

EXAMINING THE EFFECTIVENESS OF SPECIFIC PRAISE STATEMENTS IN
INCREASING APPROPRIATE BEHAVIOR AND DECREASING PROBLEM
BEHAVIOR IN YOUNG CHILDREN

By

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	iii
LIST OF TABLES	vii
LIST OF FIGURES	viii
ABSTRACT	ix
CHAPTER	
1 INTRODUCTION	1
Early Onset of Problem Behavior in Young Children	1
Incidence of Problem Behavior	1
Impact of Problem Behavior	2
Early Intervention to Address Problem Behavior in Young Children	3
Importance of Early Intervention	3
Evidence-based Intervention Strategies to Address Problem Behavior in Young Children	4
The Effects of Praise as an Intervention Tool	5
Statement of the Problem	6
Purpose of the Current Investigation	6
Summary	7
Experimental Questions	7
2 REVIEW OF THE LITERATURE	9
Conceptual Framework	10
Interventions for Young Children with Problem Behavior	13
Packaged Training Programs	15
Individual Intervention Studies	39
Parent-Child Dyad Studies	39
Teacher-Child Dyad Study	49
Summary of Adult-Child Dyad Studies	49
Summary	50
Review of Research Using Praise as an Intervention Strategy	54
Summary and Implications for Future Research	61
Future Research Directions	63
Purposes of the Investigation	64

3 METHODS	66
Participants.....	66
Teacher Participants.....	66
Child Participants.....	67
Setting	69
Materials	70
Measurement Procedures	71
Dependent Variables.....	71
Independent Variables	72
Data Collection Procedures.....	73
Interobserver Agreement	74
Experimental Procedures	74
Pre-experimental Phase.....	74
Baseline Phase	75
Training Phase	75
Intervention Phase.....	77
Generalization.....	78
Treatment Integrity	78
Design	78
Social Validity	79
4 RESULTS	81
Baseline and Intervention	82
Teacher–Child Dyad 1	82
Teacher-Child Dyad 2.....	85
Teacher-Child Dyad 3.....	87
Teacher-Child Dyad 4.....	97
Summary of Baseline and Intervention Findings.....	99
Generalization.....	102
Teacher-Child Dyad 1	102
Teacher-Child Dyad 2.....	103
Teacher-Child Dyad 3.....	104
Teacher-Child Dyad 4.....	105
Summary	106
Interobserver Agreement	108
Treatment Integrity	108
Social Validation.....	108
Summary	109
5 DISCUSSION.....	111
Summary of Research Findings	112
Limitations	113
Discussion of Findings.....	115
Future Research Directions.....	117
Summary.....	119

APPENDIX

A CONSENT FORMS AND IRB APPROVAL 121

B TEACHER TRAINING 129

C DATA COLLECTION FORM AND CODING DEFINITIONS 145

D TREATMENT INTEGRITY 150

E INTERVENTION ACCEPTABILITY 152

REFERENCES 154

BIOGRAPHICAL SKETCH 164

LIST OF TABLES

<u>Table</u>	<u>page</u>
2-1. Studies of Intervention Strategies to Decrease Problem Behavior in Young Children.....	16
2-2. Studies of Praise as a Classroom Intervention Tool to Decrease Problem Behavior Children.....	56
3-1. Demographic Data on Teacher Participants	68
3-2. Demographic Data on Day Care Centers	69
3-3. Demographic Data on Child Participants	69

LIST OF FIGURES

<u>Figure</u>	<u>page</u>
2-1. Conceptual Framework.....	10
4-1. Teacher 1-Child 1/Teacher 2-Child 2: Specific/Non-Specific Praise Statements.....	88
4-2. Teacher 1-Child 1/Teacher 2-Child 2: Non-Compliance and Compliance	89
4-3. Teacher 1-Child 1/Teacher 2-Child 2: Aggression and Disruption.....	90
4-4. Teacher 1-Child 1/Teacher 2-Child 2: Engagement.....	91
4-5. Teacher 3-Child 3/Teacher 4-Child 4: Specific/Non-Specific Praise Statements.....	92
4-6. Teacher 3-Child 3/Teacher 4-Child 4: Non-Compliance and Compliance	93
4-7. Teacher 3-Child 3/Teacher 4-Child 4: Aggression and Disruption.....	94
4-8. Teacher 3-Child 3/Teacher 4-Child 4: Engagement.....	95

Abstract of Dissertation Presented to the Graduate School
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By

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The purpose of this investigation was to study the effects of an increased use of specific praise statements on the appropriate and problem behavior of young children enrolled in a child care center. Two teachers and 2 children at the Educational Research Center for Child Development at the University of Florida and 2 teachers and 2 children at the Child Development Research Center at the University of North Florida were selected to participate in the investigation. The teachers selected held a minimum of a Child Development Associate certificate. The children chosen to participate exhibited problem behavior that interfered with their ability to participate in classroom routines and activities as designated by their teachers. The teachers were trained to increase their use of specific praise statements during a transition activity. In addition, generalization probes were taken to investigate the teachers' use of specific praise statements in an untrained setting. Data were collected on the effects of teachers' increased use of specific

praise statements and the children's behavior. A single-subject, multiple baseline design across participants was used to determine the effectiveness of the intervention.

CHAPTER 1 INTRODUCTION

Child care centers are the fastest-growing component of non-parental child care (Liang, 1998), already providing care for over 50% of all 1-year-olds, 60% of all 2-year-olds, and 70% of all 3-year-olds in the United States (Shonkoff & Phillips, 2000). Along with this growing trend in increased child care enrollment is a reported increase in the overall number of young children exhibiting problem behavior. Campbell (1995) estimated that 10% to 15% of preschool children have mild to moderate problem behavior. More recently, Webster-Stratton (1998) estimated that 10% of young children have problem behavior. These are important statistics, given that young children who arrive in child care settings with problem behavior may be subjected to negative interactions with teachers as well as an escalation of problem behavior over time (Gershoff, 2003; Raver & Knitzer, 2002).

Early Onset of Problem Behavior in Young Children

Incidence of Problem Behavior

The early onset of problem behavior may be seen well before age 5. Campbell and Ewing (1989) examined a group of young children identified beginning at age 3 who were identified as having problem behavior. By age 6, approximately half of these children continued to display problem behavior; at age 9, two-thirds continued to have problem behavior.

Additional evidence suggests that children diagnosed with Oppositional Defiant Disorder (ODD) (see American Psychiatric Association, *Diagnostic and Statistical*

Manual [DSM-IV], 2000) for definition) during the early childhood years often develop Conduct Disorder (CD) (see DSM-IV [2000] for definition) during elementary school (Loeber, 1991; Webster-Stratton, 1996). Furthermore, early onset of problem behavior often remains stable over time, but may change form. Patterson, Reid, and Eddy (2002) suggest that early problem behavior, such as aggression and non-compliance, may escalate to behavior such as lying and stealing, eventually leading to school failure. This is an important factor because problem behavior in young children is linked to negative school outcomes, such as grade retention or special education placement, as children move through early elementary school (Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002; Hamre & Pianta, 2001; Pianta, 1999; Raver & Knitzer, 2002). Unfortunately, evidence suggests that if intervention is not provided at an early age (before age 8), problem behavior becomes a lasting condition that does not respond well to intervention (Marchant, Young, & West, 2004). Therefore, given the increase in the number of children with problem behavior in child care settings, the need for evidence-based intervention to address these behaviors has never been greater (Sampers, Anderson, Hartung, & Scambler, 2001; Shonkoff & Phillips, 2000).

Impact of Problem Behavior

Problem behavior such as aggression, disruption, and non-compliance are difficult for teachers of young children to manage as well as for the children themselves.

Teachers often react negatively (i.e., increased restrictions and more punitive care) to children who demonstrate problem behavior (Barnett & Boocock, 1998; Scott-Little & Holloway, 1992). Furthermore, as children with problem behavior are often difficult to teach, teachers offer them fewer learning opportunities and provide fewer positive responses than to their peers who do not demonstrate problematic behavior (Raver &

Knitzer, 2002). Therefore, young children with problem behavior are often less engaged in classroom activities and may be missing important school readiness skills (Howes & Smith, 1995; Raver & Knitzer, 2002; Webster-Stratton, 2000). Thus, researchers have suggested that early onset of problem behavior may begin a cycle of negative patterns that influence future teacher-child interactions and lead to an increase in problem behavior as well as poor school performance (Birch & Ladd, 1997; Campbell, Shaw, & Gilliom, 2000).

Early Intervention to Address Problem Behavior in Young Children

Importance of Early Intervention

Teachers and parents often report difficulty managing young children's problem behavior (e.g., disruption, aggression, and non-compliance) (Campbell, 1995). Since these behaviors display high levels of stability and may influence future outcomes, it is critical to target them for early intervention (Stormont, 2002). Although early childhood may be the crucial time to prevent or de-escalate early onset problem behavior, there is an unfortunate dearth of evidence-based research focusing on interventions that address these behaviors in children ages 2 to 3 (Nixon, 2002). Regrettably, it is those years prior to school entry when children are learning skills needed to meet the more rigorous demands of the early school years (Patterson et al., 2002). From 2 to 3 years old, children's age-appropriate levels of temper tantrums and defiance either develop into age-appropriate skills, such as sharing and turn-taking, or devolve into inappropriate skills, such as increased levels of aggression, disruption, and non-compliance (Campbell et al., 2000). Although early intervention has been identified as necessary to stop problem behavior (Stormont, 2002), there continue to be few evidence-based interventions

available for early childhood teachers working in child care settings (Gross, Fogg, Webster-Stratton, Garvey, Julion, & Grady, 2003).

Intervention strategies designed for young children, for the most part, are focused on training the parent or guardian to manage his/her child's behavior at home (Sampers et al., 2001). Intervention strategies designed for teachers are, for the most part, focused on children already enrolled in school (Nixon, 2002). These strategies provide varying approaches and methods of delivery that target children who are demonstrating problem behavior or who are at risk for the escalation and stabilization of these behaviors.

Evidence-based Intervention Strategies to Address Problem Behavior in Young Children

Current intervention strategies available for use by teachers and parents focus on teaching adults to increase their appropriate responses to the child's problem behavior in order to increase appropriate behavior and decrease in problem behavior. The purpose of these interventions are two-fold: (1) to decrease negative interactions between the adult and child through a change in adult behavior, and (2) to promote appropriate behavior through positive reinforcement (Sampers et al., 2001).

The intervention strategies are available to parents and early childhood teachers in the form of packaged training programs or individual training programs. Two of the most widely used and evidence-based packaged training programs are the Incredible Years Training Series [IYTS] (Webster-Stratton, 2000) and Parent Child Interaction Therapy [PCIT] (Eyberg, Boggs, & Algina, 1988). IYTS provides group training to parents and teachers, teaching them strategies for interacting with children who engage in problem behaviors. In these two programs, the children receive interventions to address their problem behavior through the adults who have been trained. The target adults are taught

to reinforce children's appropriate behavior via positive attention (e.g., effective praise) and eliminate problem behavior via appropriate discipline techniques (e.g., privilege removal) (Webster-Stratton, 2000). PCIT offers parents training with their child and a trained therapist present. PCIT therapists work directly with parents to change negative parent-child interaction patterns (e.g., decrease critical statements and increase labeled praise) while also teaching discipline skills (e.g., providing choices) to increase appropriate behavior and decrease problem behavior (www. PCIT.com, 2004).

In addition to the packaged training programs, individual intervention strategies are available to parents and, to a lesser degree, early childhood teachers. These interventions focus on providing the parent or teacher with a skill or skills to increase appropriate behavior and/or decrease problem behavior in young children. The skills may include praising appropriate behavior, providing effectual commands, ignoring problem behavior, and disciplining consistently (McNeil, Capage, Bahl, & Blanc, 1999).

The Effects of Praise as an Intervention Tool

Praise as an intervention tool is supported in the literature as an effective tool to use when working with children who demonstrate problem behaviors. Praise is a strategy that has been incorporated within the early intervention training packages or programs provided to adults working with young children to increase an appropriate behavior in these children. In addition, praise may be used by an adult in conjunction with guided compliance or as part of an instructional sequence to increase compliance in young children (Hiralall & Martens, 1998; Smith & Lerman, 1999). Finally, praise may be used as the sole method of intervention employed by a teacher to increase appropriate (e.g., on-task) behavior during classroom activities (Sutherland, 2000). While there is evidence-based research on the use of praise, both as a component of the early

intervention literature and as an effective classroom-based strategy for increasing appropriate behaviors, there is limited research on the use of praise as an intervention strategy used by teachers within a child care setting. Given the number of young children with early onset behavior problem and the number of children enrolled in child care, introducing a praise strategy as an intervention tool in the child care setting may offer an important extension to the literature.

Statement of the Problem

Evidence supports an overall increase in the number of young children with problem behavior (Raver & Knitzer, 2002; Webster-Stratton & Hammond, 1997). Although teachers in child care centers are dealing with a significant number of children with problem behavior, there is a relative lack of evidence-based intervention strategies for their use to reduce the problem behavior of children in their care (Arnold, McWilliams, & Arnold, 1998). Furthermore, teachers often rely on reactive, punitive strategies when interacting with young children with problem behaviors (Hamre & Pianta, 2001). When teachers respond to problem behavior in a punitive manner, children may not learn appropriate replacement behavior, resulting in persistence and possibly exacerbation of the problem behavior (Chazen-Cohen, Jerald, & Stark, 2001). The development of evidence-based strategies teachers can use, such as praise, may prove to be an effective intervention tool that not only encourages appropriate behavior but also discourages problem behavior.

Purpose of the Current Investigation

Given the need for developing evidence-based intervention strategies teachers can use with young children in early child-care settings, the current investigation had two purposes. First, this investigation studied the effect of the use of specific praise

statements on the appropriate and problem behavior of young children. Next, this investigation examined the teachers' ability to generalize specific praise statements to an untrained setting.

