

## Improving the Social Status of Peer-Rejected Youth with Disabilities: Extending the Research on Positive Peer Reporting

Frank E. Bowers, Marcia E. Jensen, Clayton R. Cook, Amber D. McEachern & Tara Snyder

Peer rejection is a common experience for youth with emotional and behavioral disabilities and it is associated with increased risk of negative short- and long-term outcomes. There is a high premium on interventions that can improve the social status and functioning of these youth. Positive Peer Reporting (PPR) is a behavior analytic intervention designed to increase the social status of peer-rejected youth. Although several studies have demonstrated the efficacy of PPR, it is unclear whether the positive effects generalize to other settings and/or maintain after the intervention is withdrawn. This study provides preliminary support for the generalization and maintenance of PPR effects in a residential treatment program and highlights factors that may mitigate the effectiveness of PPR.

---

Emotional or behavioral disabilities and peer rejection independently pose significant risks for social, emotional, and behavioral problems. These risk factors are often co-occurring, which increases the likelihood of experiencing negative outcomes. Research has shown that peer rejection is one of the strongest predictors of delinquency (Williams & Gilmour, 1994), aggressive behavior (Rabiner, Coie, Miller-Johnson, Boykin, & Lochman, 2005), adult psychopathology (Bagwell, Newcomb, & Bukowski, 1998), and other negative life course outcomes (Parker & Asher, 1987). Studies examining the prevalence of peer rejection in the school-aged population suggest that 15 to 25% of children and youth are rejected by their peers (Bierman & Montminy, 1993). For youth with disabilities, these estimates are substantially higher, reaching as high as 40% (Mishna, 2003; Nabuzoka & Smith, 1993; Unnever, & Cornell, 2003). Given the large number of youth who experience peer rejection, there is a high premium on interventions that can improve the social status and functioning of these youth. Social skills training (SST) has been the most frequently endorsed and used intervention strategy to improve the social functioning and status of peer-rejected youth. SST assumes that peer-rejected youth have social skill deficits (i.e., they do not possess the skill) and these deficits prevent them from being successful in social situations. Consequently, teaching youth specific social skills to remediate their deficits will likely produce social dividends in terms of enhanced social competence and standing among their peers. SST has been shown to be an effective intervention for youth with emotional and behavioral disabilities (Cook et al., 2008; Gresham, Cook, Crews, & Kern, 2004). Unfortunately, there are several limitations associated with SST that prevent it from fully addressing the needs of peer-rejected youth with

disabilities. First, the youth may not have a skill deficit at all, but rather a performance deficit. That is, he or she may know how to perform the skill, but, for some reason, does not utilize the skill when the situation calls for it. Simply retraining an already learned skill does not appear to be helpful in reducing peer rejection. Second, once the youth learns the skill, because of reputational bias, behavior momentum or lack of motivation, the skill does not often generalize to the natural environment (Gresham, 1998; Maag, 2005). In an attempt to overcome some of the limitations of SST, Ervin, Miller, and Friman (1996) developed Positive Peer Reporting (PPR). PPR is a behavior analytic intervention that uses the peer ecology to influence behavior and promote social acceptance of peer-rejected youth. PPR works by actively soliciting peers to provide positive reports or statements to a target youth identified as the Recipient. The peers, called Tellers, are provided positive reinforcement using a token economy system for making positive statements about the Recipient. The Recipient receives continual positive social attention; thereby, altering the peer ecology from one that included aggressive rejection or isolation to one that is supportive and reinforcing. There is a growing body of literature demonstrating the efficacy of PPR in several different settings, including a residential treatment center (Bowers, McGinnis, Ervin & Friman, 1999), a school within a residential treatment center (Ervin, Miller, & Friman, 1996), a public school (Moroz & Jones, 2001), and foster care placement (Van Horn, 2004). Other studies have been conducted that support the efficacy of PPR (Hofstadler, 2007; Morrison & Jones, 2007). Together, these studies have targeted a wide range of youth who were either peer rejected or ignored. Researchers have also assessed the social validity of PPR and found that it is rated by implementers as highly

acceptable and likely to lead to socially important outcomes. The majority of these studies would be considered efficacy studies, in that they employed rigorous experimental methods to demonstrate a functional relationship between the implementation of PPR and improved social functioning for peer-rejected youth.

Despite the relatively large literature base supporting the efficacy of PPR, there remain several important, unanswered questions. One, it is unclear whether the effects of PPR generalize to settings other than the setting in which the intervention was implemented. As Stokes and Baer (1977) stated several years ago, generalization is a phenomenon assumed to just happen, not something that needs to be specifically programmed. At this point, PPR researchers have not assessed whether generalization of intervention effects just happens or whether it is something that needs procedures specific to it.

Two, the research on PPR fails to demonstrate whether the positive effects of PPR maintain once it is withdrawn. The available evidence on behavior modification indicates that maintenance of behavior change does not naturally occur when treatment procedures are abruptly withdrawn (Walker, Mattson, and Buckley, 1971; Kazdin, 1997). Maintenance of youth outcomes, however, remains an unaddressed empirical question with regard to PPR.

Three, there is limited understanding of the active treatment components that drive the positive outcomes associated with PPR. It is unclear whether there is differential benefit for individuals in the recipient versus teller conditions, or whether they benefit from both conditions. Thus, there is a need for a component analysis of recipient versus teller conditions.

Four, although treatment integrity has been measured in prior research, special attention has not been paid to whether the degree to which PPR is implemented as planned impacts youth outcomes. PPR is a consultation-based intervention, and the level of treatment integrity of consultation-based interventions depends on the intensity of training and feedback provided by the consultant to the consultee (Noell et al., 2005; Jitendra et al., 2007). While less intensive consultation and lower treatment integrity has been shown to lead to improvements in academic performance, research by Noell et al. has demonstrated that higher levels of treatment integrity are associated with greater treatment

response. It is unclear which of the above scenarios applies to PPR.

The purpose of the present research was to conduct a preliminary effectiveness study with these limitations in mind. In particular, there were four primary research questions that guided our study:

1. Generalization: To what extent do the effects produced by PPR generalize to other settings?
2. Maintenance: To what extent do the effects produced by PPR maintain once the intervention is withdrawn?
3. Treatment Components Analysis (recipient vs. teller): What is the active treatment component involved in PPR?
4. Treatment Integrity: Does the integrity with which PPR is implemented impact outcomes?

This study is described as an effectiveness study due to the setting and manner in which it was designed and carried out. Effectiveness studies are generally conducted in applied settings under loose experimental conditions; whereas, efficacy studies are conducted in contrived settings under tight experimental conditions. Given the amount of research demonstrating the efficacy of PPR, we were interested in an effectiveness study to provide preliminary data about the effectiveness and unknown features of PPR.

## Method

### Participants

Participants for this study were six youth placed at Boys Town, a residential treatment setting for individuals with significant problem behaviors. Demographic information for all participants including pseudonym, grade, special education status, DSM-IV diagnoses, and psychotropic medications are listed in Table 1. All youth demonstrated intellectual functioning within the average range and had treatment plans including goals to develop social skills. Boys Town employs the Teaching Family Model, a behaviorally based treatment approach utilizing a token economy administered in the home and school settings (Coughlin & Shanahan, 1991). In the home, each youth lives with a married couple, designated as Family Teachers, three to eight other residential youth, and the Family Teachers' natural children, when applicable. A multiple-gating procedure was used to select participants for this study. First, school staff and family teachers nominated youth

for participation in the study based on their overall impression of the youths' peer rejected status in the school and home settings. Prior to or during baseline data collection, the youth in each participant's home rated the desirability of spending time with each youth in the home. At this time, all participants were rated as the least liked youth in the home. All participants were Caucasian adolescents. Three participants were male and the mean age at the beginning of this study was 13.8 years of age (range: 11 -15).

