stares into space</td>
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<tr>
<td>1</td>
<td>2</td>
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<tr>
<td></td>
<td>Prefers to play alone</td>
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<td>1</td>
<td>2</td>
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<tr>
<td></td>
<td>Helps other children</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Peers refuse to let child play</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
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<tr>
<td></td>
<td>Recognizes feelings</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
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<tr>
<td></td>
<td>Not chosen as playmate</td>
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<tr>
<td>1</td>
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<tr>
<td></td>
<td>Likes to be alone</td>
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<tr>
<td>1</td>
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<tr>
<td></td>
<td>Keeps peers at distance</td>
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<td>1</td>
<td>2</td>
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<td>1</td>
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</tbody>
</table>
APPENDIX G

DIRECT OBSERVATION DATA COLLECTION SHEET

Student: _____________________  Observer: _____________________

Date: ________________________  Activity: _____________________

<table>
<thead>
<tr>
<th>1.1</th>
<th>6.1</th>
<th>11</th>
<th>16</th>
</tr>
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APPENDIX H

SCRIPT FOR PPR TRAINING SESSION

Training Steps

1. Define PPR.

Say: Positive Peer Reporting is when you tell the class something that someone did that was good or nice.

2. Explain the selection process to the students. Show the students the shoebox with all of the students’ names written on pieces of paper.

Say: See this box? Everyone’s name has been placed in this box. Each day, I will pick one name out of the box. That person will be the star of the class. I will write the name on the board so that everyone remembers who the star is.

3. Explain that the rest of the class will have to watch the star’s behavior throughout the day and remember all of the good things that the star did.

Say: The rest of the class will have to watch how the star behavior throughout the day. Try to watch for good or nice things that the star does.

4. Tell the class that at a certain time of day, they will all have the opportunity to report specific and unique examples of what the star did that day.

Say: During __________ (insert time of day), I will give you the opportunity to tell me and the class something you noticed that the star did during the day.

5. Teach the class the four steps involved in making positive statements using the poster provided.

Say: On this poster (point to the poster) are the four steps that will remind you how to tell the class about what the star did. The first step is to look at the person. The second step is to smile. The third step is to say something he or she did that was good or nice. The fourth step is to tell the person he or she did a good job.

6. Start a discussion with the class, asking for specific examples. Start the discussion by giving an example. Also include some unacceptable examples.

Say: One example of how to say something about the star is, “Jenny raised her hand to talk today.” Now that we know all of the steps to help us, who can give me another example of a good thing that someone said or did.

Praise acceptable statements and provide feedback for inappropriate examples.
Say: It is important to tell the class exactly what you saw the star doing. Saying, “Ben was doing what he was supposed to today” does not tell use what the star did. It might be better to say, “Ben answered the questions on his worksheet when the teacher told us to.”

7. Explain to the students that when they offer a statement, they will earn a token. When the class earns a certain number of tokens, they will receive a reward.

Say: Whoever makes a positive statement will receive a token. Now, when the whole class earns a total of _____ tokens, the class will get a reward. But first, we need to come up with some rewards that all of you will enjoy. Who can give me an idea for a class prize?

Reward ideas will be written on the board and the class will vote on which reward they like best.

8. Tell the class that the next morning will be the first day to pick a name from the shoebox.

Say: Today was practice. Tomorrow will be the first day we pick a name out of the box!
APPENDIX I

SCRIPT FOR PPR

PPR Steps

1. Define PPR.

2. Randomly select a star.

3. Tell the class to observe the star’s behavior.

4. During a predetermined time, the children will spend approximately 10 minutes making positive statements about the star.

5. Students who make positive statements will be given a token. When the class receives a certain number of tokens, the class will receive a reward.

Script

1. The morning

Say: During _________ (insert time of day), everyone will get a chance to say something nice or positive to the star. What you say should describe something that you saw the star do or say at some point during the day.

2. During PPR time

Say: Now is the time to tell the class and me something you saw the star do today. Who would like to go first?

Praise acceptable statements.
APPENDIX J

SCRIPT FOR COMBINATION OF PPR AND TOOTLING TRAINING SESSION

Training Steps

1. Define PPR and Tootling.

**Say:** We are going to talk about the opposite of tattling. Instead of telling something that someone did wrong, I want you to write down something that someone did that was good or nice.

2. Explain the selection process to the students. Show the students the shoebox with all of the students’ names written on pieces of paper.

**Say:** See this box? Everyone’s name has been placed in this box. Each day, I will pick one name out of the box. That person will be the star of the class. I will write the name on the board so that everyone remembers who the star is.

3. Explain that the rest of the class will watch the star’s behavior throughout the day and write down all of the good things that the star did on notecards.