Summary

A significant number of young children spend the majority of their day in child care centers. Research suggests that up to 20% of these children are entering early childhood classrooms with an early onset of problem behavior (Webster-Stratton, Reid, & Hammond, 2001). These children may be at risk for early school failure if further escalation of problem behavior is not addressed through effective intervention strategies. There is a growing awareness among parents, educators, and policymakers that child care at its best provides children with critical experiences that prepare them for preschool, kindergarten, and beyond (Liang, 1998; Raver & Knitzer, 2002; Shonkoff & Phillips, 2000). But evidence-based interventions for improving young children's problem behavior within the context of the child care setting are limited. Strategies or interventions that have been developed to ameliorate problem behavior at home, in the clinic, or in the classroom may provide important information for the advancement of interventions targeted for child care centers.

Experimental Questions

1. Following training, will teachers in a child care center implement specific praise statements during a teacher-identified activity?
2. What is the effect of teachers' use of specific praise statements on the appropriate behavior and problem behavior of young children enrolled in a child care setting?
3. If specific praise statements increase after training, will the teachers' use of specific praise statements generalize to an untrained setting?

The goal of this investigation was to provide evidence of the usefulness of training teachers in child care centers to use specific praise statements to increase appropriate behaviors and the possible influence of using this strategy on the reduction of problem behavior in young children. The review of literature pertinent to this investigation is offered in Chapter 2. The methodology is provided in Chapter 3. The results and their implications are discussed in Chapters 4 and 5.

CHAPTER 2 REVIEW OF THE LITERATURE

As discussed in Chapter 1, some young children enter child care centers with an early onset of problem behavior. These children may be at risk for early school failure if problem behavior is not remediated. Given the large number of children currently enrolled in child care centers, there is a need to develop evidence-based intervention strategies and train teachers to intervene in these children's problem behaviors (Gross, Fogg, Webster-Stratton, Garvey, Julion, & Grady, 2003). Presently, early childhood teachers of children ages 2 to 3 in child care centers have a limited number of evidence-based intervention strategies to increase appropriate behavior and decrease problem behavior. Several intervention strategies have been developed for parents, home-based teachers, or elementary school teachers, suggesting that there are evidence-based intervention strategies that can reduce problem behavior in young children. These intervention strategies may also be applicable for teachers in child care settings to use when working with young children with early onset problem behavior.

The purpose of this chapter is to provide (a) a conceptual framework for the proposed investigation; (b) a literature review of intervention strategies for young children with problem behavior, including the use of praise; and (c) a rationale for the use of praise as an intervention strategy to increase appropriate behavior and examine the effects on problem behavior in young children.

Conceptual Framework

The conceptual framework for the proposed investigation is based on the model of coercive relationships developed at the Oregon Social Learning Center (OSLC)

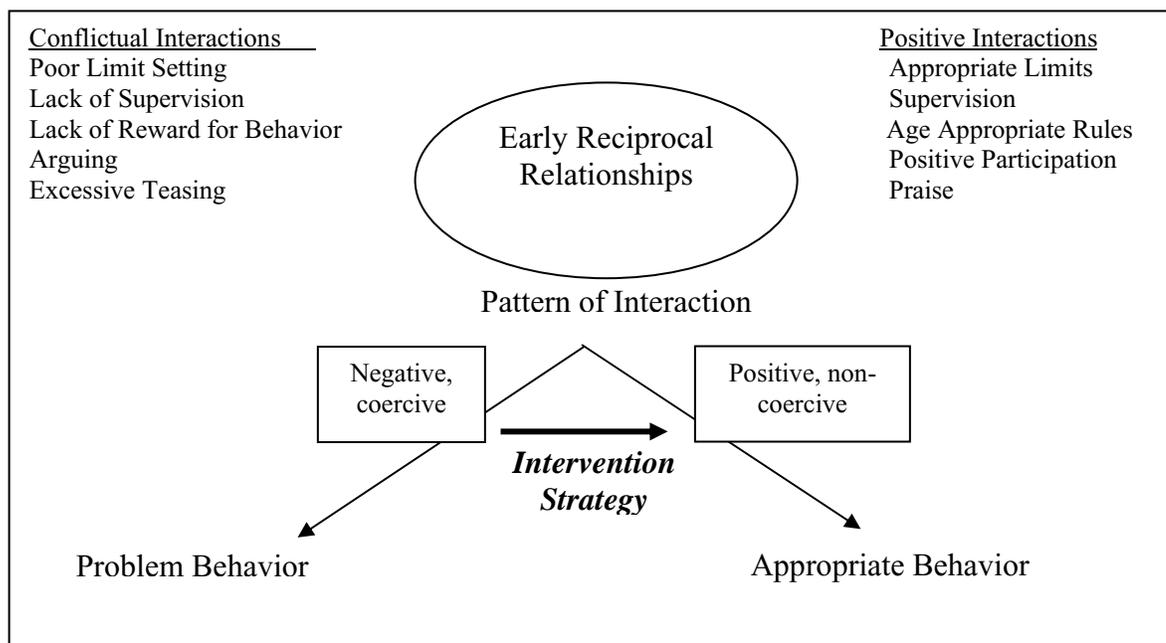


Figure 2-1. Conceptual Framework

(Patterson, Reid, & Dishion, 1992; Reid, Patterson, & Snyder, 2002). The model offers two paths for the development of adult-child interactions, conflictual interactions, or positive interactions. Conflictual interactions may include a lack of adult supervision, poor limit-setting, or lack of reward for age-appropriate behavior. These interactions may reinforce problem behavior, such as non-compliance to an adult request. Positive interactions may include age-appropriate supervision, limit-setting, and praise for appropriate behavior. These interactions may teach children appropriate behavior through reinforcement of the expected behavior. A diagram of the conceptual framework is presented in Figure 2-1.

The OSLC coercive relationship model provides an important element of the adult-child relationship that may result in an increase of problem behavior in young children—

i.e., coercive interactions. Children growing up in home environments that foster coercive interactions are at greater risk for the development of problem behavior due to ineffectual parenting, as defined by ineffective limit-setting (e.g., ignoring early non-compliant behavior) and conflictual family relationships (e.g., arguing or excessive teasing) (Patterson et al., 1992). These coercive interactions within the context of the family may lead to young children exhibiting problem behavior (e.g., non-compliance, inappropriate aggression) that has been found to escalate into serious offenses (e.g., fighting and stealing) in the early elementary school years.

The conceptual model presented in this chapter extends beyond Patterson's parent-child coercive relationship model illustrating that children entering child care with problem behavior often interact with their teachers in the same way as they do with their parents (Patterson et al., 1992; Reid et al., 2002). If the teacher responds in a similar manner as the parents by providing conflictive interactions, this may perpetuate a cycle of coercion that encourages problem behavior to continue into the child care setting. If the coercive cycle is not stopped, the child is at risk for the development of serious problem behavior associated with poor school outcomes (i.e., peer rejection, poor academic performance) (Patterson et al., 1992). Fortunately, coercive interaction patterns can be interrupted if the adults interacting with the child change their behavior patterns and engage in interactions that are based on positive interactions such as praise or age-appropriate supervision (Hembree-Kigin & McNeil, 1995; Howes & Ritchie, 2002; Patterson et al., 1992; Reid et al., 2002; Webster-Stratton, 2000).

The conceptual framework for the proposed investigation provides a basis for how intervening to change a teacher's response to a child's behavior may increase appropriate behaviors and result in a decrease in problem behavior in young children enrolled in child

care. Children's earliest relationships are built on their interactions with adults, most importantly, parents and teachers (Greenspan, 1999). These early relationships teach young children how to interact with others—adults and children—in their lives (Howes & Ritchie, 2002; Lieberman, 1993; Parlakian & Seibel, 2002). In fact, researchers show that adult-child relationships formed in the first 3 years of life influence not only the social-emotional development of the child but also language and cognitive development—areas that are critical for later school success (Chazen-Cohen et al., 2001; Zeanah & Doyle, 2001). When young children enter child care, an established parent-child interaction pattern of behavior is usually in place. The toddler and early preschool years (age 2 and 3) are a time when children are learning to become independent; however, this is also a time when children engage in a number of problem behaviors, such as tantrums, non-compliance, and aggression (Campbell et al., 2000; Lieberman, 1993). A supportive and nurturing adult-child relationship during this period provides a child with the skills needed to negotiate the early school environment (Campbell et al., 2000; Elicker & Fortner-Wood, 1995; Lieberman, 1993; Parlakian & Seibel, 2002). However, when the early relationship is coercive, the child may continue to exhibit problem behavior that impedes development (Briggs-Gowan, Carter, Skuban, & Horwitz, 2001; Howes & Matheson, 1992; Zeanah & Doyle, 2001).

Within the context of the conceptual framework, the model of coercive relationships highlights the fact that the adult in the relationship has the ability to engage in a new pattern of interaction. When the adult provides positive interactions, the child may adjust his interaction pattern, thus setting the stage for an increase in appropriate behavior and a decrease in problem behavior. In the case of teacher-child interactions, constructive change can take place through a pattern of positive, teacher-initiated

interactions (Elicker & Fortner-Wood, 1995; Howes & Ritchie, 2002; Kontos & Wilcox-Herzog, 1997). For children entering child care with an early onset of problem behavior, the teacher may be able to form a new adult-child pattern of interaction that teaches the child to interact using appropriate behavior while at the same time decreasing the child's problem behavior. Intervention strategies that are effectively applied may help create positive adult-child interactions and thus increase appropriate behavior that may lead to a decrease in a child's problem behavior.

Given the number of young children enrolled in child care and the current emphasis on school readiness, interventions to improve teacher-child relationships offer an excellent opportunity to reduce the development of problem behavior prior to preschool or kindergarten entry (Gershoff, 2003; Raver & Knitzer, 2002). Children who enter child care with problem behavior may benefit from positive, affirmative interactions with their teachers. The following section provides a critical analysis of the existing literature on intervention strategies addressing adult-child interactions that may increase appropriate behavior and decrease problem behavior.

Interventions for Young Children with Problem Behavior

There are a limited number of evidence-based interventions designed to train teachers to reduce the problem behavior of children in child care centers (Brooks-Gunn, Fuligni, & Berlin, 2003; Helburn & Bergmann, 2002). However, interventions used in homes, university clinics, and early childhood classrooms with parents and teachers to reduce problem behavior in young children may offer tactics for intervention that can be applied to child care centers. The interventions discussed in this section are designed to change an adult's response to a child's problem behavior. Although the methods of

intervention are unique, each targets changing adult (i.e., parent or teacher) behavior to increase appropriate behavior and/or decrease children's problem behavior.

To identify pertinent literature for this review, a comprehensive search was conducted. Three electronic databases were searched: Article First, ERIC, and PsychInfo. The key words—young children, behavior problems, applied behavior analysis, early intervention, behavior management, behavior modification, parent training, teacher training, teacher-child relations, parent-child relations, teacher education, parent education, and positive reinforcement—were used in several combinations. An archival search of relevant journals was completed. Finally, researchers in this area of intervention were contacted for additional information. The search focused on evidence-based studies that met the following criteria: (a) problem behavior was a target behavior in the study, (b) participants 5 years of age or under were included in the study, (c) an intervention program designed to change adult behavior resulting in a change of the child's problem behavior was evaluated, and (d) the change agent in the study was an adult. Seventeen studies were identified that met these criteria. Packaged training programs, such as the Incredible Years Training Series [IYTS] (Webster-Stratton, 2000) and Parent-Child Interaction Therapy [PCIT] (Hembree-Kigin & McNeil, 1995) as well as intervention studies that examine isolated interventions were identified in the search. A detailed review of the interventions including strengths, limitations, and implications for the proposed investigation follows.

Table 2-1 presents an overview of the literature, including descriptions of the author(s), participants/setting, dependent measures, experimental design, training, and results. The setting description includes the location (i.e., home, school, or clinic) and the type of training (i.e., group or individual). The training description provides a summary

of the type of training as well as the amount of time needed to complete the training (if reported). The training components of IYTS and PCIT are not summarized in the table because a complete summary is provided within the narrative that follows. However, modifications to the IYTS and PCIT programs are indicated (if applicable) in the table. The complete names of the measures as well as the authors are found in the narrative summary of each study. Finally, the intervention studies are presented in the table as they appear in the narrative: packaged training programs, parent-child studies, and a teacher-child study.

In the following section a comprehensive review of each of the studies outlined in Table 2-1 is provided. The studies are presented as in Table 2-1 beginning with standardized training programs, followed by intervention studies targeting individual intervention programs for parents and then teachers.

Packaged Training Programs

Packaged training programs that are available for parents and teachers to reduce problem behavior in young children are reviewed in Table 2-1. These training programs provide procedures to assess adult-child interactions and to teach the adults skills to change their interactions with the target child or children (James & Scotti, 2000). There is extensive evidence for two programs, the Incredible Years Training Series [IYTS] and Parent Child Interaction Therapy [PCIT], as reviewed above. IYTS and PCIT are accessible to teacher and parent trainers as well as teachers and parents themselves via books, training materials, and the worldwide web (see Hembree-Kigin & McNeil, 1995; Webster-Stratton, 1999; Webster & Herbert, 1994; www.php.ufl.edu/seyberg; www.incredibleyears.com/index-content.htm; The incredible years, 2005). A brief description of these programs and their accompanying research base is highlighted below.