**Social Skills Rating System (SSRS)**

Three separate forms of the SSRS (Gresham & Elliott, 1990) were obtained at baseline and following the final intervention phase from the youth participant (who completed the student form), the Family Teachers (who completed the parent form), and a behavioral intervention specialist from the school (who completed the teacher form). The SSRS is a standardized questionnaire implementing Likert ratings to assess the perceived frequency (never, sometimes, and

Table 1  
Participant Demographic Information

Participant <sup>1</sup>	Grade	Special Education Status	DSM-IV TR <sup>2</sup> Diagnosis	Psychotropic Medication
Caleb	8	Emotional Disturbance	ODD; ADHD – Combined Type	Abilify, Vyvanse
Robert	8	Emotional Disturbance	Bipolar Disorder; PTSD; Impulse Control Disorder; ADHD - NOS	Abilify, Guanfacine Hydrochloride, Ritalin LA
Kathleen	6	None	Mood Disorder, NOS; ADHD; ODD; Enuresis	Concerta, DDAVP
Helen	8	None	Adjustment Disorder w/ Mixed Disturbance of Emotions & Conduct	None
John	8	None	MDD, Recurrent; ODD; ADHD-Combined Type	Wellbutrin SR, Risperdal, Adderall XR,
Tiffany	8	None	MDD, Severe w/o psychotic features; ODD; ADHD, NOS	None

<sup>1</sup> Participant names were replaced with pseudonyms

<sup>2</sup> DSM-IV TR = Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition – Text Revision (American Psychiatric Association, 2000); ADHD = attention-deficit/hyperactivity disorder; MDD = Major Depressive Disorder; ODD = Oppositional Defiant Disorder; PTSD = Posttraumatic Stress Disorder

**Measures**

**Sociometric Rating Scale**

Prior to intervention implementation and again at post-intervention each youth living in the home with the target youth rated how much they enjoyed working on projects and spending their free time with each of their housemates, including the target child. The ratings were conducted on an 8-point Likert scale, ranging from 0 (not at all) to 7 (very much). An average score was derived for each youth by summing the scores provided the youth's peers and not including the youth's self-rating and dividing by the number of raters included.

very often) and importance (not important, important, and critical) of social skills, the frequency of problem behaviors, and ranking of the students' academic competence in comparison to his or her classmates.

**Direct Behavior Rating (DBR)**

DBRs are hybrid assessment tools combining features of systematic direct observations and behavior rating scales. DBRs have been recommended as a practical alternative to systematic direct observations as progress monitoring tools, given how strongly they correlate with systematic direct observation. DBRs (sometimes referred to as home notes, daily report cards, and home-school notes) are observation

tools that meet the following criteria: (a) specification of target behavior(s), (b) rating behavior(s) at least once per day, (c) sharing rating information across individuals (e.g., teachers, parents, students), and (d) monitoring the effects of interventions (Chafouleas, Christ, Riley-Tilman, Briesch, & Chanese, 2007; Chafouleas, Riley-Tilman, & McDougal, 2002; Riley-Tilman, Kalberer, & Chafouleas, 2005).

The DBR was used by Family Teachers to evaluate the frequency of positive interactions initiated by the participants with their peers as well as the frequency of positive interactions initiated by peers with the participants within the home setting on a daily basis. In the school setting, a behavior intervention specialist provided ratings of participant-initiated and peer-initiated positive interactions for each school day. The DBR assessed the estimated frequency of positive interactions initiated by the participant and their peers using a 9-point Likert scale. A rating of 1 indicated that the participant or their peers initiated "no positive interactions", a rating of 5 indicated "some positive interactions", and a rating of 9 indicated "several positive interactions".

### Procedure

Prior to the implementation of the intervention, baseline data were collected using the Sociometric Rating Scale, the SSRS, and the DBR. DBR data were collected throughout baseline, intervention, and during the post-intervention maintenance evaluation by school staff for five of the six participants. Family teachers provided DBR ratings through all phases for four participants. For one participant, the family teachers stopped providing daily DBR data after the second phase of the intervention and for another participant, the family teachers stopped providing home ratings after the withdrawal of the intervention.

During the baseline phase, the school staff and family teachers completed the DBRs on a regular basis to indicate when each youth reached stability and was able to begin the first phase of the study (Recipient or Teller). The subsequent phase changes were staggered so that each youth began a different phase at a different point throughout the study. The original plan was that each youth began a phase when another youth was switching phases; however, external factors (e.g., home visits, staffing shortages, emergencies) precluded

this from occurring. The first youth was on baseline for 7 days while others were on baseline for as long as 37 days.

An investigator presented the PPR intervention to all of the youth in the home during the daily Self-Government meeting (n.b., this is equivalent to a family meeting in which youth in the home discuss house business and engage in group skills practice). All youth in the home were invited to sign informed consents. Once the youth signed consents, they completed sociometric ratings of all of the other youth in the home. One youth abstained from participating in the study; however, he was not a selected target participant, so it was easy to exclude his sociometric ratings. All youth in the home were told a drawing would occur approximately weekly during the Self-Government meeting that would identify a Recipient for the home until the next drawing. All youth were told that by providing positive comments about the Recipient during daily Self-Government meetings they would receive incentives toward their motivation system. The Family Teacher provided the youth with examples of appropriate positive comments which would result in the immediate presentation of positive incentives for the reporter and acknowledgement to the Recipient regarding their behavior. Appropriate comments were explicit observations of prosocial behavior demonstrated by the Recipient (e.g., "I saw Mike pick up a book for Johnny that he dropped"). It is important to note that the Recipient was not provided with point incentives for the behavior reported on; however, he or she was given verbal praise for the reported actions. During the intervention, Family Teachers were also supplied with Treatment Integrity Protocols which allowed for a self-review of their adherence to the treatment. For each participant, there were at least two phases in which he/she was the Recipient and two phases in which he/she was the Teller of positive comments to the selected Recipient.

Following the intervention phases, the Sociometric Ratings Scales and the SSRS were collected again. DBR data were collected during the period of 15, 30, and 45 days post intervention.

### Results

#### Effectiveness of PPR Intervention

#### Sociometric Data

A comparison of the sociometric ratings preceding and following the implementation of the intervention suggested that the PPR intervention may have contributed to increasing the social status of four of five participants within the home setting. Although the majority of youth remained the lowest ranked in the home, one youth increased her rank by one place (i.e., from 6/6 to 5/6). For this participant (i.e., Tiffany), the average ranking for all youth in the home stayed consistent from pre-intervention to post-intervention and her ranking increased slightly suggesting that her social status in the home improved at the same time that other youth remained the same. Another youth improved his overall sociometric score by more

that the PPR intervention may have contributed to improvements in social skills ratings and decrements in problem behavior ratings for three of five participants. At baseline, all participants were rated by their family teachers as having fewer than average social skills (i.e., at least one standard deviation below the mean) in the home setting. For three of the participants (i.e., Helen, Tiffany, and Kathleen), their family teachers rated their level of problem behaviors as more than average (i.e., at least one standard deviation above the mean). Five of six participants provided ratings of their pre-intervention levels of social skills. Four participants rated their social skills in the average range (i.e., Caleb, Tiffany, John, and Robert) and

Table 2  
Sociometric Data

Participant	Pre-Intervention		Post-Intervention		Δ Pre- to Post- Score (Rank)
	Score (Rank)	Range (Mean)	Score (Rank)	Range (Mean)	
Caleb	1.3 (9/9)	1.3-4.8 (3.8)	3.5 (8/8)	3.5-6.3 (4.8)	+2.2 (0)
Tiffany	4.0 (6/6)	4.0-5.6 (5.2)	4.4 (5/6)	4.2-6.0 (5.2)	+0.4 (+1)
Kathleen	2.0 (6/6)	2.0-5.2 (3.8)	2.4 (6/6)	2.4-6.4 (4.6)	+0.4 (0)
Robert	1.8 (8/8)	1.8-6.0 (4.6)	N/A	N/A	N/A
Helen	5.0 (5/5)	5.0-6.25 (5.75)	3.0 (6/6)	3.0-6.0 (4.8)	-2.0 (0)
John	1.0 (4/4)	1.0-5.0 (3.7)	1.7 (4/4)	1.7-6.7 (4.4)	+0.7 (0)

than two points on an 8-point scale. In three cases (i.e., Caleb, Kathleen, and John), the increase in the participants' sociometric scores was consistent with higher average ratings across all youth in the home. This suggests that in addition to the target youth having a higher level of social acceptance in the home, all youth in the home were rated as more desirable to spend time with following the intervention. One participant achieved a lower sociometric score, and this score was consistent with an overall lower average rating across all girls in her home. This decreased sociometric score was not congruent with other measures of social skills (i.e., the SSRS) and peer interactions (i.e., Direct Behavior Ratings) described below. See Table 2 for the sociometric data pre- and post-intervention for all participants.

**Social Skills Rating System (SSRS)**

The comparison of the pre- versus post-intervention SSRS data in the home setting suggest

one rated her social skills in the above average range (i.e., Helen).