**Say:** The rest of the class will watch how the star behaves throughout the day. Try to write down good or nice things that the star does on these notecards (hold up notecards). You may have as many notecards as you need.

4. Teach the class what to write on the notecards.

**Say:** On each note card, you will write the star’s name and what he or she did or said that was good or nice.

5. Tell the class that at a certain time of day, they will all have the opportunity to report specific and unique examples of what the star did that day.

**Say:** During _________ (insert time of day), I will give you the opportunity to tell me and the class something you noticed that the star did during the day.

6. Teach the class the four steps involved in making positive statements using the poster provided.

**Say:** On this poster (point to the poster) are the four steps that will remind you how to tell the class about what the star did. The first step is to look at the person. The second step is to smile. The third step is to say something he or she did that was good or nice. The fourth step is to tell the person he or she did a good job.

7. Start a discussion with the class, asking for specific examples. Start the discussion by giving an example. Also include some unacceptable examples.
Say: One example of how to say something about the star is, “Jenny raised her hand to talk today.” Now that we know all of the steps to help us, who can give me another example of a good thing that someone said or did.

Praise acceptable statements and provide feedback for inappropriate examples.

Say: It is important to tell the class exactly what you saw the star doing. Saying, “Ben was doing what he was supposed to today” does not tell us what the star did. It might be better to say, “Ben answered the questions on his worksheet when the teacher told us to.”

8. Tell the class that they can put their notecards in a marked shoebox throughout the day.

Say: You can put your notecards in this box (hold up box) at any time during the day. You can put your notecards in the box if you choose not to read them aloud during PPR or if you do not get a chance during PPR to say what the star did or said.

9. Explain to the students that when they make a statement, they will earn a token. When the class earns a certain number of tokens, they will receive a reward.

Say: All positive statements will receive a token. Now, when the whole class earns a total of _____ tokens, the class will get a reward. But first, we need to come up with some rewards that all of you will enjoy. Who can give me an idea for a class prize?

Reward ideas will be written on the board and the class will vote on which reward they like best.

10. Tell the class that the next morning will be the first day to pick a name from the shoebox.

Say: Today was practice. Tomorrow will be the first day we pick a name!
APPENDIX K

SCRIPT FOR COMBINATION OF PPR AND TOOTLING

Combination of PPR and Tootling Steps

1. Define PPR and Tootling.
2. Randomly select a star.
3. Tell the class to write down the star’s behavior on notecards.
4. During a predetermined time, the children will spend approximately 10 minutes making positive statements about the star.
5. Read acceptable tootles to the class at the end of the day.
6. All positive statements will receive a token. When the class receives a certain number of tokens, the class will receive a reward.

Script

1. The morning

Say: During _________ (insert time of day), everyone will get a chance to say something nice or positive to the star. What you say should describe something that you saw the star do or say at some point during the day. Remember, you can also put your notecards in this box.

2. During PPR time

Say: Now is the time to tell the class and me something you saw the star do today. Who would like to go first?

Praise acceptable statements.

3. The end of the day

Say: I am going to read some of the things that people wrote down that tell what the star did or said that was good.

Praise the class for each acceptable statement and the star for doing something good.
# APPENDIX L

## INTEGRITY CHECKLIST FOR PPR TRAINING SESSION

<table>
<thead>
<tr>
<th>Examiner: ___________________________</th>
<th>Date: ________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher: ____________________________</td>
<td>Time: ________________</td>
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</table>

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Step Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PPR defined</td>
<td>Y  N</td>
</tr>
<tr>
<td>2. Selection process described to the class</td>
<td>Y  N</td>
</tr>
<tr>
<td>3. Class is told to observe the star’s behavior throughout the day</td>
<td>Y  N</td>
</tr>
<tr>
<td>4. Class is told that they will have the opportunity to report positive examples of behavior</td>
<td>Y  N</td>
</tr>
<tr>
<td>5. Four steps used to make positive comments explained to the class</td>
<td>Y  N</td>
</tr>
<tr>
<td>6. Poster is displayed in the classroom</td>
<td>Y  N</td>
</tr>
<tr>
<td>7. Examples and non examples of positive comments are provided</td>
<td>Y  N</td>
</tr>
<tr>
<td>8. Students are given the opportunity to provide examples of positive comments</td>
<td>Y  N</td>
</tr>
<tr>
<td>9. Process of earning a token for reporting positive comment is described</td>
<td>Y  N</td>
</tr>
<tr>
<td>10. Class is told the criteria to earn a reward</td>
<td>Y  N</td>
</tr>
<tr>
<td>11. Ideas for reinforcement are obtained from the class</td>
<td>Y  N</td>
</tr>
<tr>
<td>12. Class votes on reinforcement</td>
<td>Y  N</td>
</tr>
</tbody>
</table>
APPENDIX M