Table 2-1. Studies of Intervention Strategies to Decrease Problem Behavior in Young Children

Author(s)	Participants Setting	Target Behavior(s)	Design/Measures	Training	Results
Gross et al., 2003	<u>Child:</u> 208 Ages: 2-3 Environmental Risk <u>Adult:</u> Parent:208 and Teacher: 77 <u>Setting:</u> Group Training	<u>Child:</u> Non-compliance, aggression, destruction, whining, yelling <u>Parent:</u> Self-efficacy, coercive discipline, parent stress	Random assignment to PT, PT + TT, TT, or wait list control Growth Curve Modeling/ANOVA <u>Child:</u> ECBI Kohn`s, Observation <u>Parent:</u> TCQ, PS, DPCICS, ESI, Depression Scale, Observation	<u>PT</u> = 12 wks (24 hours total) weeks of IYTS <u>TT</u> = 12 wks (24 hours total) weeks of PT (IYTS) <u>PT + TT</u> = 12 (48 hours) wks of IYTS <u>Modifications:</u> PT for teachers, Vignettes not DAP eliminated	<u>Child:</u> problem decreased; behavior improved in the classroom via teacher report. No improvement at home on measures or observation. <u>Parent:</u> Self-efficacy improved, coercive practices decreased, but not maintained.
Webster-Stratton et al., 2001	<u>Child:</u> 272 Ages: 4 Environmental Risk <u>Adult:</u> Parent: 272 and Teacher: 61 <u>Setting:</u> Group Training	<u>Child:</u> Aggression and non-compliance <u>Parent:</u> Interact with child, provide help, praise, and encouragement. Provide consequences for inappropriate behavior	Random assignment to IYTS or standard HS group Construct Score <u>Child:</u> CBCL, ECBI, DPCIS-R, SCBE, ADHD	<u>PT</u> = IYTS 12 weeks (2.5 hours per week, 30 hours total) with an additional 8 hours of booster sessions <u>TT</u> = 6 sessions of IYTS (36 hours)	<u>Child:</u> Increase in compliance and a decrease in aggression toward peers at school and a decrease in conduct problems at home <u>Parent:</u> Increase in praise and encouragement, decrease in harsh discipline, increase in school involvement

Note. ADHD=Attention Deficit Hyperactivity Disorder, CD=Conduct Disorder, DAP=Developmentally Appropriate Practice, DD=Developmental Delay, ODD=Oppositional Defiant Disorder, MR=Mental Retardation, PT=Parent Training, PDD=Pervasive Developmental Disorder, TT=Teacher Training.

Table 2-1. Continued.

Author(s)	Participants Setting	Target Behavior(s)	Design/Measures	Training	Results
		<u>Teacher:</u> promote positive relationships, strengthen social skills of children, use incentives, be proactive (use praise), handle misbehaviors, teach children to problem-solve, collaborate	Checklist, observations of teacher, social health profile <u>Parent:</u> PPI, DPICS-R, CII, INVOLVE-P <u>Teacher:</u> INVOLVE-T, impression inventory, rate per 30-minute session of praise, encouragement, and criticism	<u>Modification:</u> Booster session in Year Two	<u>Teacher:</u> Increase positive behavior strategies (praise), decrease harsh and critical techniques

Table 2-1. Continued.

Author(s)	Participants Setting	Target Behavior(s)	Design/Measures	Training	Results
Nixon, Sweeney, Erickson, & Touyze, 2003	<p><u>Child</u>: 54 Age: 3-5</p> <p><u>Adult</u>: Parent</p> <p><u>Inclusion</u>: diagnosis ODD</p> <p><u>Setting</u>: Individual Training Clinical Setting or Home Consultation</p>	<p><u>Child</u>: non-compliance disruptive behavior</p> <p><u>Parent</u>: discipline methods, use of praise while interacting with child, parental stress</p>	<p>Randomly assigned to 1 of 3 groups: PCIT, modified PCIT(M), WL ANOVA</p> <p><u>Child</u>: ECBI, CBCL, HSQ</p> <p><u>Parent</u>: PSI, PSCS, PS</p> <p><u>Interaction</u>: DPICS-II</p>	<p><u>PCIT</u>=12 weeks (15.5 hours)</p> <p><u>PCIT(M)</u> = 5 sessions with therapist/parent, 5 video sessions with technique modeled and explained, telephone follow-up (9.5 hours)</p>	<p><u>Child</u>: Increase in compliance in PCIT. Decrease in conduct problem in PCIT and PCIT(M)</p> <p><u>Parent</u>: Increase praise, decrease criticism (PCIT), decrease in parental stress (PCIT) and commands (PCIT) and PCIT(M)</p>
McNeil et al., 1999	<p><u>Child</u>: 32 Age: 2.5 to 8.6 years</p> <p><u>Adult</u>: 2 Parent</p> <p><u>Setting</u>: Individual Training Clinical Setting</p>	<p><u>Child</u>: Disruptive behavior</p> <p><u>Parent</u>: Parental stress</p>	<p>Random assignment: Treatment or WL MANOVA</p> <p><u>Child</u>: CBCL ECBI</p> <p><u>Parent</u>: PSI</p>	<p><u>PT</u>: 14 sessions of PCIT (3.5 months)</p>	<p><u>Child</u>: Decrease in disruptive behavior</p> <p><u>Parent</u>: Improvement in parental stress</p>

Table 2-1. Continued.

Author(s)	Participants Setting	Target Behavior(s)	Design/Measures	Training	Results
Schuhmann, Foote, Eyberg, Boggs, & Algina, 1998	<p><u>Child:</u> 64 Age: 3-6</p> <p><u>Adult:</u> Parent</p> <p><u>Setting:</u> Individual Training Clinical Setting</p> <p><u>Inclusion:</u> Diagnosis of (ODD, ODD+ADHD, ODD+ADHD+CD, OD+CD) plus medication for hyperactivity</p>	<p><u>Child:</u> Problem behavior, non- compliance</p> <p><u>Parent:</u> marital satisfaction, parental stress, locus of control, depression.</p> <p>Parent-Child Interactions</p>	<p>Random assignment: Treatment or WL ANOVA</p> <p><u>Child:</u> DSM-III- R, DPICS-II, ECBI, PPVT-R</p> <p><u>Parent:</u> PLCS, Beck, DAS, TAI</p>	<p><u>PT:</u> 14 sessions of PCIT (3.5 months)</p>	<p><u>Child:</u> increase in compliance, no longer met ODD criteria.</p> <p><u>Parent:</u> Increased praise, followed child's lead, less critical of child, decreased stress, improved locus of control</p>

Table 2-1. Continued.

Author(s)	Participants Setting	Target Behavior(s)	Design/Measures	Training	Results
Funderburk, Eyberg, Newcomb, McNeil, Hembree-Kigin, & Capage, 1998	<p><u>Child:</u> Age: 4.8 (mean)</p> <p><u>Adult:</u> Parent</p> <p><u>Setting:</u> Individual Training Clinical Setting</p> <p><u>Inclusion:</u> ODD ADHD ODD+ADHD ODD+ADHD+CD</p>	<p><u>Child:</u> Conduct problem and compliance school</p>	<p>Random assignment to treatment or control group ANOVA</p> <p><u>Child:</u> ECBI, RCTRS, SESBI, Walker-McConnell, Observation</p>	<p><u>PT:</u> 14 sessions of PCIT</p> <p><u>Follow-up:</u> at 12 and 18 months</p>	<p><u>Child:</u> Decrease in problem behavior at school following treatment</p> <p><u>Follow-up:</u> Decrease maintained at 12 months; at 18 months, only compliance maintained.</p>

Table 2-1. Continued.

Author(s)	Participants Setting	Target Behavior(s)	Design/Measures	Training	Results
Feinfield & Baker, 2004	<p><u>Child</u>: 47 Age: 4.3 to 8.3</p> <p><u>Adult</u>: Parent</p> <p><u>Setting</u>: Group Training with individual support Clinical Setting</p>	<p><u>Child</u>: aggression, non-compliance, oppositional</p> <p><u>Parent</u>: (1) reduce negative and increase positive behaviors, (2) improve consistency, (3) decrease negative response, (4) positive parent-child relationship, (5) practice, (6) improve confidence</p>	<p>Random assignment to immediate or delayed treatment group</p> <p>MANOVA</p> <p><u>Child</u>: CBCL, ECBI, HSQ, CBCL-TRF, SSQ, Walker-McConnell</p> <p><u>Parent</u>: APQ, PCRQ, IPA, PSOC, PSI</p>	<p><u>PT</u>: 12 weeks (9 1.5-hour group sessions + 4 40-minute sessions)</p> <p>Role-play, lecture, group discussion, video, homework</p>	<p><u>Child</u>: Decrease in problem behavior as reported by parents</p> <p><u>Parent</u>: Decrease in aggressive parenting, consistent discipline, improved parenting attitudes, less stress</p> <p>Teachers did not report a decrease in problem behavior immediately following treatment, but did report a decrease at 5-month follow-up</p>
Marchant et al., 2004	<p><u>Child</u>: 4 3 children with DD; 1 developing within normal limits Age: 4</p> <p><u>Adult</u>: Parent</p>	<p><u>Child</u>: compliance</p> <p><u>Parent</u>: (1) effective praise, (2) instructional praise, (3) direct teaching (4)</p>	<p>Multiple baseline probe across 4 dyads</p>	<p><u>PT</u>: 1 (2-hour) modeling, direct coaching and feedback 2 to 3 times per week</p>	<p><u>Child</u>: compliance behavior increased.</p> <p><u>Parent</u>: increased use of effective and instructional praise, direct and corrective teaching, and positive reinforcement</p>

Table 2-1. Continued.

Author(s)	Participants Setting	Target Behavior(s)	Design/Measures	Training	Results
Bradley, Jadaa, Brody, Landy, Tallet, & Watson, 2003	<u>Setting:</u> Individual Training Home <u>Inclusion:</u> referred by school for non- compliance, high score on PKBS > 50% compliance at home	corrective teaching (5) positive reinforcement	Random assignment to treatment of wait list control RMANOVA <u>Child:</u> PBQ, PCQ, BSI <u>Parent:</u> PS	<u>PT:</u> 3 (2-hour) weekly group sessions followed by 1 booster session. Videotape, group discussion, and written material	<u>Child:</u> Decrease in problem, notably non- compliance <u>Parent:</u> Decrease in yelling, increase in rewards and time-out
	<u>Child:</u> 198 Age: 3-4 <u>Adult:</u> Parent <u>Setting:</u> Group Training	<u>Child:</u> Problem behavior <u>Parent:</u> (1) rewards, (2) time- out, (3) reduce negative parenting, (4) reduce coercive practices			

Table 2-1. Continued.

Author(s)	Participants Setting	Target Behavior(s)	Design/Measures	Training	Results
Hancock, Kaiser, & Delaney, 2002	<p><u>Child</u>: 5 Age: 3.2 to 3.10</p> <p><u>Adult</u>: Parent</p> <p><u>Setting</u>: School Individual Training</p> <p><u>Inclusion</u>: at risk for language delay, at risk for behavior problem, low income</p>	<p><u>Child</u>: Language: (% of utterance of <3, mean length utterance, diver- sity of utterances, number of utter- ances, % of self- initiated utterances <u>Behavior</u>: non- compliance, negative physical or verbal behavior <u>Parent</u>: balance turn-taking, child response, adult response, simple directions, reduce commands, increase positive to compliance, increase correction to non- compliance, decrease negative, increase praise, model appropriate language</p>	<p>AB single- subject design replicated across 5 participants: frequency of response of behaviors reported as a percentage</p> <p><u>Child</u>: PLS-3, CBCL273, CTRF, WPPSI IQ</p> <p><u>Parent</u>: (1) parental ability to use intervention, (2) child's observed behavior and communication, (3) assessment of language, (4) parental satisfaction</p>	<p><u>PT</u>: 30 individual sessions 30 to 45 minutes mean time=8 months</p> <p>Hand-outs, role plays, videotapes, coaching, and specific feedback</p>	<p><u>Child</u>: Increase on 5 language measures during parent interactions, but not on standardized measures and compliance, decrease in negative verbal and physical behaviors</p> <p><u>Parent</u>: learned and applied strategies during play sessions with limited generalizations at home; a significant increase in praise with modest and inconsistent changes on language skills</p>

Table 2-1. Continued.

Author(s)	Participants Setting	Target Behavior(s)	Design/Measures	Training	Results
Mandal, Olmi, Edwards, Tingstom, & Benoit, 2000	<p><u>Child</u>: 4 Age: 2.5-4 2 severe language delays; 1 child with mild MR and language delay</p> <p><u>Adult</u>: Parent Grandparent</p> <p><u>Setting</u>: Individual Training Clinic</p> <p><u>Inclusion</u>: >40% compliance</p>	<p><u>Child</u>: Non-compliance</p> <p><u>Parent</u>: EID-eye contact, praise for eye contact, directives, close proximity, descriptive instruction, response time, praise for compliance</p> <p>TI- verbal/physical praise for compliance</p>	<p>Multiple baseline crossover design with three conditions: frequency of compliance and treatment integrity reported as a percentage</p>	<p>Written information, direct teaching, role modeling, and immediate corrective feedback (bug in ear) during Effective Delivery Instruction/Time In</p>	<p><u>Child</u>: Compliance increased</p> <p><u>Parent</u>: Implemented intervention</p>
Greene, Kamps, Wyblie, & Ellis, 1999	<p><u>Child</u>: 4 Age 5-7 1 with ADHD 2 fraternal twins</p> <p><u>Adult</u>: Parent</p> <p><u>Setting</u>: Individual Training Home</p>	<p><u>Child</u>: inappropriate behavior, compliance, on-task</p> <p><u>Parent</u>: praise</p>	<p>Multiple baseline across participants, frequency data were obtained in 10-minute samples</p>	<p><u>PT</u>: 2 to 3 times per week for an average of an hour for 8 to 13 weeks.</p> <p>Written information, discussion, role-play, and modeling. Goals: use praise, provide clear instructions, model, consequences, reinforcement, time-out</p>	<p><u>Child</u>: Increase in compliance, decrease in aggression, on-task behavior increased</p> <p><u>Parent</u>: Increased praise</p>

Table 2-1. Continued.