Following the intervention, three of five participants (i.e., Caleb, Helen, and Tiffany) were rated by their family teachers as having average level social skills in the home setting. The ratings provided by John's family teachers remained fewer than average in the domain of social skills. There were also reductions in the level of problem behaviors demonstrated in home settings for three participants (i.e., Caleb, Helen, and Tiffany). Although still above average, Tiffany's level of problem behavior was rated more than one standard deviation lower than baseline levels. In contrast, John's level of problem behavior following the PPR intervention was rated as slightly elevated compared to baseline and fell in the more than average range. Three of four participants (i.e., Caleb, Tiffany, and John) rated their social skills in the average range and one participant (i.e., Helen)



rated her social skills in the below average range during the post-intervention period. See Table 3 for pre- and post-interventions ratings on the SSRS for all participants.

the Teller phase demonstrated an increase in her self-initiated and peer-initiated positive interactions during the first intervention phase (i.e., Helen). Another participant (i.e., Tiffany) who began with

Table 3  
Social Skills Rating Scales

Participant	Rater <sup>a</sup>	Pre-intervention	Post-intervention	Δ Pre- to Post-intervention
Caleb	Family Teacher	Social Skills: 70 Problem Behaviors:109	SS: 98 PB: 95	SS: +28 <sup>b*</sup> PB: -14 <sup>b*</sup>
	Teacher	Social Skills: 87 Problem Behaviors:133	SS: 105 PB:113	SS: +18 <sup>b*</sup> PB: -20 <sup>b*</sup>
	Student	Social Skills: 87	SS: 112	SS: +25 <sup>b*</sup>
Helen	Family Teacher	Social Skills: 65 Problem Behaviors:120	SS: 107 PB:109	SS: +42 <sup>b*</sup> PB: -11 <sup>b*</sup>
	Teacher	Social Skills: 84 Problem Behaviors:99	SS: 108 PB:99	SS: +24 <sup>b*</sup> PB: 0
	Student	Social Skills: 119	SS: 77	SS: -42 <sup>*</sup>
Tiffany	Family Teacher	Social Skills: 68 Problem Behaviors:135	SS:100 PB:116	SS: +32 <sup>b*</sup> PB: -19 <sup>b*</sup>
	Teacher	Social Skills: 80 Problem Behaviors:137	SS: 91 PB:119	SS: +11 <sup>b*</sup> PB: -18 <sup>b*</sup>
	Student	Social Skills: 97	SS: 104	SS: +07 <sup>b</sup>
Kathleen	Family Teacher	Social Skills: 73 Problem Behaviors:128	SS: 77 PB: 119	SS: +04 <sup>b</sup> PB: -09 <sup>b</sup>
	Teacher	Social Skills: 95 Problem Behaviors:121	SS: 96 PB:100	SS: +01 <sup>b</sup> PB: -21 <sup>b*</sup>
John	Family Teacher	Social Skills: 78 Problem Behaviors:112	SS: 76 PB: 116	SS: -02 PB: +04
	Teacher	Social Skills: 74 Problem Behaviors:125	SS: 89 PB:119	SS: +15 <sup>b*</sup> PB: -06 <sup>b</sup>
	Student	Social Skills: 95	SS: 88	SS: -07
Robert	Family Teacher	Social Skills: 79	N/A	N/A
	Teacher	Social Skills: 96 Problem Behaviors:108	N/A	N/A
	Student	Social Skills: 93	N/A	N/A

Note. <sup>a</sup> Family teachers used the SSRS – Parent Form, school personnel used the SSRS – Teacher Form, and participants rated themselves using the SSRS – Student Form.

<sup>b</sup> Change in score was in expected direction based on the intervention. \* Change in score exceeded confidence interval of pre-intervention rating.

**Direct Behavior Rating (DBR)**

Overall, the delivery of the PPR intervention co-occurred with increases in self-initiated and peer-initiated positive interactions compared to baseline levels in the home setting for four of the six participants. Two of the three participants who started with the Recipient phase of the PPR intervention demonstrated an increase in their self-initiated and peer-initiated positive interactions during the first intervention phase (i.e., Caleb and Robert). One of three participants who began with

the Teller phase showed an increase in her peer-initiated positive interactions during the first intervention phase, but she did not show an increase in her self-initiated positive peer interactions until the second phase of the intervention (i.e., the Recipient phase). The increased levels of self-initiated and peer-initiated positive interactions in the home setting during the first and second intervention phases were sustained through the delivery of the intervention for four of six participants. See Table 4 for a

presentation of Direct Behavior Ratings of positive interactions were correlated with Caleb’s

Table 4  
 Direct Behavior Ratings – Participants’ Positive Interactions by Phase

Participant	Setting	Baseline	Recip. (Δ)	Teller (Δ)	Recip. (Δ)	Teller (Δ)	15-day Post (Δ)	30-day Post (Δ)	45-day Post (Δ)		
Caleb	Home	3.9	5.1 (+1.2)	3.1 (-2.0)	5 (+1.9)	4.4 (-0.6)	5.3 (+0.9)	5.3 (0)	3.4 (-1.9)		
	School	2.6	2.0 (-0.6)	3.9 (+1.9)	5 (+1.1)	4.8 (-0.2)	5.9 (+1.1)	6.4 (+0.5)	5.5 (-0.9)		
Robert	Home	3.5	4.5 (+1.0)	-	-	-	-	-	-		
	School	4.7	6.0 (+1.3)	-	-	-	-	-	-		
Kathleen	Home	5.2	4.0 (-1.2)	3 (-1.0)	-	-	-	-	-		
	School	4.0	3.0 (-1.0)	2.7 (-0.3)	4.2 (+1.5)	3.0 (-0.8)	6.3 (+3.3)	6.6 (+0.3)	7.0 (+0.4)		
Helen	Home	3.7	4.8 (+1.1)	4.3 (-0.5)	5.9 (+1.6)	6.1 (+0.2)	6.1 (0)	5.7 (-0.4)	-		
John	Home	4.5	3.7 (-0.8)	3.3 (-0.2)	1.4 (-1.9)	2.5 (+0.9)	2.5 (0)	-	-		
	School	2.5	3.4 (+0.9)	3.2 (-0.2)	2.2 (-1.0)	2.0 (-0.2)	3.4 (+1.4)	-	-		
		Baseline	Teller (Δ)	Recip. (Δ)	Teller (Δ)	Recip. (Δ)	Teller (Δ)	Recip. (Δ)	15-day Post (Δ)	30-day Post (Δ)	45-day Post (Δ)
Tiffany	Home	5.1	4.0 (-1.1)	6.3 (+2.3)	5.3 (-0.7)	5.0 (-0.3)	6.0 (+1.0)	6.0 (0)	-	-	-
	School	3.0	4.4 (+1.4)	3.4 (-1.0)	3.6 (+0.2)	4.5 (+0.9)	6.8 (+1.3)	4.0 (-2.8)	5.3 (+1.3)	6.0 (+0.7)	5.5 (-0.5)

Note. The ratings are averaged across phase.

participants’ self-initiated positive interactions with peers by phase in the home settings. See Table 5 for a presentation of Direct Behavior Ratings of peer-initiated positive interactions with participants by phase in the home settings.

The PPR intervention was effective at increasing Caleb’s mean level of self-initiated positive interactions with peers, particularly during the Recipient phases. In addition, peer-initiated

level of self-initiated positive peer interactions in the home setting. See Figure 1 for a summary of Caleb’s self-initiated positive peer interactions in home and school settings by phase.

According to ratings provided by his family teachers, Robert’s mean level of self-initiated and peer-initiated positive interactions increased relative to baseline levels when the Recipient phase of the intervention was introduced. See Figure 2

Table 5  
*Direct Behavior Ratings – Peers' Positive Interactions with Participants by Phase*

Participant	Setting	Baseline	Recip. ( $\Delta$ )	Teller ( $\Delta$ )	Recip. ( $\Delta$ )	Teller ( $\Delta$ )	15-day Post ( $\Delta$ )	30-day Post ( $\Delta$ )	45-day Post ( $\Delta$ )		
Caleb	Home	2.5	6.0 (+3.5)	3.4 (-2.6)	5 (+1.6)	4.6 (-0.4)	4.7 (+0.1)	4.5 (-0.2)	3.6 (-0.9)		
	School	1.4	1.5 (+0.1)	2.4 (+0.9)	4.0 (+1.6)	4.0 (0)	3.9 (-0.1)	4.3 (+0.4)	3.9 (-0.4)		
Robert	Home	2.6	4.3 (+1.7)	-	-	-	-	-	-		
	School	4.7	5.3 (+0.6)	-	-	-	-	-	-		
Kathleen	Home	3.9	4.1 (+0.2)	4.4 (+0.3)	-	-	-	-	-		
	School	3.8	2.7 (-0.9)	3.3 (+0.6)	3.6 (+0.3)	3.0 (-0.6)	5.8 (+2.8)	6.1 (+0.3)	6.2 (+0.1)		
Helen	Home	3.5	3.8 (+0.3)	3.8 (0)	5.4 (+1.6)	5.6 (+0.2)	5.5 (-0.1)	4.8 (-0.7)	-		
John	Home	5.4	4.6 (-0.8)	2.9 (-1.7)	5.4 (+2.5)	4.3 (-0.9)	2.2 (-1.9)	-	-		
	School	2.0	2.6 (+0.6)	2.8 (+0.2)	2.4 (-0.4)	2.0 (-0.4)	2.7 (+0.7)	-	-		
		Baseline	Teller ( $\Delta$ )	Recip. ( $\Delta$ )	Teller ( $\Delta$ )	Recip. ( $\Delta$ )	Teller ( $\Delta$ )	Recip. ( $\Delta$ )	15-day Post ( $\Delta$ )	30-day Post ( $\Delta$ )	45-day Post ( $\Delta$ )
Tiffany	Home	4.5	5.0 (+0.5)	5.0 (0)	3.7 (-1.3)	4.8 (+1.1)	4.4 (-0.4)	4.6 (+0.2)	-	-	-
	School	3.0	4.8 (+1.8)	2.3 (-2.5)	3.8 (+1.5)	4.5 (+0.7)	5.6 (+1.1)	3.8 (-1.8)	4.7 (+0.9)	5.4 (+0.7)	5.3 (-0.1)

*Note.* The ratings are averaged across phase

for a summary of Robert's self-initiated positive peer interactions in home and school settings by phase.