INTEGRITY CHECKLIST FOR PPR

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Morning</th>
<th>Step Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Script is read</td>
<td>Y N</td>
<td></td>
</tr>
<tr>
<td>2. Child’s name is selected from the box</td>
<td>Y N</td>
<td></td>
</tr>
<tr>
<td>3. Star’s name is written in a visible location</td>
<td>Y N</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Procedure</th>
<th>PPR Time</th>
<th>Step Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Script is read</td>
<td>Y N</td>
<td></td>
</tr>
<tr>
<td>5. Students voluntarily make positive statements</td>
<td>Y N</td>
<td></td>
</tr>
<tr>
<td>6. Praise is given for acceptable statements</td>
<td>Y N</td>
<td></td>
</tr>
<tr>
<td>7. A token is provided for acceptable statements</td>
<td>Y N</td>
<td></td>
</tr>
<tr>
<td>8. Tokens are counted and displayed to the class</td>
<td>Y N</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX N

INTEGRITY CHECKLIST FOR COMBINATION OF PPR AND TOOTLING TRAINING SESSION

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Step Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PPR and Tootling defined</td>
<td>Y N</td>
</tr>
<tr>
<td>2. Selection process described to the class</td>
<td>Y N</td>
</tr>
<tr>
<td>3. Class is told to write down the star’s behavior throughout the day</td>
<td>Y N</td>
</tr>
<tr>
<td>4. Teach the class what to write on the notecards</td>
<td>Y N</td>
</tr>
<tr>
<td>5. Class is told that they will have the opportunity to report positive examples of behavior</td>
<td>Y N</td>
</tr>
<tr>
<td>6. Four steps used to make positive comments explained to the class</td>
<td>Y N</td>
</tr>
<tr>
<td>7. Poster is displayed in the classroom</td>
<td>Y N</td>
</tr>
<tr>
<td>8. Examples and non examples of positive comments are provided</td>
<td>Y N</td>
</tr>
<tr>
<td>9. Students are given the opportunity to provide examples of positive comments</td>
<td>Y N</td>
</tr>
<tr>
<td>10. Class is told that they can put their notecards in the box throughout the day</td>
<td>Y N</td>
</tr>
<tr>
<td>11. Process of earning a token for reporting positive comment is described</td>
<td>Y N</td>
</tr>
<tr>
<td>12. Class is told the criteria to earn a reward</td>
<td>Y N</td>
</tr>
<tr>
<td>13. Ideas for reinforcement are obtained from the class</td>
<td>Y N</td>
</tr>
<tr>
<td>14. Class votes on reinforcement</td>
<td>Y N</td>
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## APPENDIX O

### INTEGRITY CHECKLIST FOR COMBINATION OF PPR AND TOOTLING

Examiner: ___________________________  Date: ______________

Teacher: ___________________________  Time: ______________

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<tr>
<th>Procedure</th>
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<th>Present</th>
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<tbody>
<tr>
<td><strong>Morning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Script is read</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>2. Child’s name is selected from box</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>3. Star’s name is written in a visible location</td>
<td>Y</td>
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| **PPR Time** | | |
| 4. Script is read | Y | N |
| 5. Students voluntarily make positive statements | Y | N |
| 6. Praise is given for acceptable statements | Y | N |
| 7. A token is provided for acceptable statements | Y | N |

| **The end of the day** | | |
| 8. Script is read | Y | N |
| 9. Teacher reads acceptable statements | Y | N |
| 10. Praise is provided for acceptable statements | Y | N |
| 11. A token is provided for acceptable statements | Y | N |
| 12. Tokens are counted and displayed to the class | Y | N |
APPENDIX P

IRB FORM

THE UNIVERSITY OF SOUTHERN MISSISSIPPI
Institutional Review Board
118 College Drive #5147
Hattiesburg, MS 39406-0001
Tel: 601.266.6820
Fax: 601.266.5509
www.usm.edu/irb

HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE
NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 10091701
PROJECT TITLE: Positive Peer Reporting and Positive Peer Reporting Combined with Tooting: A Comparison of Interventions
PROPOSED PROJECT DATES: 08/24/2010 to 08/24/2011
PROJECT TYPE: Dissertation or Thesis
PRINCIPAL INVESTIGATORS: Julie Sherman
COLLEGE/DIVISION: College of Education & Psychology
DEPARTMENT: Psychology
FUNDING AGENCY: N/A
HSPRC COMMITTEE ACTION: Expedited Review Approval
PERIOD OF APPROVAL: 09/21/2010 to 09/20/2011

[Signature]
Lawrence A. Hosman, Ph.D.
HSPRC Chair

[Date]
REFERENCES