Author(s)	Participants Setting	Target Behavior(s)	Design/Measures	Training	Results
Painter, Cook, & Silverman, 1999	<p><u>Child</u>: 4 Age: 5-7</p> <p><u>Adult</u>: Parent</p> <p><u>Setting</u>: Clinical Setting/ Individual Training</p>	<p><u>Child</u>: non-compliance</p> <p><u>Parent</u>: Adherence and satisfaction Stress</p>	<p>A nonconcurrent multiple baseline crossover design; frequency data were reported for non-compliance as well as behavior intensity</p> <p><u>Child</u>: BASC <u>Parent</u>: PSI</p>	<p><u>PT</u>: therapeutic story is provided to allow the dyad to identify the problem and strategize alternative; behavioral training to develop parenting skills</p>	<p><u>Child</u>: 3 of 4 children increased compliance according to parent report not reflected in BASC</p> <p><u>Parent</u>: Adhered to intervention, reduce stress, satisfied with training</p>
Smith & Lerman, 1999	<p><u>Child</u>: 2 Age: 4- 5 1 with autism and moderate MR, 1 with PDD and mild MR</p> <p><u>Adult</u>: Parent</p> <p><u>Setting</u>: Home/ Individual Training</p>	<p><u>Child</u>: non-compliance</p> <p><u>Parent</u>: Guided compliance: clear instructions, gestural prompt, physical prompt, praise</p> <p><u>High-probability request</u>: High-probability followed by low-probability command, ignore non-compliance, provide praise</p>	<p><u>PT</u>: Two 1-hour sessions</p> <p>Handout, modeling, role-play, guided practice</p>	<p><u>Child</u>: increase in compliance in both treatments</p> <p><u>Parent</u>: able to introduce both strategies, but a decrease in non-compliance showed greater improvement under the guided compliance treatment</p>	

Table 2-1. Continued.

Author(s)	Participants Setting	Target Behavior(s)	Design/Measures	Training	Results
Richman, Harrison, & Summers, 1995	<u>Child</u> : 5 Age 4-7 2 with DD <u>Adult</u> : Parent <u>Setting</u> : Clinic Individual Training	<u>Child</u> : non-compliance <u>Parent</u> : appropriate response to compliance: praise, physical affection, access to an activity; non-compliance: restate direction	Multiple probes design <u>Child</u> : Frequency measure of compliance and non-compliance, CBCL <u>Parent</u> : Frequency measure of correct and incorrect responses	<u>PT</u> : 1 to 11 sessions Definitions and examples of the child's behavior, didactic instruction, rehearsal, and interaction with trainer present	<u>Child</u> : compliance increased <u>Parent</u> : increased appropriate response to both compliance and non-compliance <u>Generalization</u> : results generalized to a second nonclinical setting
Hiralall & Martens, 1998	<u>Child</u> : 14 Age: 3.8 to 4.10 <u>Adult</u> : Teacher <u>Setting</u> : Classroom Group Training	<u>Child</u> : decrease off-task behavior <u>Teacher</u> : use instructional sequence: eye contact, instruction, model, praise, redirect	Counterbalanced multiple baseline design <u>Teacher</u> : Continuous-event recording for 10-14 minutes <u>Child</u> : 10-second momentary time sampling	<u>TT</u> : 2-hour with a 10-minute practice session the following day Handouts, modeling, checklist	<u>Child</u> : off-task behavior decreased, on-task behavior and attending to instruction increased <u>Teacher</u> : implemented sequence <u>Generalization</u> : modeling and praise to other settings

The Incredible Years Training Series [IYTS] developed by Webster-Stratton is designed to work with parents and teachers of young children showing early onset of problem behavior (Webster-Stratton & Hammond, 1997). The framework for the model is based on the notion that parents and teachers who interact with children with problem behavior must change their behavior if the children's problem behavior is to decrease. Briefly, the parents and/or teachers of children ranging in age from 2 to 10 years old are taught (a) to provide positive reinforcement for appropriate behavior and (b) to employ appropriate discipline to reduce problem behavior.

The parent training program and the teacher training program include proactive teaching, positive relationship-building, and behavior management techniques. The parent component (Incredible Years Early Childhood, ages 2-7, BASIC Parent Training Program, 2005; The incredible years, 2005) targets four skills areas with one to three subsets of skills in each area: play (i.e., how to play with a child, helping children learn); praise and rewards (i.e., use of effective praising, tangible rewards); effective limit-setting (i.e., how to set limits, helping children learn to accept limits, dealing with non-compliance); and handling misbehavior (i.e., avoiding and ignoring misbehavior, timeout, and preventative strategies). The standard parent training component lasts for 12 weeks and incorporates group discussion and activities guided by a series of videos of parenting skills to facilitate instruction. The teacher training component for ages 4-10 is offered as a 6-day workshop or as 24 weekly sessions lasting 2 hours per session. The teacher training package targets six components of classroom management techniques (i.e., providing teacher attention, encouraging and praising, motivating children through incentives, preventing behavior problems, the proactive teacher, decreasing students' inappropriate behavior, building positive relationships with students, teaching social

skills, problem solving, and managing anger in the classroom). The teacher and parent components utilize a didactic method of training: direct instruction, modeling, coaching, and homework. Specifically, a certified facilitator uses videotape modeling, role-playing, and rehearsal to teach IYTS. Practicing specific strategies and conducting follow-up sessions at home (parents) or in the classroom (teachers) are encouraged. Parents and teachers are also given visual reminders of the strategies taught in the form of refrigerator magnets or blackboard notes. Of the 17 studies identified in this literature review, 3 studies investigated the use of IYTS intervention program. Summarized below are findings from these 3 studies.

Gross and her colleagues (2003) examined the effectiveness of the IYTS with 208 low-income parents, 77 teachers, and 2- to 3-year-old children at risk for the development of problem behavior due to their home environment. The families and teachers were randomly assigned across 4 groups: (a) parent training and teacher training (PT + TT); (b) parent training (PT); (c) teacher training (TT); and (d) a control. The groups were assessed four times during a 15- to 18-month period: baseline, post-intervention, 6-month, and 1-year follow-up. The parents were assessed for self-efficacy (Toddler Care Questionnaire-parent interview); discipline strategies (Parenting Scale, Arnold, O'Leary, Wolf, & Acker, 1993); parenting skills (Dyadic Parent-Child Interactive Coding System-Revised [DPCICS], Parent child interaction therapy, 2004; Webster-Stratton, 1998); depression (Center for Epidemiological Studies Depression Scale, Radloff, 1977); and everyday stress (Everyday Stressor Index, Hall & Farel, 1988). The children's problem behavior was examined using parent report (Eyberg Child Behavior Inventory [ECBI], Robinson, Eyberg, & Ross, 1980); teacher report (Kohn's Problem Checklist, Kohn, 1977); and an observer rating of child behavior based on a 15-minute videotape of parent

and child interaction. The interventions were taught to the 3 groups using the previously described strategies (via videotaped vignettes followed by discussion and homework). However, the teachers were given the parent training (designed for children ages 2-7) in place of the teacher training (designed for children ages 4-10). Furthermore, videotape vignettes deemed inappropriate for use with toddlers were excluded. The strategies were then carried out at home or in the classroom by the parent, teacher, or both. The findings indicate that there was no effect on the parent's report of child's problem behavior or on the researcher's observations of problem behavior at home. However, parenting self-efficacy scores improved as did positive parent-child interaction scores. Coercive discipline also decreased, but was not maintained. The classroom behavior of the toddlers improved for all three groups with no significant effect noticed between groups (PT, TT, PT + TT). Teachers did not report increased collaboration, but reported that contact with parents was minimal. While the teachers and the parents reported satisfaction with the training, one-fifth of the parents and one-third of the teachers dropped out of the study before completion. Half of the parents who completed the program reported that it was difficult to complete the homework assignments, and a third reported that it was not easy for them to attend the training at the child care center. A small percentage of the teachers who completed the study (3%) reported difficulty with attendance or completion of the homework assignments.

A second study examined the effectiveness of IYTS within a Head Start (HS) program (Webster-Stratton et al., 2001). The study included 272 mothers and their 4-year-old children as well as 67 HS teachers and 13 HS family service workers (FSW). The children did not have a specific behavioral diagnosis but were considered at risk for the development of ODD/CD due to criteria for Head Start placement. Parents and

teachers were assigned randomly to IYTS or a control group. FSW were trained to provide the parent training. The children were assessed via home observation as well as parent and teacher report twice (fall and spring) during the school year. The follow-up year (kindergarten) parent report and home observation were included in the assessment, but the teacher report was not. The following assessments were used to evaluate the children's behavior at home: Child Behavior Checklist [CBCL] (Achenbach & Edelbrock, 1991); ECBI (Robinson et al., 1980); Dyadic Parent-Child Interactive Coding System-Revised [DPICS-R] (Robinson & Eyberg, 1981); CII-child (parent questionnaire). The following assessments were used in school to assess the child's behavior at school: SCBE-preschool (LaFreniere, Dumas, Dubeau, & Capuano, 1992); Teacher ADHD checklist (DuPaul, 1990); independent observations of behavior in the classroom (child engagement during unstructured time, classroom conduct with teachers and peers); and social health profile (school readiness and antisocial behavior).

For the teacher classroom management as well as overall classroom atmosphere, the following assessments were given: classroom atmosphere measure; independent observations of teachers' behaviors in classroom (praise and encouragement, critical statements); and teacher coder impression inventory. The mothers' behaviors were assessed using: PPI (parent questionnaire); DPICS-R (Robinson & Eyberg, 1981); and CII-parenting style (parent questionnaire). Finally, parent-teacher bonding was measured using INVOLVE-P (questionnaire) and INVOLVE-T (questionnaire). Mothers received the standard 12 parent training sessions (1 time per week for 12 weeks) as previously described. As an addition to the standard IYTS, 4 booster sessions (group or individual) were offered the following school year (kindergarten). The booster session addressed a review of child-directed play, helping your child make friends, reading using an

interactive approach, problem solving with children, and working successfully with teachers. Teachers were given six 1-day workshops over a 6-month period as previously described without any reported modifications. When compared to the mothers in the control group, there was an increase in positive parenting (e.g., an increase in praise), a reduction in harsh discipline, and improved school involvement to include parent-teacher bonding. The teachers who received the training used more positive behavior management strategies (e.g., an increase in praise) than the control teachers. The children whose parents and teachers participated in the training showed an increase in compliance with teachers and a decrease in aggressive behavior toward peers in school. Fewer conduct problems were reported at home as well. Teacher as well as mother satisfaction was reported as very high. Mothers in the intervention group attended an average of 6 of 12 classes with partners attending an average of 3 out of 12 sessions. Teachers did not miss more than one class, and viewing a video of the training made up the missed class. Overall family enrollment in the program was lower than projected. The researchers concluded that the families who were most at risk may not have participated. Additionally, families in the control group continued to receive the HS parent education curriculum that included information on stress management, nutrition, self-care, and dental health.

A third study examined the effects of a randomized study evaluating the parent training component of IYTS on children's problem behavior at home and school as well as home-school connections (Webster-Stratton, 1998). The study looked at 426 families (n=296 experimental and n=130 control) with 426 children (average age: 4 years 8 months) who were enrolled in Head Start (HS). The children, who did not have a specific diagnosis, were deemed at risk for the development of ODD/CD due to the criteria for

enrollment in HS. Families in the control group continued to receive the HS parent education curriculum that included information on stress management, nutrition, self-care, and dental health. The children's social competencies as well as conduct problems at school were assessed using the Social Competence Scale-Teacher Report (teacher interview) and Teacher-Report Form-CBCL (Edelbrock & Achenbach, 1984). Parental competencies were assessed using the Discipline Style and Techniques (questionnaire), [DPICS-R] (Robinson & Eyberg, 1981), CII-Parenting Style (impression inventory) as well as INVOLVE to measure parent-school involvement (questionnaire). The intervention group worked in partnership with parents, teachers, and family service workers, while the control group received regular HS services. Participating parents received a shortened (8-9 weeks) version of the IYTS (specific components of the shortened version were not reported), which included weekly parent meetings with videotape, role-play activities, and homework assignments. All participating classroom staff received a 2-day workshop that provided an overview of the parent workshops as well as classroom behavior management techniques. The mothers in the intervention group decreased harsh and negative parenting and increased praise as well as discipline competence. Teachers reported a significant increase in parental school involvement as compared to the control parents, and involvement was maintained in kindergarten. The children whose parents participated showed an increase in compliance with a decrease in deviant behavior and misbehavior at home. Teachers did not report a decrease in problem behavior at school, but did note an increase in social competence. Parents were reported to be very pleased with the program. The mothers attended an average of 6 of the 8-9 sessions, and the fathers (34% participated) attended an average of 5 sessions. The teachers who participated received complete training sessions. The researchers concluded

that the limited teacher training component may have had an impact on the lack of improvement in problem behavior at school.

Although the overall results of the research examining the effectiveness of the IYTS are promising, there are limitations. First, there is no component analysis within each of the training series. For example, it is not known within the parent training program if play involvement, praise and rewards, or limit-setting either alone or in combination provide the most powerful intervention. Second, parents reported satisfaction with IYTS, but many did not complete the training or were unable to follow-up with the homework. It is not known if such a lengthy intervention (12 sessions) with many skills to learn is needed to provide a decrease in problem behavior. Third, 2 of the 3 studies involve HS parents or teachers, and this may not be a representative sample of parents because they are parents who are motivated to seek services, and HS strongly encourages active parent involvement and training. Additionally, parents continued to receive regular HS services while participating in parent training.

The second training standardized intervention program included within the review, Parent Child Interaction Therapy [PCIT] (Hembree-Kigin & McNeil, 1995), is a clinic-based program emphasizing parenting techniques to improve parent-child interactions to decrease problem behavior in young children ages 2 to 8 years. A comprehensive treatment takes 10 to 16 weekly sessions of 1 hour per session. The treatment package encompasses five components: (a) an assessment of child and family functioning pretreatment; (b) child-directed interaction [CDI] phase; (c) parent-directed interaction (PDI) phase; (d) generalization; and (e) an assessment of child and family functioning post-treatment assessment (Herschell, Calzada, Eyberg, & McNeil, 2002).