In the home setting, Kathleen demonstrated a decrease in her mean level of self-initiated positive interactions with peers during both the initial Recipient and Teller phases below baseline levels. When the PPR intervention was introduced in the home setting, there was a slight increase in Kathleen's peer-initiated positive interactions relative to baseline. No daily behavior rating data

were provided from the home setting following these two phases. In sum, the PPR intervention was effective at increasing peer-initiated, but not self-initiated positive interactions during the first two phases in the home setting. See Figure 3 for a summary of Kathleen's self-initiated positive peer interactions in home and school settings by phase.

The PPR intervention was effective at increasing Helen's level of self-initiated and peer-initiated positive interactions in the home setting. The effectiveness of the PPR intervention appeared to



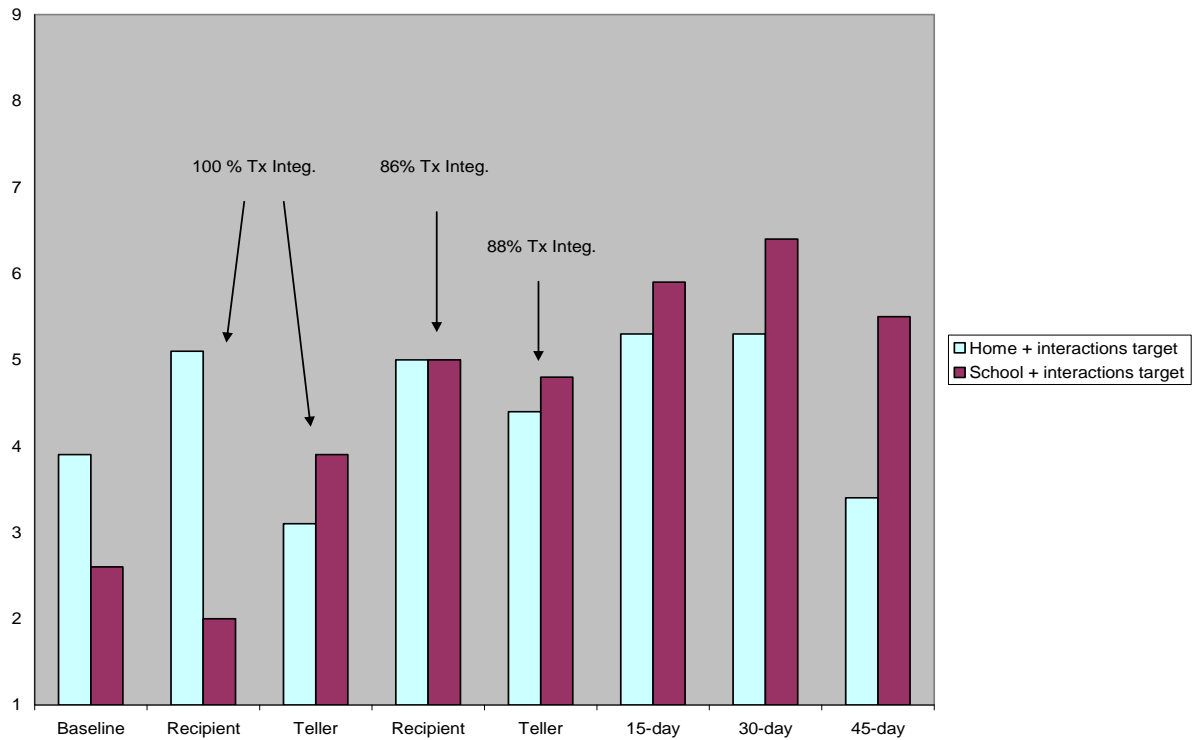


Figure 1. Caleb’s positive interactions with peer by phase in home and school settings.

be influenced by the level of treatment implementation. This issue is elaborated further in the section entitled Treatment Integrity below. See Figure 4 for a summary of Helen’s self-initiated positive peer interactions in the home setting by phase.

The PPR intervention was not effective at increasing John’s self-initiated or peer-initiated positive interactions in the home setting. John’s lack of response to the PPR intervention cannot be explained by poor treatment integrity as he had a high proportion of treatment implementation and was consistently present throughout all intervention phases (see Table 5). Of note, during the implementation of the PPR intervention, John struggled significantly in many aspects of his treatment. He attributed his struggle to a lack of motivation to complete treatment successfully due to a lack of desire to return to the placement designated in his permanency plan. Following withdrawal of the intervention, John continued to demonstrate poor social skills and noncompliant behaviors. See Figure 5 for a summary of John’s self-initiated positive peer interactions in home and school settings by phase.

Tiffany showed an increase in her mean level of positive interactions initiated with peers compared to baseline levels when the PPR intervention was implemented consistently and with good treatment integrity. Issues related to treatment implementation are addressed below. See Figure 6 for a summary of Tiffany’s self-initiated positive peer interactions in home and school settings by phase.

SSRS

During the baseline phase, three of the six participants (i.e., Helen, Tiffany, and John) were rated as having fewer than average social skills in the school setting by their teachers or other school staff. At the same time, four participants (i.e., Caleb, Tiffany, Kathleen, and John) were showing higher levels of problem behaviors than the average peer at school. Post-intervention ratings by school staff reflected improved levels of social skills for four of five participants (i.e., Caleb, Helen, Tiffany and John) and reductions in levels of problem behaviors for three of five participants (i.e., Caleb, Tiffany, Kathleen and John). See Table 3 above for pre- and post-interventions ratings on the SSRS for all participants in home and school settings.

The improved levels of social skills in the school setting exceeded the confidence intervals of the

school setting exceeded the confidence interval of the pre-intervention ratings and were consistent with home ratings for two of the five participants (i.e., Caleb and Tiffany) suggesting that the effects of the PPR intervention may have generalized to improve social skills for three participants and to decrease problem

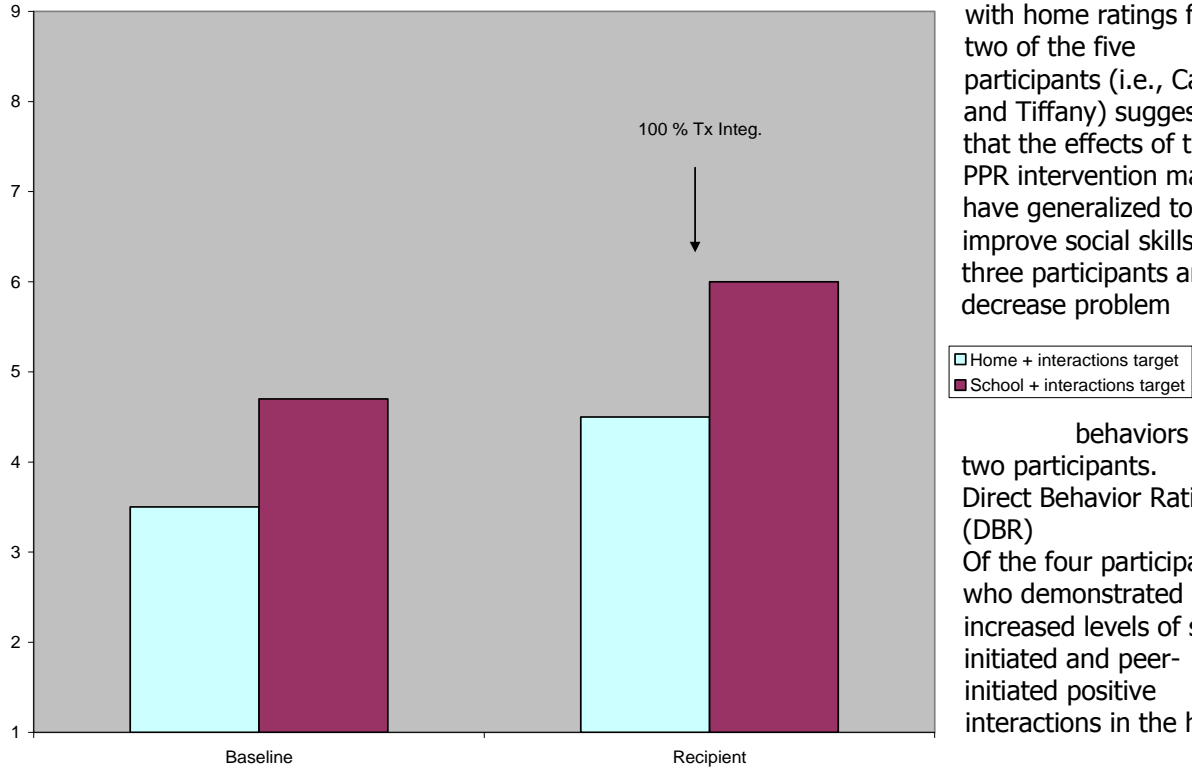


Figure 2. Robert's positive interactions with peer by phase in home and school settings.