PCIT incorporates intervention goals in a two-phase process: (a) strengthening the parent-child relationship via positive interaction strategies and (b) teaching parents the skills needed to manage their child's problem behavior by providing effective consequences. The program works with parents and their children who display an array of problem behavior (Hembree-Kigin & McNeil, 1995). The parents play with their child while trained therapists via radio ear piece provide specific interventions to improve parental behavior management techniques. The techniques used during the controlled 5-minute play sessions include using specific praise of appropriate behavior, labeling, describing child's appropriate behavior, reflecting appropriate talk, imitating appropriate play, decreasing commands, questions or criticism, and ignoring inappropriate behavior. In addition, discipline techniques are taught. Specifically, parents are trained to give effective directions, determine compliance, provide two choices when giving a request, and use time-out (several stages from time-out to spanking during time-out to isolation). Furthermore, parents are taught to use labeled praise if a child complies during the discipline phase. PCIT favors a direct coaching approach as the program (a) provides immediate feedback, (b) gives parents encouragement to continue the job, and (c) allows for fast paced learning. Of the 17 studies identified, 4 studies investigated the use of PCIT. Summarized below are findings from these PCIT studies that have been conducted with target children and parents. (The investigators from each of the PCIT studies excluded children who were diagnosed with a physical or mental disability or impairment.)

A study of 54 children (ages 3-5) with problem behavior and their parents evaluated the effectiveness of standard PCIT training and a modified version (Nixon et al., 2003). The children randomly were assigned to one of three groups: PCIT, PCIT

modified (PCITM), and wait list control. Children were included in the study if they (a) were in the clinical range of the ECBI (Eyberg & Pincus, 1999); (b) met the diagnostic criteria for ODD; and (c) displayed disruptive behavior for 6 months. The children's behavior was assessed using the following measures: ECBI (Eyberg & Pincus, 1999); CBCL (Achenbach & Rescorla, 2000); and the Home Situation Questionnaire-Modified [HSQ-M] (Matthey & Barnett, 1999). The parents' attitudes as well as discipline methods were assessed using the following measures: Parenting Stress Index [PSI] (Abidin, 1995); Parent Sense of Competence Scale [PSCS] (Gibaud-Wallston & Wandersman, 1978); Parental Locus of Control Scale [PLCS] (Campis, Lyman, & Prentice-Dunn, 1986); and the PS (Arnold et al., 1993). Finally, an observation of parent-child interaction was completed in the clinical setting using the Dyadic Parent-Child Interaction Coding System II [DPICS-II] (Eyberg, Edwards, Bessmer, & Litwins, 1994). The training for the standard PCIT group was followed as previously described. The modified group did not attend a clinic but instead received the training via videotape (i.e., the principal investigator videotaped himself discussing and modeling the previously described skills) with alternate face-to-face or telephone meetings provided. The standard program took 15.5 hours to administer per target dyad while the modified program took 9.5 hours per dyad. The results indicate that, immediately following treatment, mothers in PCIT reported significant changes in oppositional behavior and a reduction in parental stress. Mothers in both treatment groups gave their children more praise and fewer commands with PCIT mothers greatly reducing criticisms. Children in the standard group showed more compliant behavior than children in PCITM. Follow-up data for this investigation reported that 1 and 2 years after the completion of PCIT as well as PCITM the treatment gains were mostly in place with no significant differences noted between the two groups

(Nixon, Sweeney, Erickson, & Touyz, 2004). This is an important addition to the PCIT research literature because parents who are not able to travel to or are not comfortable in a clinical setting may benefit from the modified version of the training.

A second study evaluated the effectiveness of PCIT training on 32 children with a mean age of 5 years and their parents (McNeil et al., 1999). Children who were referred for disruptive behavior problems were placed in a treatment group (n=18) or a wait list control group (n=14). The children's behavior was assessed using the following measures: CBCL (Achenbach & Edelbrock, 1991) and ECBI (Eyberg & Pincus, 1999). Parental stress was assessed via the PSI (Abidin, 1995). The families followed the standard treatment program as previously described. The results indicated that children in the treatment group decreased disruptive problem behavior while children in the wait list control group continued to exhibit disruptive behavior. Parental stress also improved. However, the decrease in problem behavior as well as parental stress levels was based solely on parent report. This may introduce bias into the results because the treatment parents may have expected a positive effect following treatment. In addition, effect of treatment was not generalized to a second setting (e.g., school).

A third study illustrated the results of PCIT on a group of 64 children ages 3 to 6 years old diagnosed with ODD, ADHD/ODD, CD/ADHD, or CD/OD (Schuhmann et al., 1998). In addition, the children were taking medication for hyperactivity. Children were assigned to an immediate treatment (n=37) or a wait list control (n=27) group. The investigators were looking at the effect of PCIT on the following: parent-child interactions, child behavior problems, marital satisfaction, parenting stress, parental locus of control, and parental depression. Child and parent behaviors were assessed using the following instruments: DSM-III-R Structured Interview for Disruptive Behavior

Disorders [DPICS-II] (Eyberg et al., 1994); ECBI (Eyberg, 1992); PSI (Abidin, 1995); Parent Locus of Control Scale [PLCS] (Campis et al., 1986); The Peabody Picture Vocabulary Test-R [PPVT-R] (Dunn & Dunn, 1981); Beck Depression Inventory (Beck, 1992); Dyadic Adjustment Scale [DAS] (Spanier, 1976); and Therapy Attitude Inventory [TAI]. The families followed the standard treatment program as described previously. The average length of treatment was 13 sessions. After treatment, parents successfully changed their interaction style with their child. For example, the parents used praise significantly more often, were better able to follow their child's lead during play, and were less critical of their child. Furthermore, the children's non-compliance decreased following treatment. The parents reported great improvement at home, and the children no longer met the criteria for ODD. Parents in the study did not report high levels of depression or marital problems, although these findings were not significant. However, parents did report a decrease in parenting stress as well as an increase in their ability to control their child.

Funderburk and colleagues (1998) extended the PCIT literature as they examined the generalized effects of PCIT on the target children's school behavior. Eighty-four children with a mean age of 4.8 years referred for treatment of conduct problems at home were included in the study. The treatment group (12 males) was compared to three control groups (72 males) identified as low problem behavior, average problem behavior, and high problem behavior. The children in the treatment group were diagnosed with ODD, ADHD, ODD/ADHD, or ODD/ADHD/CD. The children in the control groups were placed in each group based on teacher rating. The children's behaviors were assessed using the following measures: ECBI (Eyberg, 1992); Revised Conners Teacher Rating Scale [RCTRS] (Goyette, Conners, & Ulrich, 1978); Sutter-Eyberg Student

Behavior Inventory [SESBI] (Eyberg, Boggs, & Algina, 1998); Walker-McConnell Scale of Social Competence and School Adjustment (Walker & McConnell, 1987); and classroom observation of the children's behavior. The parents participated in the standard clinical treatment as previously described. At the end of the 14-session treatment, the children's problem behavior at school decreased. This is a significant finding because treatment was not provided for students within the classroom setting or to the teacher. Twelve months after treatment the children maintained a decrease in problem behavior. However, 18 months after treatment, only compliance behavior maintained at school. The investigators concluded that while PCIT improved the children's school behavior, as the children moved from preschool and first-grade academic requirements increased, and the treatment effect decreased in the school setting.

While the results of the PCIT studies are promising, there are limitations. The studies are conducted on controlled target populations within a university-based clinical setting. This eliminates parents and children who are unable to participate in a clinical setting due to travel requirements or monetary restraints, such as lack of insurance coverage for mental health services. Furthermore, phase and component analysis has not been investigated so it is not known which phase or component may have the strongest treatment effects. Additionally, the discipline phase of PCIT might not be generalized to the school setting as a classroom teacher may be unable to incorporate the more severe forms of discipline (e.g., spanking, basket hold in time-out, and isolation).

In summary, while the two packaged training programs have promising outcomes for parent and teacher educators, there are additional practical limitations. Both programs provide a packaged program of treatment; therefore, individual parent-child and teacher-child differences may not be taken into account when planning and implementing

treatment. Both programs require a generous commitment of time on the part of the adult enrolled in training. Additionally, both programs require a personal or program-level monetary commitment, either in the form of funding for clinical services (PCIT) or payment of trained facilitators and the purchase of standard training materials (IYTS). Furthermore, with the exception of the short-term results of the Funderburk et al. (1998) study, the programs offering only parent training report little or no generalization to the school environment. Finally, the parents participating in the two programs are those who are seeking help for their child's behavior problems. It is not known if less motivated parents would receive the same positive results.

Individual Intervention Studies

In addition to the two standardized training programs reviewed, several individual intervention studies meeting the search criteria targeting reduction of problem behavior in young children have been conducted. Nine studies focus on altering the parent-child dyad while the remaining study focuses on altering the teacher-child dyad. Parent-child and teacher-child studies are reviewed in the next two sections.

Parent-Child Dyad Studies

Feinfield and Baker (2004) studied the effect of a 12-week group parent training program on young children (ages 4 to 8 years) with persistent and significant problem behavior (aggression, non-compliance, and oppositional behaviors) as identified by CBCL (Achenbach & Edelbrock, 1991) or the ECBI (Robinson et al., 1980) parental report scores. Children were excluded from the study if they were developmentally delayed. The following measures were used to assess the children's behaviors at home and school: CBCL (Achenbach & Edelbrock, 1991); ECBI (Robinson et al., 1980); Home Situation Questionnaire [HSQ] (Barkley, 1981); Behavior Global Change Rating (parent

questionnaire); CBCL-TRF (Achenbach & Edelbrock, 1991); SSQ (Barkley, 1981); and Walker-McConnell (Walker & McConnell, 1987). Parenting practices were assessed using the following measures: Alabama Parenting Questionnaire [APQ] (Frick, 1991); Parent-Child Relationship Questionnaire [PCRQ] (Furman & Buhrmester, 2001); Index of Parental Attitudes [IPA] (Hudson, 1982); Parenting Sense of Competence [PSOC] (Gibaud-Wallston, 1978); and PSI (Abidin, 1995). The 39 participating parents were assigned to either a treatment or a delayed treatment group. The length of the parent training consisted of 30 minutes with their child followed by nine 1.5-hour group sessions and three 40-minute individual sessions. The parents were taught the following techniques: (a) to reduce negative behaviors and increase positive behaviors, (b) to consistently respond to their child's behavior, (c) to decrease negative responses to behaviors, and (d) to build a positive parent-child relationship. Parents were encouraged to practice the skills with their child. The curriculum was taught via role-play, lecture, and group discussion. Furthermore, parents were given weekly homework assignments. During the individual session, parents worked with a trainer on the skills previously mentioned. (A videotape of the parent and child playing together was available as a training tool.) Group and individual child sessions were also provided while the parents attended training, but the results of this additional intervention are not reported. The results indicated that parents reported a decrease in problem behavior (i.e., aggression, non-compliance, and oppositional behavior) at home. Parents also reported an improvement in parenting techniques with a more consistent pattern of discipline and less aggressive parenting (i.e., spanking, yelling, nagging). Parents' attitudes about their parenting improved while their stress decreased. The parents reported high levels of satisfaction with the training. Immediately following treatment, teachers of the target

children reported no decrease in problem behavior, but 5 months after treatment teachers noted a decrease in problem behavior. The authors concluded that the adults and the children learned a new pattern of adult-child interaction when parent-child interactions improved at home and were able to apply this pattern of interaction at school, thus helping them respond to classroom demands.

Marchant, Young, & West (2004) used a multiple baseline probe design to examine how effectively four parents were able to learn and use strategies to reduce the problem behavior (i.e., non-compliance) in their 4-year-old children. Three of the children attended a HS program and one attended a self-contained classroom for preschool children with disabilities. Three of the children were reported to have significant developmental delays. The children were included in the study if they: (a) had been referred by school personnel for behavior problems including non-compliance; (b) had a moderate to significant score on the Preschool and Kindergarten Behavior Scale [PKBS] (Merrell, 1994); and (c) had less than 50% compliance as observed in the home setting. One child behavior was targeted for intervention: increase compliance. Five parent behaviors were targeted for intervention: effective praise (contingent, specific and immediate); instructional praise); direct teaching; corrective teaching; and positive reinforcement. Parents were trained at home to use the target behaviors to decrease non-compliance in their children. Training was conducted using videotapes, modeling skills, role-playing, as well as positive and corrective feedback. The initial training lasted 2 hours followed by modeling and feedback 2 to 3 times per week, which was decreased to phone calls and less frequent visits as the study progressed. Observational data were collected throughout the investigation. Following training, the parents increased their use of praise strategies as well as appropriate teaching skills, and children decreased non-

compliant behavior. The researchers concluded that parents learned new skills that decreased non-compliant behavior in their children. The greatest improvement was in the parent's increased use of praise when interacting with their children. The parents were able to use effective (i.e., contingent, specific, immediate) praise as well instructional (i.e., contingent, specific, immediate, with a reason provided) praise with their children. While the outcomes at home were promising, the results did not generalize to the school setting. The parents indicated that they were satisfied with the treatment.

A third study examined the effectiveness of a brief group parent training on the problem behavior of 3- and 4-year-old children (Bradley et al., 2003). The parents were self-referred because they felt they were having difficulty managing their children's behavior. Parents (n=198) were randomly assigned either to an experimental (n=89) or to a wait list control group (n=109). The following measures were given prior to and at the conclusion of intervention: PS (Arnold et al., 1993); The Preschool Behavior Questionnaire [PBQ] (Behar & Stringfield, 1974); Preschool Characteristics Questionnaire [PCQ] (Finegan, Niccols, Zacher, & Hood, 1989); and the Brief Symptom Inventory [BSI] (Derogatis, 1993). A video was used to facilitate group discussion on ways to manage difficult behavior. The training consisted of three 2-hour group sessions followed by 1 booster session. The strategies provided in the curriculum include the use of rewards and time-out as well as the importance of reducing negative parenting (i.e., yelling, hitting, and criticism) and coercive interactions. Additionally, positive and negative examples of parenting behavior were given as well as methods to reduce child-resistant behavior. The measures of child behavior indicated a decrease in hyperactive/distractible behavior, but not on aggressive behavior. Parents reported a decrease in problem behavior, notably non-compliance. Parents reported improved

parenting skills with a decrease in yelling and better management skills. However, all results are based solely on parental report of a self-referred population.

A fourth study assessed the results of an intervention taught to 5 parents with children ages 38 to 46 months who exhibited both an early onset of problem behavior and mild language delays (Hancock et al., 2002). The children were included in the study if they were (a) at risk for a language delay as measured on the PLS-3 (Zimmerman, Steiner, & Pond, 1992); (b) at risk for the behavior problems as measured on the CBCL/2-3 (Achenbach, 1992); and (c) low income as reported by the parent. In addition to the previously mentioned assessments, the children were given the CTRF (Achenbach, 1992) and the WPPSI IQ (Wechsler, 1989). Four variables were assessed: (a) the parent's ability to use the intervention strategies, (b) the child's observed behavior and communication, (c) developmental assessments of the child's language, and (d) parental satisfaction. Parent intervention goals included balance turns, increase opportunity for children to respond, increase adult responses to child's language, provide simple directions, decrease commands during play, increase positive responses to compliance, increase correction to non-compliance, decrease negative verbalization, increase praise, and model appropriate language. The parents attended 30 (30- to 45-minute) individual sessions for approximately 8 months at the child's care center. Generalization observations were made in the home four times during the study. During the sessions the training was provided via handouts, videotape to provide specific examples, modeling, direct coaching, and immediate feedback. The results of the study indicated that parents were able to implement the strategies during the sessions at the child care center with limited generalization to the home. For example, parents praised their children four times more from baseline to intervention. Although teachers and parents reported that the target

children had high levels of problem behavior, this was not observed during baseline or intervention. However, during the play sessions all the children decreased non-compliant and negative behaviors from baseline to intervention. Children showed improvements in language skills during play sessions, but significant changes were not seen on standardized measures of language ability. Parents reported satisfaction with the training, but investigators reported the parents in the study did not consistently attend training sessions, had a difficult time meeting criterion as well as maintaining the target behaviors. Furthermore, in addition to poor generalization of skills to the home, the skills were not well maintained in the follow-up phase.

A fifth study assessed the effects of an individual parent training program in a clinical setting using positive procedures on the problem behavior (i.e., non-compliance) of 4 preschool children (Mandal et al., 2000). Their primary caregiver referred the children. Children were included if they complied with an adult request less than 40% of time. Two of the children were diagnosed with severe language delays; one child was diagnosed with mild mental retardation and a language delay. A multiple baseline crossover design was used to evaluate effective instruction delivery [EID] (i.e., eye contact, praise for eye contact, directives, close proximity, descriptive instruction, response time, and praise for compliance) and time in [TI] (i.e., verbal/physical praise for appropriate behavior). Parent training sessions included: written information, didactic teaching, role modeling, and immediate feedback (i.e., “bug in the ear”). In each condition (EID, TI, and combined EID/TI), a decrease in problem behavior (non-compliance) was observed; the greatest improvement was in the combined phase. However, the parents reported the immediate feedback provided via the “bug in the ear” was unpleasant to them. Additionally, the TI phase did not specify if verbal or physical

praise was more effective. The parents had difficulty implementing the treatment effectively during the EID phase. Furthermore, the investigators did not report the length of time for each session or total length of time needed to complete the intervention phase.

Greene, Kamps, Wyble, and Ellis (1999) examined the effects of a home-based program to train 3 mothers to manage the problem behavior of their 4 children (ages 5-7). The children were participating in an in-school behavior prevention program at the time of recruitment. The mothers in the study were self-referred to learn additional techniques for managing behavior at home. One child was diagnosed with ADHD. The mothers reported the following problem behavior in the children: physical and verbal aggression as well as non-compliance. Five behaviors were targeted for intervention: inappropriate child behavior, child compliance, on-task behavior, child and parent interaction, and parent praise. Observations of the child-parent and sibling interactions were completed in the home, and parents filled out a weekly child behavior report. A multiple-baseline design across participants was used to study the outcomes. The in-home program incorporated written information, discussion, modeling, role-playing, and practice. Home visits occurred two to three times per week lasting 8 to 13 weeks; the number of sessions ranged from 11 to 18 sessions. To decrease problem behaviors, the parents were taught to use praise, give clear instructions, model appropriate behavior, provide effective consequences, employ a reinforcement schedule, and use a time-out method. After treatment, a decrease in problem behavior (aggression and non-compliance) was observed and reported by the parent. Notably, all parents increased their use of praise after training. The parents were highly satisfied with the program. However, the parents volunteered for treatment and were familiar with the therapist at the start of the home-based program because they had a prior relationship in the in-school prevention program.

Furthermore, the children and the parents were already participating in a prevention program. Generalization information to an out-of-home setting (e.g., school) was not provided.

A nonconcurrent multiple baseline design was used to assess the effects of an individual parent training in a clinical setting using therapeutic storytelling [TST] and behavioral management (BPT) on the problem behavior (non-compliance) of 4 boys (ages 5 to 7) (Painter et al., 1999). The parents and the children were self-referred for treatment. Parents took the following measures of their child's problem behavior (frequency and intensity of non-compliance) and their own ability to adhere to treatment (i.e., adherence and satisfaction). The children's recall of a therapeutic story was also assessed. Two additional measures were given to the parent: PRS version of the Behavioral Assessment System for Children [BASC] and the PSI (Abidin, 1995). During the TST phase, the parents were provided with a story that correlated to the problem behavior of the child. The parent and child read and discussed the story to learn alternative solutions to the problem behavior. During the BPT phase, each parent worked individually with a therapist on strategies to decrease non-compliance (i.e., give specific directions, provide natural consequences, ignore inappropriate behaviors, use time-out, and provide a stable routine). The results indicated that both treatments were effective in reducing the non-compliance of 3 of the 4 target children as reported by the parents. However, the findings were not evident in the BASC results given post-treatment. Parents were highly satisfied with the treatment.

Smith and Lerman (1999) studied the effectiveness of a parent training to decrease the problem behavior (i.e., non-compliance) of two boys (ages 4 and 5). One boy was diagnosed with autism and moderate mental retardation and the other with pervasive

developmental disorder (PDD) and mild mental retardation. Therapists trained parents during two home visits (1-hour each) to use guided compliance and a high-probability instructional sequence to decrease rates of non-compliance and increase compliance. The goal was to provide short-term training to teach both strategies to the parents and to compare the effectiveness of the strategies on the children's non-compliance and on the parents' ability to acquire the new skill and their satisfaction. Parents and children were observed prior to the start of the study to determine levels of non-compliance. The parents were also interviewed. In the guided compliance phase, the parent was instructed to: (a) give clear direct instructions, (b) deliver a gestural prompt if the child did not comply, (c) provide physical guidance if the child did not comply, and (d) give praise in the event of compliance. In the high-probability phase, the parent was taught to (a) give a series of high-probability commands followed by a low-probability command, (b) ignore non-compliance, and (c) praise immediately following compliance. The training procedures were the same during both phases: (a) a handout with all procedures outlined was given to the parent; (b) the therapist provided modeling; (c) role-playing was conducted; and (d) guided practice with therapist, parent, and child present occurred. The training took place in two home visits lasting 1 hour each. A comparison of the effectiveness of treatments as well as parental satisfaction was made. Parents easily learned to implement both treatments following short-term training, but a higher rate of improvement (decrease in non-compliance) was seen in the guided compliance phase. The parents found the procedures easy to implement and were satisfied with both treatments.

A ninth study examined the results of a parent training program to decrease the problem behavior of 5 young children (ages 4 to 7) (Richman et al., 1995). The primary

cause for referral was non-compliance, but the children also exhibited tantrums, aggression, disruption, and verbal aggression. Two of the 5 children were diagnosed with developmental delays. The CBCL (Achenbach & Edelbrock, 1991) was completed prior to the start of treatment. Researchers worked with the parents and children in a simulated play setting within a medical facility. The target behavior for the parents was appropriate response to compliance (i.e., praise, physical affection, access to an activity) as well as restating the directions if the child continued to be non-compliant. However, for the 2 children with developmental delays, the parental response for non-compliance was a prompt sequence (i.e., verbal, gestural, and physical prompt). The target behavior for the children was completion of the request within 10 seconds and task completion within 5 minutes. The training ranged from 1 to 11 sessions. The training involved four components: (a) definitions and examples of the child's behavior with the parent were provided by the trainer; (b) didactic instruction of appropriate responses to the child's behavior was taught; (c) rehearsal of the response with the child, parent, and trainer present; and (d) application of parent-child interactions without the trainer present. The parents were taught to use praise, give clear instructions, model appropriate behavior, provide effective consequences, employ a reinforcement schedule, and use a time-out method. Findings after training indicated that parents increased positive responses to the child's appropriate behavior and non-compliance decreased. Additionally, the parents successfully generalized the responses to a second non-clinical setting and maintained the behaviors for 6 months. This investigation is a worthwhile addition to the literature because modification to the treatment was made based on each child's developmental level as well as the family's ability to learn the intervention successfully.

Teacher-Child Dyad Study

A study using a multiple baseline design examined the effects of a five-step instructional sequence given by the teacher to address off-task behavior of children in a preschool classroom (Hiralall & Martens, 1998). Four teachers and 14 children (3 to 4 years old) participated in the study. Teachers nominated their students with problem behavior. The target behavior for the teacher was the use of the instructional sequence during a teacher-directed art activity. The target behaviors for the children were: attend to instruction and be on-task. A 2-hour teacher training in the classroom was provided to the teachers. The training included verbal and written descriptions of the strategies as well as modeling and role-playing. The teachers were given a checklist to remind them of the instructional sequence during the chosen activity. They were taught to implement in a prescribed order: demand eye contact, give step-by-step instructions, model, praise, and redirect. After training, the results indicated that the teachers used the sequence successfully (i.e., eye contact, modeling, and praise showed the greatest increase) and that the children's problem behavior (off-task) decreased; furthermore, child engagement increased. Although generalization data were not reported, the teachers stated that they used modeling and praise during free play and transitions.

Summary of Adult-Child Dyad Studies

The parent-child studies and teacher-child study reported several positive findings. First, the majority of parents and all teachers were able to learn and to implement all or part of the intervention steps or strategies. Second, an increase in appropriate behavior (i.e., compliance) and a decrease in problem behavior (i.e., non-compliance and aggression) were reported in the majority of the target children. Third, in all studies the parents and teachers reported satisfaction with the training. These positive outcomes

should be viewed with caution because the studies have limitations. First, the studies that required a longer commitment of time on the part of the adults reported mixed results in parent attendance and their ability to learn and implement the entire skill set. Second, many parents were self-referred, and the results were self-reported. The parents participating in the intervention may have expected to see an improvement in the child's behavior and therefore reported an increase in appropriate behavior and a decrease in problem behavior. Third, although the toddler and early preschool years (ages 2 and 3) may be a critical time to intervene with children exhibiting an early onset of problem behavior, the majority of the studies focus on children ages 4 and older. The training provided adults and children over the age of 4 may not be developmentally appropriate for toddlers and young preschoolers (Sampers et al., 2001). Furthermore, the majority of the training is provided for the home setting with little generalization data provided regarding an outside setting such as a child care classroom. Finally, like the standard training programs, the parent-child and teacher-child studies offer multi-component interventions, so the effect of a single component is unknown.

Summary

In summary, promising evidence-based interventions to train adults to implement strategies that increase appropriate behavior and decrease problem behavior in young children are available. Results of the 17 studies reviewed indicate that a variety of interventions and strategies have been utilized with varying levels of success. The strengths of the studies in addition to their limitations may offer a direction for future intervention research. The following section provides a summary of the strengths and limitations of studies reviewed with suggestions for future research.

There are encouraging findings within the body of intervention studies reviewed. First, most of the intervention studies emphasized the need for the parent or teacher to change his or her behavior to increase appropriate behavior and decrease the problem behavior of the target children. Second, the interventions, for the most part, emphasized positive intervention strategies, such as the use of praise, prompting, redirection, or modeling to increase a child's appropriate behavior. Third, adults were taught appropriate discipline strategies (i.e., ignore, give a choice, provide effective directions, provide appropriate consequences) to decrease a child's problem behavior. Fourth, while the majority of the intervention studies required a substantial time commitment, three studies provided the adult with a relatively brief training that resulted in a decrease in the problem behavior of young children (Bradley et al., 2003; Hiralall & Martens, 1998; Smith & Lerman, 1999). Finally, each of the reviewed programs or studies incorporates components of direct instruction when teaching intervention strategies to parents or teachers. Direct instruction provides the parent or teacher with modeling, prompts, feedback, and reinforcement (Hiralall & Martens, 1998). As a result, the parent or teacher implements a standard procedure so they are well prepared and consistent when interacting with the target child.