pre-intervention ratings and were consistent with observations in the home setting for three of five participants (i.e., Caleb, Helen, and Tiffany). The reductions in levels of problem behaviors in the

setting during the PPR intervention, three were also evaluated by school staff using the daily behavior rating system. All three of these participants (i.e., Caleb, Robert, and Tiffany)

behaviors for two participants. Direct Behavior Rating (DBR) Of the four participants who demonstrated increased levels of self-initiated and peer-initiated positive interactions in the home

demonstrated a generalization of increased levels of self-initiated and peer-initiated positive interactions in the school setting which could be attributable to the PPR intervention. See Table 4

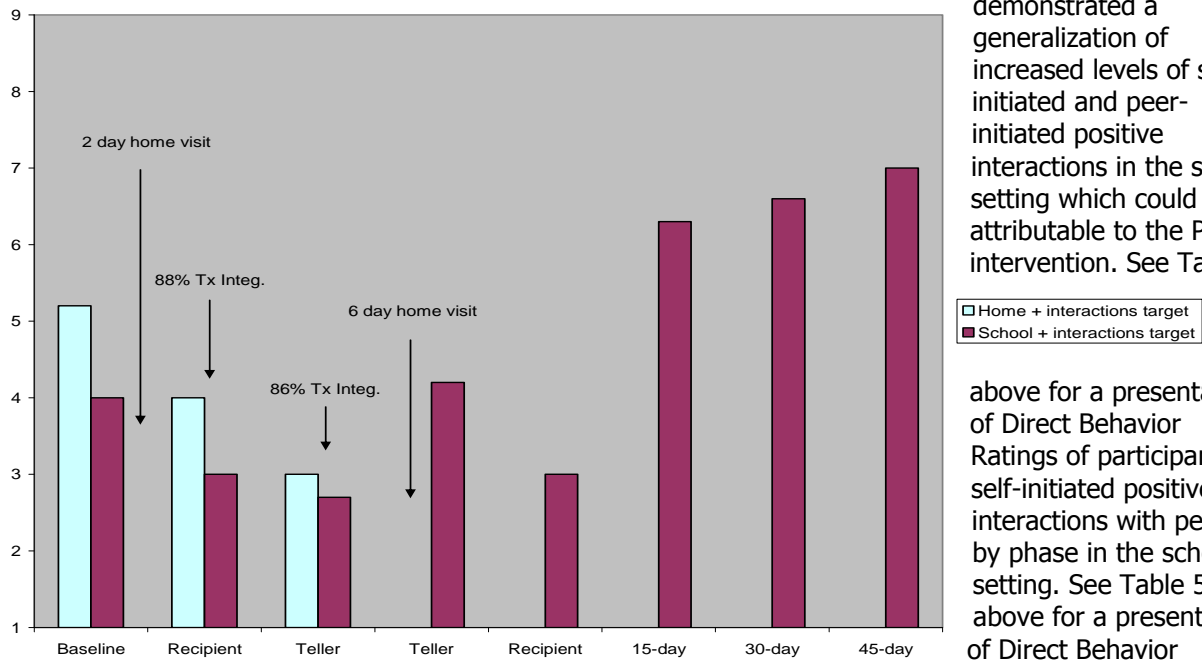


Figure 3. Kathleen's positive interactions with peer by phase in home and school settings.

above for a presentation of Direct Behavior Ratings of participants' self-initiated positive interactions with peers by phase in the school setting. See Table 5 above for a presentation of Direct Behavior

Ratings of peer-initiated positive interactions with participants by phase in the school setting.

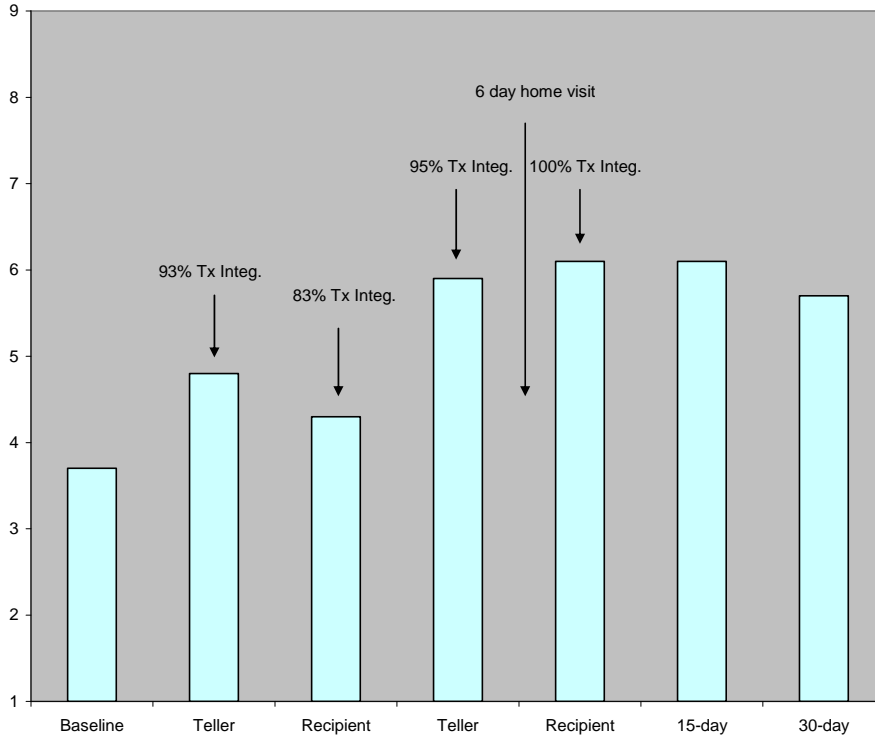


Figure 4. Helen's positive interactions with peer by phase in home and school settings.

In the school setting, there was a reduction in Caleb's mean level of self-initiated positive interactions with peers and a slight increase in

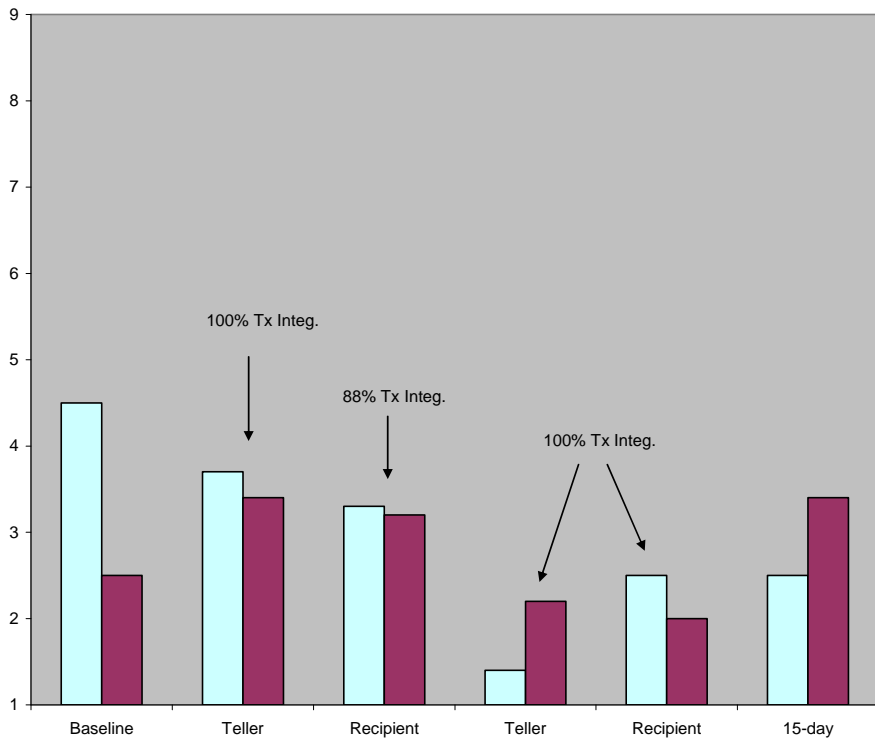


Figure 5. John's positive interactions with peer by phase in home and school settings.

peer-initiated positive interactions during the initial Recipient phase. During the Teller phase, Caleb's mean level of self-initiated and peer-initiated positive interactions increased relative to the previous phase and above baseline levels. Caleb's mean level of self-initiated and peer-initiated positive interactions remained above baseline levels throughout the remainder of the intervention in the school setting.