While the overall results of the parent-child and teacher-child intervention studies reviewed are promising, the body of literature is not without limitations. The first limitation is the relative absence of intervention studies with children ages 2 and 3 and their child care teachers. Given the large number of young children in child care centers who are exhibiting problem behavior, this is a need to address in future research. Second, the majority of the interventions provided require a large commitment of time on the part of the adult. For example, 13 of the interventions require over 13 hours of training, often

outside the child's home environment. This may not be possible for parents who are unable to attend training sessions during the work day, after work, or on the weekend. Parents often report that other commitments such as a second job, child care issues, or unmet transportation needs prevent them from attending or completing training (Hancock et al., 2002). Third, very few of the intervention studies (not adult group training) take place in the child's natural environment (home or school). For example, 8 studies conducted intervention sessions in a therapeutic setting such as a university clinic. Therefore, the effectiveness of the intervention in the child's natural environment is often unknown. Fourth, the interventions are multi-component, involving many steps for the adult to learn. This may be difficult to sustain over time or to generalize to another adult (e.g., second teacher or parent); child (e.g., sibling); or setting (e.g., school). Fifth, several interventions used time-out or more coercive discipline practices (isolation or spanking) as a behavior management strategy. The National Association for the Education of Young Children [NAEYC] recommends that time-out not be used with children who are toddlers (age 2) (National Association for the Education of Young Children, 1996). In addition, NAEYC recommends time-out as a "last resort technique" for managing problem behavior in young preschoolers (age 3) (NAEYC, 1996). Furthermore, recent Head Start guidance recommends adults use positive behavior techniques to guide children's behavior with time-out put in place in a limited capacity by a trained adult in an adult-supervised separation (Hill, 2004). These recommendations may make it difficult for a teacher to use time-out as a part of an intervention strategy. Sixth, the majority of the interventions are multi-component without analysis provided on each component. It is not known which component may be the most effective, either alone or in combination with another strategy. Seventh, several of the studies used the parent, the

teacher, or a risk category (i.e., enrollment in Head Start) to determine the presence, severity, and intervention outcome of the target child's or children's problem behavior. This may introduce a bias because the adults may over- or under-report the presence and severity of the behavior prior to intervention as well as the impact the intervention has on the target behavior(s).

Based on this review, a number of factors appear to be effective components to use when intervening on young children's problem behaviors. These three factors consistently appear throughout the literature reviewed:

1. use of the adult as a change agent
2. reliance on praise or another form of positive interaction to increase appropriate behaviors and the use of appropriate discipline (i.e., ignore, provide consequences, give choices, provide effective directions) to decrease problem behaviors
3. use of direct programmatic instruction to teach adults new strategies.

These components appear throughout the reviewed studies; therefore, they may be key strategies for developing successful interventions to increase appropriate behavior that may replace the problem behavior in young children enrolled in child care.

One of these factors—reliance on praise as an intervention tool—will be further addressed in the next section. While the studies reviewed each explore unique intervention strategies, praise is used in 14 out of 17 studies (82%). This is not surprising because praise has been used as a child management technique for many years (Gettinger, 1988). For example, PCIT teaches parents about the importance of praise as a way to increase appropriate behaviors that can replace problem behaviors and the value of using labelled or specific praise as a teaching tool (Hembree-Kigin & McNeil, 1995). In fact, PCIT instructs parents “that praise is one of the most powerful tools available for improving young children's behavior” (Hembree-Kigin & McNeil, 1995, p. 37).

Furthermore, teachers as well as parents find praise to be an acceptable form of intervention (Martens, Hiralall, & Bradley, 1997). Incorporating a praise strategy within a child care environment may provide a simple yet effective intervention strategy for teachers of young children to teach replacement behaviors to children who are demonstrating problem behavior. The following section reviews praise as an intervention strategy within the classroom setting.

Review of Research Using Praise as an Intervention Strategy

The previous section reviewed research related to intervention packages and strategies that has been conducted with young children and adults directed toward increasing appropriate behavior and decreasing children's problem behaviors. One strategy that was included in most of the studies was the use of praise to teach appropriate behaviors that serve to replace problem behaviors. Praise is often used as a tool to manage children's behavior in the home, school, and clinical setting. This section further examines praise as an important and viable strategy to increase appropriate and decrease problem behavior in children.

As previously discussed, praise is a component of many of the interventions used with children who engage in problem behaviors. Praise has been used extensively within classrooms as a way to address problem behavior by teaching replacement behaviors (e.g., increasing on-task behavior to replace off-task behavior) (Brophy, 1981; Sutherland, Wehby, & Copeland, 2000). However, research conducted over the past 35 years has shown praise to be an effective, but not an often or well used, classroom management tool (Beaman & Wheldall, 2000; Brophy, 1981; Sutherland et al., 2000). Furthermore, much of the praise literature is based on correlational or inferential information, not experimental evidence (Filcheck, McNeil, & Herschell, 2001; Swinson

& Harrop, 2001). A literature review of studies using praise within the classroom setting as well as possible implications for use within a child care setting follows.

A thorough search of the literature was conducted to identify studies for this section of the review. Three electronic databases were searched: Article First, ERIC, and PsychInfo. The key words: praise, problem behavior, behavior problems, behavior management, behavior modification, classroom behavior modification, classroom discipline, intervention, and teacher were searched in various combinations. A hand search of relevant journals was performed. In addition, researchers in this area of intervention were contacted for additional information. The search of the intervention literature focused on evidence-based studies that met the following criteria: (a) praise was the only intervention used; (b) an adult was responsible for introducing or increasing praise statements; (c) target children in elementary school (Grade 5) or younger were included in the study; and (d) target children exhibited problem behavior. The search was limited to 1994 through 2004. Seven studies meeting the criteria were found. A review of the interventions and implications for future research are given.

Table 2-2 presents the author(s), participants, setting, dependent measures, design, intervention, and results for each of the identified studies.

Dobrinski (2004) studied the efficacy of using specific (delayed) praise on the appropriate (on-task) behavior of 4 second-grade students with problem behavior (off-task behavior). The four children (nominated by their teachers) were in 2 different classes and were identified by their teachers as having off-task behavior during academic time. Behavior-specific praise (i.e, verbal statement of the reinforced behavior) was given to the students as a delayed directive for on-task behavior during academic time. The results indicated that the introduction and use of specific (delayed) praise increased the 4

Table 2-2. Studies of Praise as a Classroom Intervention Tool to Decrease Problem Behavior in Children.

Authors	Participants	Dependent Measures	Design	Intervention	Results
Dobrinski, 2004	<u>Child:</u> 4 <u>Grade:</u> 2 (General Education) <u>Teacher:</u> 2 <u>Inclusion:</u> Teacher nomination	<u>Child:</u> Interval recording of on-task behavior <u>Teacher:</u> Interval recording of specific delayed praise	Multiple baseline design across participants	Delayed specific praise given to students for on-task behavior during academic instruction	<u>Child:</u> Increase in on-task behavior during academic instruction <u>Teacher:</u> Increase in specific delayed praise during academic instruction
Smith, 2004	<u>Child:</u> 3 <u>Grade:</u> Prekindergarten (Head Start) <u>Teacher:</u> 3 <u>Inclusion:</u> Teacher nomination	<u>Child:</u> Frequency and duration of non-compliance, aggression, and on-task behavior <u>Teacher:</u> Frequency of precorrects, behavior-specific praise, behavior-specific praise with behavior expectations	Multiple baseline design across participants	Teacher use of precorrects, behavior-specific praise, behavior-specific praise with behavior expectations directed at target child during a large group activity 60- to 90-minute training	Increase in teacher use of precorrects, as well as praise; increase in on-task (compliant) behavior as well as decrease in aggression

Note: EBD=Emotional Behavior Disorder, LD= Learning Disability, MR=Mental Retardation

Table 2-2. Continued.

Authors	Participants	Dependent Measures	Design	Intervention	Results
Freeland, 2003	<u>Child:</u> 3 <u>Grade:</u> Prekindergarten (Head Start) <u>Teacher:</u> 3 <u>Inclusion:</u> Problem behavior, teacher nomination	<u>Child:</u> Interval recording appropriate behavior <u>Teacher:</u> Interval recording Praise	Multiple baseline across settings	Teachers taught via direct instruction to increase praise given to students' appropriate behavior.	<u>Child:</u> Increase in appropriate behavior <u>Teacher:</u> Increase in praise <u>Generalization:</u> Teacher skill and student behavior generalized to a second setting
Wills, 2002	<u>Child:</u> 5 <u>Grade:</u> 2 and 3 (General Education) <u>Teacher:</u> 2 <u>Inclusion:</u> Teacher nomination	<u>Child:</u> Frequency of inappropriate behavior (disruption), duration of engagement <u>Teacher:</u> Frequency of praise, frequency of reprimands	Multiple baseline across students	Teacher set praise goal, students record number of praise statements given by teacher, if numbers match, prize given to student 15-minute training	<u>Child:</u> Increase in engagement <u>Teacher:</u> Increase in praise, decrease in reprimands
Sutherland & Wehby, 2001	<u>Child:</u> 216 <u>Grade:</u> K-8 (Self-contained EBD) 112 EBD 48 LD 20 MR 26 Other <u>Teacher:</u> 20	<u>Child:</u> Correct response <u>Teacher:</u> Effective praise	Random assignment to treatment or control group; ANOVA	Self-evaluation, teacher recorded rate of effective praise from 5-minute tape, 1 training session	<u>Child:</u> Increase in correct response <u>Teacher:</u> Increase in effective praise

Table 2-2. Continued.

Authors	Participants	Dependent Measures	Design	Intervention	Results
Sutherland et al., 2000	<u>Child:</u> 9 <u>Grade:</u> 5 (Self-contained EBD) <u>Teacher:</u> 1 <u>Inclusion:</u> EBD diagnosis	<u>Child:</u> Frequency of on-task behavior <u>Teacher:</u> Frequency of Behavior-specific praise, non-behavior-specific praise	ABAB withdrawal	Teacher set praise goal, feedback given following 1 session with brief meeting before and after each observation	<u>Child:</u> Increase in on-task behavior <u>Teacher:</u> Increase in behavior-specific praise and non-behavior
Martens et al., 1997	<u>Child:</u> 2 <u>Grade:</u> 1 (Self-contained EBD) <u>Teacher:</u> 1 <u>Inclusion:</u> EBD diagnosis	<u>Child:</u> Appropriate behavior <u>Teacher:</u> Praise	Multiple baseline across participants	Teacher (1) identified behavior to increase, (2) set a goal of number of times to praise, (3) daily feedback	<u>Child:</u> Increase in appropriate behavior <u>Teacher:</u> Increase in praise

students' on-task behavior during the intervention phase of the study. Teachers were satisfied with the intervention. Generalization to a second setting was not examined.

Smith (2004) investigated the effectiveness of 3 teachers' increased use of precorrects and praise on the appropriate (on-task) and problem behavior (physical aggression) of 3 children enrolled in Head Start. A brief training (60 to 90 minutes) was given to each teacher to explain the intervention. The teacher was trained to provide the entire class as well as the target child with precorrects, behavior-specific praise, and

behavior-specific praise with behavioral expectations during a large group activity (circle time). The teachers did increase their use of precorrects and behavior-specific praise. A less significant increase in behavior-specific praise with behavioral expectations was noted. Following an increase in teacher precorrects and praise, an increase in student on-task behavior and a decrease in problem behavior were demonstrated. The results indicated that the use of large group precorrects and praise did have an effect on the behavior of target children. Teachers were reported to be satisfied with the training. Although generalization data were not provided, the researcher reported that teachers used the strategies in additional settings within the classroom.

Freeland (2003) examined the effectiveness of 3 teachers' increased use of praise on the problem behavior of 3 children enrolled in Head Start classrooms. Direct consultation (modelling, feedback, and practice) was used to train teachers to increase praise when the students used appropriate behavior in the classroom and to generalize the praise to two other settings. The results indicated that as teacher praise increased, problem behavior decreased. The increase in teacher praise and the decrease in children's problem behavior generalized to a second, but not a third setting.

Wills (2002) investigated the effect of a praise game on the problem behavior of 5 second- and third-grade students (nominated by their teachers) and 2 teachers. Specifically, the game was introduced to increase teacher praise and to reduce students' problem behavior (disruption) as well as to increase their engagement in the learning activity. The researcher met with each teacher for 15 minutes to teach the game, discuss the behavior the teacher would like to increase, and decide the time of day to implement the game. The children were taught the rules of the game in a 5-minute meeting with the

researcher. Following the intervention phase, the teachers were able to increase their use of praise, and the problem behavior (disruption) decreased. Furthermore, the teachers' use of reprimands decreased. The teachers and students were satisfied with the game.

A fourth study examined the effectiveness of rates of teacher praise on children's problem behavior (Sutherland & Wehby, 2001). Twenty elementary school teachers (grades K-8) and 216 children diagnosed with EBD (ages 5 to 15) participated in the study. The participants were divided into two groups: treatment (self-evaluation) and no treatment. As the intervention, the teacher was provided with current rates of praise (measured during pre-treatment) and the importance of using effective praise. During the treatment phase, the teacher was provided with a tape recorder, taught coding procedures, and then coded and graphed the number of praise statements they used in a 5-minute period (multiplied by 3). The use of praise increased for the treatment group as did the number of correct answers given by students. Furthermore, the number of teacher reprimands decreased for the treatment group. In addition, while generalization data were not reported, teachers in the treatment group considered the intervention (increased use of effective praise) to be practical to use during the course of the day.

Sutherland et al. (2000) researched the on-task behavior of 9 fifth-grade students diagnosed with EBD, specifically: (a) the effect an intervention had on the teacher's rate of praise (behavior-specific) and (b) the effect of increased praise (behavior-specific). The intervention consisted of one meeting between the teacher and the researcher to discuss examples of behavior-specific praise and to determine a teacher-chosen level for criterion. A brief booster session (reminder of criterion and examples of praise) was provided prior to each observation. During a teacher-directed activity (social skills

training), both the teacher's rate of praise and on-task behavior of the students increased. However, the teacher increased non-behavior-specific praise as well, so it is not clear if specific praise was the determining factor. Furthermore, because the children were not participating in an academic task, it is unclear whether or not the intervention would be successful in a more demanding setting. Nevertheless, the finding that teachers easily incorporated praise with a positive result after a relatively brief intervention is a worthwhile avenue for future research.

A seventh study examined the effect of an increase in teacher praise on increasing appropriate behavior in 2 students (Martens et al., 1997). One teacher and two 6-year-old boys with EBD participated in the study. In the intervention the teacher (a) chooses 4 positive behaviors to improve in each of the two students, (b) sets a daily goal to praise each behavior a certain number of times during the activity, and (c) receives a feedback note at the end of each day about goal attainment. Results indicated that the teacher increased the use of praise and the 2 students increased the teacher-chosen behavior. Furthermore, the teacher found the intervention to be acceptable.