During the introduction of the Recipient intervention, there was an increase in Robert's mean level of self-initiated and peer-initiated positive interactions in the school setting relative to baseline levels. The delivery of the PPR intervention in the home

setting did not appear effective at consistently increasing Kathleen's self-initiated or peer-initiated positive interactions in the school setting. This is not judged to be a problem of generalization; however, as effectiveness was not established in the home setting.

Although John appeared to demonstrate an improvement in his level of self-initiated positive social interactions in the school setting following the introduction of the PPR

intervention in the home setting, this trend was reversed in subsequent phases. It is unlikely that this was a generalization of intervention effects from the home setting as there were no positive effects of the intervention relative to baseline observed in the home setting.

Evidence of generalization of the effects of the PPR intervention in the home setting to the school setting was inconclusive for Tiffany. During all phases of the PPR intervention, Tiffany's levels of self-initiated positive peer interactions were above baseline levels. The variation in level of positive peer interactions in the school setting did not seem to match the pattern in the home setting.

During the 15-day post-intervention ratings, Helen maintained consistent levels of self-initiated and peer-initiated positive interactions. During the 30-day post-intervention period, the family teachers' ratings of her level of self-initiated and peer-initiated positive peer interactions were slightly lower than the previous two-week period; however, they remained above baseline levels

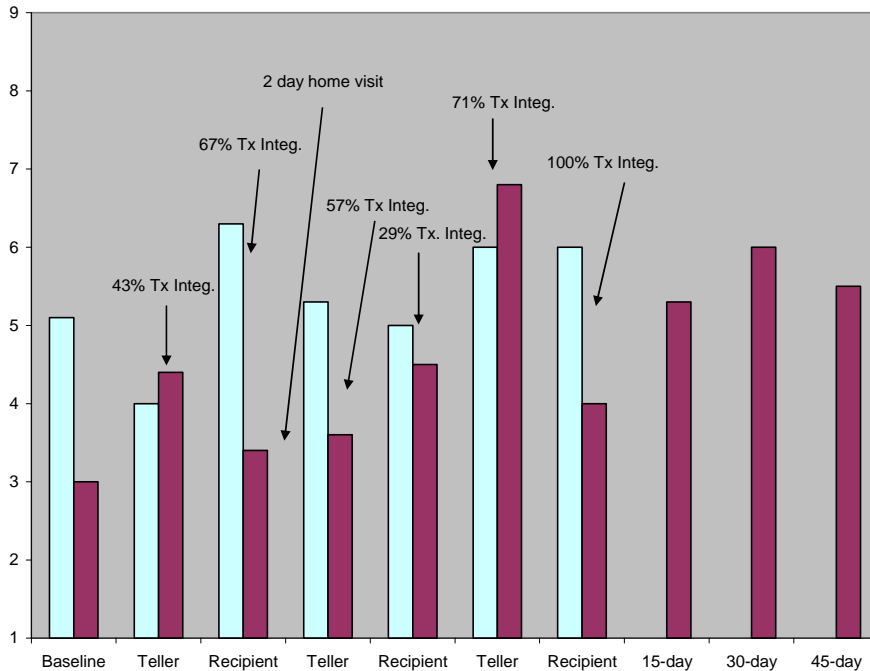


Figure 6. Tiffany's positive interactions with peer by phase in home and school settings.

during the month following withdrawal of the intervention. Due to the absence of home ratings following withdrawal of the intervention, it is impossible to evaluate the maintenance of Tiffany's increased level of positive peer interactions relative to baseline in the home setting. Tiffany's ratings of self-initiated and peer-initiated positive interactions in the school setting remained above baseline levels during the 45 days following withdrawal of the intervention in the home setting suggesting maintenance of treatment effects in the school setting.

**Maintenance**

**Direct Behavior Rating (DBR)**

Three of the four participants who demonstrated increased levels of self- and peer-initiated positive interactions during the PPR intervention were monitored between 30 and 45 days following withdrawal of the intervention. All three participants demonstrated evidence of maintenance of the effects of the intervention for the first 30 days following withdrawal of the intervention.

In home and school settings, Caleb demonstrated levels of self-initiated positive peer interactions that were consistent with intervention levels during both the 15-day and 30-day post-intervention ratings; however, there was a decrease in his level of self-initiated positive peer interactions during the 45-day post-intervention period. Peer-initiated positive interactions in the home and school settings were maintained at intervention levels through the 45-day post-intervention period.

**Treatment Integrity**

The effectiveness of the PPR intervention seemed to be at least partially moderated by the level of treatment integrity and the consistency of the participants' presence in the home. Due to the individualized nature of the treatment goals and permanency plans of the participants in this study, there was some variability in the presence of the participants throughout the intervention phases. In addition to this variability, some family teachers were more consistent with treatment implementation than others. See Table 6 for average proportions of treatment implementation for each participant by phase.

There were frequent disruptions in the delivery of the PPR intervention in Kathleen's home setting. Kathleen had one home visit over the weekend prior to the implementation of the first Recipient phase and a second home visit during Spring Break between the first and second Teller phases. Kathleen's family teachers reported missing one day of implementation of the intervention during

both the first Recipient and Teller phases. Inconsistency in Kathleen’s availability to

family teachers were unable to provide consistent treatment implementation due to Tiffany’s absence

Table 6  
Treatment Implementation by Phase

Participant	Days of Baseline	Recip.	Teller	Recip.	Teller
Caleb	07	100%	100%	86%	88%
Robert	37	100%	-	-	-
Kathleen	33	88%	86%	?	?
Helen	11	93%	83%	95%	100%
John	11	100%	88%	100%	100%

		Teller	Recip.	Teller	Recip.	Teller	Recip.
Tiffany	21	43%	67%	57%	29%	71%	100%

Note. The percentages of treatment implementation are averaged across phase.

participate in the intervention due to her home visits and family teacher intervention implementation may have compromised the effectiveness of the PPR intervention for Kathleen. For Helen, small changes in levels of treatment implementation appeared to impact the effectiveness of the PPR intervention. When the PPR intervention was implemented at an average proportion of 93% or higher, there were increases in Helen’s level of self-initiated positive interactions with peers; however, when the average proportion of treatment implementation decreased to 83%, during the first Recipient phase, Helen’s level of self-initiated positive peer interactions decreased as well. There did not appear to be a negative impact of a six-day break in intervention during a home visit just prior to the final phase of the PPR intervention.

Tiffany’s family teachers were inconsistent with treatment implementation on two days during this first Teller phase and they missed two days of treatment implementation during the second Teller phase. Tiffany had one home visit over the weekend between the implementation of the first Recipient phase and the second Teller phase. During the second implementation of the Recipient phase, Spring Break occurred and the intervention was only implemented on 2 of 7 days. Tiffany demonstrated increases in her self-initiated positive interactions with peers in the home setting when the proportion of treatment implementation was 67% or higher averaged across the phase. When

in the home or when they forgot to implement the intervention, Tiffany’s level of self-initiated positive interactions declined compared to baseline and preceding phases. Inconsistency in Tiffany’s availability to participate in the intervention due to her home visits and family teacher intervention implementation were judged to have compromised the effectiveness of the PPR intervention for Tiffany.

**Discussion**

The overarching purpose of this paper was to present an effectiveness study on the use of the PPR intervention for youth with emotional and behavioral disabilities. First, PPR was introduced as an effective and socially valid intervention for peer rejected youth with disabilities. Second, a series of single-case experiments was described with the intent of addressing existing gaps in the PPR research base. These single-case experiments were designed to evaluate the following four areas of interest (a) generalization, (b) maintenance, (c) treatment component analysis, and (d) treatment integrity. Before a discussion of the findings for each of these areas is provided, the rationale underlying this research as an effectiveness study is discussed.

**Efficacy versus Effectiveness Research**

Most scholars investigating and publishing research on evidence-based standards argue for a logical progression of research from efficacy, or internal validity, to effectiveness, or external validity, with

each part constituting an important aspect of empirical support for intervention procedures (Nathan, Stuart, & Dolan, 2000). Efficacy research is characterized by strong control in which a standardized program is delivered by researchers in a uniform fashion to a specific, homogeneous target group. Efficacy research is generally high on internal validity (i.e., positive effects can be attributed unambiguously to the intervention being studied) owing to the strict control and standardization, but is often lacking in terms of external validity (i.e., extent to which intervention's effects can be generalized beyond the conditions of the investigation to other populations, settings, conditions, and intervention agents; Cook & Campbell, 1979). Effectiveness research, on the other hand, refers to tests of whether the service delivery method or intervention does "more good than harm when delivered under real-world conditions" (Flay, 1986, p.14). The primary goal of effectiveness research is to determine whether an intervention works for a broadly defined population under loose experimental conditions. Also, with effectiveness research, researcher participation is held to a minimum and, therefore, implementation and adherence levels vary naturally as a function of real-world circumstances.

In the Introduction, we summarized that the published literature on the use of PPR is replete with efficacy research. This research was an important first step when considering the evidence-based status of PPR. The next step, which is perhaps even more important than the efficacy research, is effectiveness research. In order to extend the applicability of the PPR intervention to applied consultation settings, effectiveness research must be conducted to better understand whether PPR technology is capable of being transferred effectively into everyday practice. The present study represents a preliminary foray into this process. As such, the data resulting from this study should not be interpreted as providing unambiguous confirmation or disconfirmation of the research inquiries. Instead, the data should be considered representative of the findings one would likely see when using PPR under naturally occurring conditions in a residential treatment facility.

**Generalization: To what extent do the effects produced by PPR generalize to other settings?**

Youth with disabilities are embedded in and function within multiple settings (e.g., home,

school, and community). These settings often have distinct peer groups and ecological characteristics that place different social demands on youth. The research clearly demonstrates that PPR is capable of improving the social interaction skills and status of youth in the setting in which the intervention is implemented. The research, however, sheds very little light on whether the effects of PPR generalize to settings other than that in which the intervention was delivered. This is not surprising considering that generalization is often a neglected aspect of intervention research (Gresham, 1998).

Given this gap in the PPR research, one of the primary questions guiding our investigation was whether the effects of PPR generalize from the family home setting to the school environment. Data were, therefore, collected in the family home and school to track progress in both environments and examine the data for evidence of transfer of effects. The results from this study supported the generalization of effects from the family home to the school environment. Concomitant improvements in social functioning, as measured by DBRs and SSRS, were noted in both the family home and school environment for the majority of participants.

**Maintenance: To what extent do the effects produced by PPR maintain once the intervention is withdrawn?**

There is a paucity of research on the maintenance or durability of intervention effects following withdrawal of interventions in the evidence-based literature (Kazdin & Weisz, 2003). Results from large-scale meta-analyses indicate that only about a third of published studies include assessment of maintenance beyond immediate posttreatment (Weisz, 1995; Weisz, Weiss, & Langmeyer, 1987). The research literature on PPR is no different, in that it too is devoid of information on whether the effects produced by PPR maintain following withdrawal of the intervention (Bowers, Woods, Carlyon, & Friman, 2000). An aim of this investigation, therefore, was to evaluate the maintenance of youth outcomes in relation to PPR. Inspection of the follow-up data indicated that the positive effects produced by the PPR intervention maintained once the intervention was withdrawn. Improvements in self- and peer-initiated positive interactions were maintained above baseline levels for 15- and 30-day follow-up assessments. However, the data indicated that at the 45-day follow-up the effects of PPR began to taper off for some participants. The implication of this finding is



that some participants may need to be exposed to the PPR intervention for a longer duration and/or receive periodic booster session to support long-term maintenance. Future research should explore the impact of intervention duration and/or booster sessions on the maintenance of PPR outcomes.

**Treatment Component Analysis:** What is the active treatment component involved in PPR?

Another aim of this research was to uncover whether peer-rejected youth differentially benefit from being a teller or recipient of positive peer reports. In other words, the authors were interested in trying to isolate the active treatment ingredient involved in the PPR intervention. The results from the single-case experiments indicate that it depends on the particular target youth whether the teller or recipient condition is the active treatment component. For example, Caleb demonstrated better outcomes in the recipient condition. There are a number of explanations for the differential effects for teller and recipient conditions. One explanation is that not all peer-rejected youth are similar in their constellation of social interactions. That is, peer-rejected youth, like Caleb, who initiate a lot of negative verbal interactions with their peers, may benefit more from being the recipient of positive comments from their peers. We hypothesize that peer-rejected youth who are isolated by their peers, may benefit more from being the teller of positive statements from their peers. These hypotheses should be evaluated in future studies. Researchers will want to conduct additional component analyses to determine the most potent treatment component and whether certain types of peer-rejected youth are more likely to benefit from one condition than the other.

**Treatment Integrity:** To what extent does the integrity with which PPR is implemented impact outcomes?

One of the more important lessons that can be learned from this study is the critical role of treatment integrity. Treatment integrity is defined as the degree to which the intervention is implemented as planned (Gresham, 1989). Treatment integrity not only involves whether the intervention is implemented accurately (i.e., adherence to intervention protocol), but it also involves whether the intervention is implemented on a consistent basis (i.e., commitment to implementing intervention across time). Results from this study demonstrated that inaccurate or inconsistent implementation of the intervention

compromised participant outcomes. Specifically, concurrent fluctuations in participant response to the PPR intervention were noted with variations in treatment integrity levels. The impact of participant involvement is often overlooked in the treatment integrity literature. Findings from this study showed that variable participation of the target youth is one aspect of PPR that can undermine the integrity of its implementation and, correspondingly, diminish its efficacy. Two of the participants involved in this study were absent from the family home on a regular basis, which affected the dose or amount of the intervention they received. Given the applied nature and loose methodological conditions of this study, the authors did not have a strict protocol in place to handle participants who went on frequent home visits and missed critical days of intervention.

#### **Moderators of PPR Effectiveness**

Collectively the results indicate the need for additional research on the factors that moderate the effectiveness of PPR. We believe that a simplistic view that PPR is an intervention that always works is inaccurate. Rather the results of this study suggest that we should consider PPR as an intervention that works with particular youth under particular conditions. That is, we should rephrase the question of whether PPR works to with whom and under what conditions does PPR work? Future analyses that adopt this lens will move away from a main effect interpretation of PPR to a more precise interactional interpretation of the type of youth with whom and environmental circumstances under which PPR is optimally effective. For example, the results from this study indicate that PPR may not be effective for youth who are unmotivated to participate in treatment (e.g., John). Also, PPR is not likely to be useful if the target youth is not embedded within a stable peer ecology (e.g., Tiffany, Kathleen). Further, the results touch on the mitigating role of treatment integrity on PPR outcomes. Additional research should be conducted to explore with whom and under what conditions PPR is effective.

#### **Limitations**

As with all studies, this study has limitations worth mentioning. This research lacked the typical experimental methodological rigor necessary to establish internally valid conclusions. This limitation can also be viewed as a strength because the findings have external validity in that the effects were produced in a strictly applied residential setting with minimal oversight by researchers.

Nevertheless, readers should use discretion when interpreting the results from this study. A second limitation was the absence of direct behavior observations in home and school settings to validate the direct behavior ratings provided by family teachers and school staff. At the outset of the study, the investigators planned to conduct direct behavior observations in the school setting; however, the students were not consistently present during the planned school observation time.

A third limitation was the lack of interobserver agreement on the evaluation of treatment implementation. Self-report approaches to measuring treatment implementation, like that used in this study, have been shown to provide an inaccurate representation of treatment integrity (Wickstrom, Jones, LaFleur, & Witt, 1998). It is important to discuss the limitations of the PPR intervention for peer-rejected youth with disabilities. First, the data from this study indicate that although PPR can enhance the social functioning and status of peer-rejected youth, it is unlikely that PPR is capable of moving youth from being one of the most rejected peers in the group to one of the most popular peers. However, given the stability of sociometric status, any improvement is welcome news (Coie & Dodge, 1983). Also, other than shape how to deliver appropriate positive statements, PPR does not teach youth additional social skills that will enable them to be more successful in social situations with their peers.

### Future Directions

Researchers should use the results of this study as a jumping off point for future research on PPR. First, this study should be replicated with more rigorous experimental methods to provide more definitive conclusions regarding the four areas of inquiry that guided this study. Second, additional effectiveness studies should be conducted to better understand how to facilitate the adoption of PPR technology into real world settings. Third, the impact of PPR combined with other intervention strategies, such as social skills training or cognitive behavior therapy, should be investigated.

### Conclusion

Peer rejection is an all too familiar experience for youth with disabilities, which is likely to lead to a host of negative short- and long-term outcomes. Peer rejection, therefore, is a social phenomenon

that warrants continued attention from researchers and practitioners. PPR was introduced as a socially valid and effective intervention that can lead to improved social functioning for peer rejected youth with disabilities. The results from this study indicate that before the effects of PPR can generalize to other settings and/or maintain once the intervention is withdrawn, it must be implemented with integrity. In addition, greater attention to understanding with whom and under what circumstances PPR works will advance our discernment of the true merits of PPR.

### References

- American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders (4th ed., Text Revision)*. Washington, DC: Author.
- Bagwell, C.L., Newcomb, A.F., & Bukowski, W.M. (1998). Preadolescent friendship and peer rejection as predictors of adult adjustment. *Child Development, 69*, 140-153.
- Bierman, K.L., & Montminy, H.P. (1993). Developmental issues in social-skills assessment and intervention with children and adolescents. *Behavior Modification, 17*, 229-254.
- Bowers, F. E., McGinnis, C., Ervin, R. A., & Friman, P. C. (1999). Merging research and practice: The example of positive peer reporting applied to social rejection. *Education and Treatment of Children, 22*, 218-226.
- Bowers, F. E., Woods, D. W., Carlyon, W. D., & Friman, P. C. (2000). Using positive peer reporting to improve the social interactions and acceptance of socially isolated adolescents in residential care: A systematic replication. *Journal of Applied Behavior Analysis, 33*, 239-242.
- Chafouleas, S., Christ, T., Riley-Tilman, C. Briesch, A., & Chanese, J. (2007). Generalizability and dependability of direct behavior ratings to assess social behavior of preschoolers. *School Psychology Review, 36*, 63-79.
- Chafouleas, S., Riley-Tilman, T.C., & McDougal, J. (2002). Good, bad, or in-between: How does the daily behavior report card rate? *Psychology in the Schools, 39*, 157-169.
- Coie, J.D., & Dodge, K.A. (1983). Continuities and changes in children's social status: A five-year longitudinal study. *Merrill-Palmer Quarterly, 29*, 261-281.
- Cook, T.D., & Campbell, D.T. (1979). *Quasi-experimentation: Design and analysis issues for field settings*. US: Rand McNally & Co.
- Cook, C.R., Gresham, F.M., Kern, L., Barreras, R., Thornton, S., & Crews, S.D. (2008). Social skills training for secondary students with emotional and/or behavioral disorders: A review and analysis of the meta-analytic literature. *Journal of Emotional and Behavioral Disorders*.
- Coughlin, D., & Shanahan, D. (1991). *Boys Town Family Home Program: Training Manual*. Boys Town, NE: Boys Town Press.
- Ervin, R. A., Miller, P. M., & Friman, P. C. (1996). Feed the hungry bee: Using positive peer reports to improve the social interactions and acceptance of a socially rejected girl in a residential placement. *Journal of Applied Behavior Analysis, 29*, 251-253.
- Flay, B.R. (1986). Efficacy and effectiveness trials (and other phases of research) in the development of health promotion programs. *Preventive Medicine, 15*, 451-474.

- Gresham, F.M. (1989). *Assessment of treatment integrity in school consultation and prereferral intervention. School Psychology Review, 18, 37-50.*
- Gresham, F.M. (1998). *Social skills training: Should we raze, remodel, or rebuild? Behavior Disorders, 24, 19-25.*
- Gresham, F.M., Cook, C.R., Crews, S.D., & Kern, L. (2004). *Social skills training for children and youth with emotional and behavioral disorders: Validity considerations and future directions. Behavioral Disorders, 30, 32-46.*
- Gresham, F.M., & Elliott, S.N. (1990). *Manual for the Social Skills Ratings System.* Circle Pines, MN: American Guidance Service.
- Hofstadler, K. (2007). *Class-wide effects on the disruptive behavior of children with emotional disturbance. (Doctoral dissertation, Miami University, 2007).* *Dissertation Abstracts International, 176, 58A.*
- Jitendra, A.K., DuPaul, G.J., Volpe, R.J., Tresco, K.E., Vile Junod, R.E., Lutz, J.G., et al. (2007). *Consultation-based academic intervention for children with attention deficit hyperactivity disorder: School functioning outcomes. School Psychology Review, 36, 217-236.*
- Kazdin, A.E. (1997). *Parent management training: Evidence, outcomes, and issues. Journal of the American Academy of Child & Adolescent Psychiatry, 36, 1349-1356.*
- Kazdin, A.E., & Weisz, J.R. (2003). *Evidence-based psychotherapies for children and adolescents.* New York: Guilford Press.
- Maag, J. W. (2005). *Social skills training for youth with emotional and behavioral disorders and learning disabilities: Problems, conclusions, and suggestions. Exceptionality, 13, 155-172.*
- Mishna, F. (2003). *Learning disabilities and bullying: Double jeopardy. Journal of Learning Disabilities, 36, 1-15.*
- Moroz, K. B., & Jones, K. M. (2002). *The effects of positive peer reporting on children's social involvement. School Psychology Review, 31, 235-245.*
- Morrison, J., & Jones, K. (2007). *The effects of positive peer reporting as a class-wide positive behavior support. Journal of Behavioral Education, 16, 111-124.*
- Nabuzoka, D. & Smith, P. K. (1993). *Sociometric status and social behaviour of children with and without learning difficulties. Journal of Child Psychology and Psychiatry, 34, 1435-1448.*
- Nathan, P.E., Stuart, S.P., & Dolan, S.L. (2000). *Research on psychotherapy efficacy and effectiveness: Between Scylla and Charybdis. Psychological Bulletin, 126, 964-981.*
- Noell, G.H., Witt, J.C., Slider, N.J., Connell, J.E., Gatti, S.L., Williams, K.L., et al. (2005). *Treatment implementation following behavioral consultation in schools: A comparison of three follow-up strategies. School Psychology Review, 34, 87-106.*
- Parker, J. G., & Asher, S. R. (1987). *Peer relations and later personal adjustment: Are low-accepted children at risk? Psychological Bulletin, 102, 357-389.*
- Rabiner, D.L., Coie, J.D., Miller-Johnson, S., Boykin, A.M., & Lochman, J.E. (2005). *Predicting the persistence of aggressive offending of African-American males from adolescence into young adulthood: The importance of peer relations, aggressive behavior, and ADHD symptoms. Journal of Emotional and Behavioral Disorders, 13, 131-140.*
- Riley-Tilman, T.C., Kalberer, S., & Chafouleas, S. (2005). *Selecting the right tool for the job: A review of behavior monitoring tools used to assess student response-to-intervention. The California School Psychologist, 10, 81-91.*
- Stokes, T.F., & Baer, D.M. (1977). *An implicit technology of generalization. Journal of Applied Behavior Analysis, 10, 349-367.*
- Unnever, J. D., & Cornell, D. G. (2003). *Bullying, self-control, and ADHD. Journal of Interpersonal Violence, 18, 129-147.*
- Van Horn, J.L. (2004). *Utility of positive peer reporting to improve interactions among children in foster care. (Doctoral dissertation, University of South Florida, 2004).* *Dissertation Abstracts International, 109, 23B.*
- Walker, H. M., Mattson, R. H., and Buckley, N. K. (1971). *The functional analysis of behavior within an experimental class setting. In W. C. Becker (Ed.) An empirical basis for change in education (pp. 236-263).* Chicago: Science Research Associates.
- Weisz, J.R., Weiss, B., & Langmeyer, D.B. (1987). *Giving up on child psychotherapy: Who drops out? Journal of Consulting and Clinical Psychology, 55, 916-918.*
- Weisz, J.R. (1995). *Bridging the gap between laboratory and clinic in child and adolescent psychotherapy. Journal of Consulting and Clinical Psychology, 63, 688-701.*
- Wickstrom, K.F., Jones, K.M., LaFleur, L.H., & Witt, J.C. (1998). *An analysis of treatment integrity in school-based behavioral consultation. School Psychology Quarterly, 13, 141-154.*
- Williams, B. T. R., & Gilmour, J. D. (1994). *Annotation: Sociometry and peer relationships. Journal of Child Psychology and Psychiatry, 35, 997-1013.*

Frank E. Bowers, Ph.D.  
Boys Town  
13603 Father Flanagan Blvd.  
Boys Town, NE 68010  
Email: [bowersf@boystown.org](mailto:bowersf@boystown.org)

Marcia E. Jensen  
Boys Town  
13603 Father Flanagan Blvd.  
Boys Town, NE 68010  
Email: [jensenm@boystown.org](mailto:jensenm@boystown.org)

Clayton R. Cook  
Louisiana State University  
119 Audubon Hall  
Louisiana State University  
Baton Rouge, LA 70803  
Email: [cook2142@yahoo.com](mailto:cook2142@yahoo.com)

Amber D. McEachern  
Boys Town  
13603 Father Flanagan Blvd.  
Boys Town, NE 68010  
Email: [mceacherna@boystown.org](mailto:mceacherna@boystown.org)

Tara Snyder, Psy.D.  
Boys Town  
13603 Father Flanagan Blvd.  
Boys Town, NE 68010  
Email: [snyders@boystown.org](mailto:snyders@boystown.org)