Summary and Implications for Future Research

In summary, evidence-based interventions to train teachers to implement praise within the classroom are available. Results of the study review indicate that praise does have a positive effect on increasing appropriate behavior in children who demonstrate problem behavior. The strengths of the studies in addition to their limitations may offer a direction for future intervention research. The following section summarizes the strengths and limitations of the praise studies reviewed with suggestions for future research.

The seven studies reviewed do provide a few common strategies that may be useful for future intervention planning. First, when the teacher implemented specific effective

praise, there was a positive effect on increasing appropriate behavior (i.e., on-task or correct response) in the target children. Specific praise provides the target children feedback about appropriate behaviors that can be demonstrated to replace problem behaviors as well as expected future behaviors (Mangin, 1998). Second, all studies provided the teacher with a relatively short and immediately applicable intervention. Praise appears to be an easily applied intervention that does not require a great deal of time or money to implement (Dobrinski, 2004). Three, the teachers were able to learn and implement the intervention strategy. Four, the interventions were teacher-driven, meaning that the teacher, for example, chose the number of praise statements to make in a session, chose the behavior to increase, or nominated the target children. Finally, the teachers found the intervention to be acceptable, increasing the likelihood that they may continue to use the intervention with other students or with the target children in other settings.

Although the results of the praise studies are promising, there are limitations. First is the relative paucity of studies on young children and teachers. With the number of children in child care centers with early onset behavior problems, investigating the use of praise within a child care setting is a worthwhile addition to the literature. Second, because most studies take place in an elementary school classroom, the level of teacher education is higher than commonly found in a child care center. Implementing an easily learned and applied strategy with child care teachers may increase their ability to address the behaviors of the children in their classrooms. Third, although praise is considered an important tool for increasing appropriate behaviors in children demonstrating problem behavior, there is a relative lack of research on the use of praise in isolation. Finally,

despite the fact that praise is an easily learned and implemented strategy, there is little information on the teacher's use of praise generalized to a non-trained setting.

Results of the review indicate that the following factors are important components to consider when using praise as an intervention:

1. implementation of specific praise by the teacher
2. introduction of a short intervention resulting in teacher change
3. inclusion of the teacher in designing the intervention process
4. acceptability of the intervention.

These components may offer strategies for developing successful interventions to increase appropriate behavior in young children demonstrating problem behavior. In the following section, based on the reviewed literature, suggestions for further research are provided.

Future Research Directions

The intervention studies reviewed provide directions for future research to train teachers to increase appropriate behavior in young children who demonstrate problem behavior. The studies present a variety of intervention methods. One strategy—specific praise that reinforces an appropriate behavior—is included in 13 of the 24 studies. Specific praise (effective, labeled, instructional) has been effectively applied to increase appropriate behavior in children. Increasing appropriate behavior is an important goal of an intervention strategy for children demonstrating problem behavior. An appropriate behavior may provide the child with a replacement for the problem behavior. Giving teachers a specific intervention strategy that may increase children's appropriate behaviors and decrease problem behaviors may be an effective method to intervene in the child care classroom. Praise may be an appropriate strategy to use, especially in child

care classrooms, because it is a proactive, preventative intervention that can be easily used by child care teachers. Furthermore, although many studies required lengthy training, several studies indicated an increase in appropriate behavior following a relatively short training period (e.g., a single session of 90 minutes or less). This allows the teacher to learn and implement an intervention strategy without lengthy multi-component training sessions. Additionally, in the majority of the studies, adult training included written or verbal instruction, videotape, guidance, practice, and feedback. Efficient intervention training may provide teachers with a new skill in a helpful and cost-effective manner. Finally, an intervention strategy that is free, easy to implement, and available to the teacher in most classroom settings may generalize to a second untrained settings.

Purposes of the Investigation

Given the paucity of research examining the use of specific praise statements on increasing appropriate behavior with young children demonstrating problem behavior in child care centers, there is a need to further examine this line of research. Therefore, this investigation addressed the following research questions:

1. Following training, will teachers in a child care center implement specific praise statements during a teacher-identified activity?
2. What is the effect of the teachers' use of specific praise statements on the appropriate and problem behavior of young children enrolled in a child care setting?
3. If specific praise statements increase after training, will teachers' use of specific praise statements generalize to an untrained setting?

By investigating the effects of using specific praise statements to decrease problem behavior in young children enrolled in child care, this investigation extended the current research by examining the use of training to teach child care teachers to use specific

praise statements with children ages 2, 3 and 4 demonstrating problem behaviors within the child care setting. The next chapter presents the methodology for the investigation.

CHAPTER 3 METHODS

This study was designed to investigate teachers' ability to implement a strategy of specific praise statements following training. The study further investigated the effectiveness of teachers' use of specific praise statements on the appropriate and problem behavior of young children enrolled in child care centers. Finally, the study examined whether, following training, teachers would generalize the specific praise statements to a second untrained setting. The chapter presents information regarding the participants, setting, and materials, independent measures, dependent measures, data collection procedures, experimental procedures, and research design.

Participants

Teacher Participants

Four teachers working with children between the ages of 33 and 51 months participated in the investigation. Two teachers and children were from the Educational Research Center for Child Development on the campus of the University of Florida (UF-ERCCD) and 2 teachers and 2 children were from the Child Development Research Center at the University of North Florida (UNF-CDRC). Several teachers from two classrooms at UF-ERCCD were asked by the center director to participate in the study. The two teams of classroom teachers selected one member of their classroom team to participate. The selection was based on teacher schedule and their availability to work with the two children the teachers wanted to be included in the study. The center director at UNF-CDRC asked two lead teachers in two classrooms with children exhibiting

problem behavior to participate in the study. Furthermore, in order to be included in the investigation, each participating teacher met the following criteria:

1. The teacher held a minimum of a Child Development Associate [CDA] credential and a maximum of a Bachelor of Arts.
2. The center director nominated the teacher.
3. The teacher had a good work attendance record as defined by 80% attendance or an average of 4 out of 5 days per week.
4. The teacher signed an informed consent form (see Appendix A).

Demographic information about each teacher was obtained from the teacher (Table 3-1).

Child Participants

Four children between the ages of 33 and 51 months participated in the investigation. Two target child participants were enrolled in the Educational Research Center for Child Development on the University of Florida campus. The two children at the University of Florida were chosen by their respective team of teachers to participate in the study. The center director concurred with the decision. The two children at UNF-CDRC were chosen by the lead teacher in their respective classrooms, and the center director concurred with the decision. Baby Gator offers child care for children ages 6 weeks to 5 years who have at least one parent or guardian associated with the University of Florida (student, staff, or faculty). (See Table 3-2) Eighty percent of the spaces are reserved for the children of full-time students (Baby Gator Educational Research Center for Child Development, 2005). Florida Department of Education (2005) indicates that for the 2004-2005 school year, 32,948 students enrolled full-time at the University of Florida with 24,692 students at the undergraduate level and 8,256 at the graduate level. Two target child participants were enrolled at the Child Development Research Center (CDRC) at the University of North Florida campus. CDRC offers child care for children

ages 2.5 to 10 years of age. The center is available to students, staff, and faculty at UNF as well as the general public. However, the majority of children have parents who are students at UNF. Florida Department of Education (2005) indicates that for the 2004-2005 school year, 14,641 students enrolled with 12,2005 at the undergraduate level and 1,639 at the graduate level. According to the Florida Department of Education (2005), the ethnic make-up of the students enrolled in the Florida university system is 60% White non-Hispanic, 15% Black, 16% Hispanic, 5% Asian, and 4% International.

In order to be included in the investigation, each participating child met the following criteria:

1. The child demonstrated problem behavior that interfered with his/her ability to participate in learning activities and classroom routines as designated by the teacher.
2. The child had typical development as demonstrated by scores on a standardized screening instrument, the Battelle Developmental Inventory [BDI] (Newborg, Stock, Wnek, Guidubaldi, Svinicki, Dickson, & Markley, 1988) given by the investigator, who is a certified early childhood and special education teacher.
3. The child was between 2 years and 6 months and 4 years and 6 months.
4. The child had good record of attendance as defined by 80% attendance or an average of 4 out of 5 days per week.
5. The child's guardian provided informed consent (see Appendix A).

Demographic information about each child as well as the child's specific problem behavior was obtained from the teacher (Table 3-3).

Table 3-1. Demographic Data on Teacher Participants

Teacher	Race*	Gender**	Level of Education	Years of Experience
1	C	F	AA	4
2	AA	F	AS	12
3	C	F	AA	6
4	AA	M	AA	13

Note: *Race: C=Caucasian; AA=African American

**Level of Education: AA=Associate of Arts; AS=Associate of Science

Table 3-2 Data on Child Care Centers

	UF-ERCCD	UNF-CDRC
Ages of Children Enrolled	8 weeks to 5 years	2.5 years to 5 years
Number of Children Enrolled	131	95
Total Number of Classrooms	4	4
Percent of Student Parents	80%	60%
Number of Teaching Staff	21	8
Payment	Sliding Scale for Students	Sliding Scale for Students
Ethnicity	25 Countries Represented	75% Caucasian, 20% African American, 5% Other
Accreditation	NAEYC	NAEYC, Gold Seal (Children and Families)

Table 3-3. Demographic Data on Child Participants

Child	Age (yr-mo)	Race*	Gender	BDI(S)–Results	CBCL-Results	Teacher Reported Behaviors(s) of Concern
1	2-11	C	M	Pass	Clinical Attention/ Aggressive Behavior	Non-Compliance
2	3-8	AA	M	Pass	Clinical Attention	Non-Compliance
3	4-3	C	M	Pass	Clinical Emotionally Reactive, Anxious/Depressed, Withdrawn	Non-Compliance, Aggression, Disruption
4	3-10	C	M	Pass	Clinical Attention	Non-Compliance, Aggression

Note: *Race: C=Caucasian; AA=African American

Setting

This investigation was conducted across 2 teacher-child dyads in 2 classrooms at the University of Florida Educational Research Center for Child Development (UF-ERCCD) and 2 teacher-child dyads in 2 classrooms at the University of North Central

Florida Child Development Research Center (UNF-CDRC). The classrooms contained routine care items (such as cots or mats for resting, a kitchen, tables for eating, and child-sized bathrooms). In addition, each classroom had learning centers that included activities for quiet and active play. The learning centers included (but were not limited to) a book center, a housekeeping center, a manipulative center, an art center, and an area for gross motor play. Access to a large outside play area was available to the classrooms daily.

The investigation took place in the setting prescribed during a transition time. This activity was chosen to target for intervention due to high rates of problem behavior during transition times. The transition times were identified by the teachers. The classroom of Teacher-Child Dyad 1 at UF-ERCCD contained 7 full-time teachers with 32 children ages 12-35 months. The classroom of Teacher-Child Dyad 2 contained 6 full-time teachers with 47 children ages 3 to 5 years. The classroom of Teacher-Child Dyad 3 at UNF-CDRC contained 2 full-time teachers and 18 children age 4. The classroom of Teacher-Child Dyad 4 contained 2 full-time teachers and 16 children age 3.

Materials

Materials were those typically found in a child care center classroom. The materials included (but were not limited to) books, housekeeping toys, small motor manipulatives, art supplies, and indoor gross motor apparatus. The child and the teacher used the classroom materials available during the transition activity. Additional classroom materials were not needed for the proposed investigation.

Materials required for teacher training included the teacher training guide developed by the investigator (Appendix B), a tape recorder, a video camcorder, a television, a video, five index cards, magnet strip, marker, and pencil or pen.

Measurement Procedures

Dependent Variables

The dependent variables for the investigation were child and teacher behaviors. The coding definitions as well as examples and non-examples of the behaviors can be found in Appendix C.

Child behavior

The following child behaviors were measured as defined:

Appropriate behavior.

Engagement. Engagement is defined as participating in an activity, interacting with peers and teachers, or looking at or using materials in an appropriate manner (McBride & Schwartz, 2003).

Compliance. Compliance is defined as completing an instruction or beginning to follow the instruction within 5 seconds after the teacher request has been given

Problem behavior.

Non-compliance. Non-compliance is defined as failure to complete an instruction or to begin to follow the instruction within 5 seconds after the teacher request has been given.

Aggression. Aggression is defined as any negative physical behavior directed toward another person including hitting, biting, pinching, kicking, pulling or pushing, throwing an object at another person, or spitting at another person.

Disruption. Disruption is defined as behavior that interferes with the ongoing activity, such as verbal talk that is loud or out of context, making inappropriate noises, screaming/yelling, dropping to the ground and remaining there, attempting to leave an area/room, or leaving the area/room without teacher permission.

Teacher behavior

The following teacher behaviors were measured as defined:

Specific praise statement. Specific praise statements were defined as a positive declarative statement specifically directed to the target child that describes the child's behavior (e.g., I was so proud of you when you tried to clean up the spilled rice).

Non-specific praise statement. Non-specific praise statements were defined as a positive declarative statement specifically directed to the target child that does not describe the child's behavior (e.g., awesome, super, way to go).

Independent Variables

Training in the use of specific praise statements by the teacher in a child care center was the independent variable. For the purpose of this investigation, a specific praise statement was a positive declarative statement specifically directed to the target child that describes the child's behavior (e.g., "Great job putting all the cars in the red bin"). Each teacher was trained to use specific praise statements with the target child as described in the following section.

Teachers were trained individually by the investigator in the use of specific praise statements. The teacher training was conducted during a 1- to 2-hour training session. The training included: definitions and examples of specific praise, videotape analysis, and guidance. The teachers were provided with a training manual, and videotapes of the teacher-child dyad during baseline data collection were to facilitate learning. A brief description of the teacher training follows in experimental procedures with a more detailed description provided in Appendix B.

Data Collection Procedures

Baseline and intervention sessions were videotaped for 5 minutes at least three times a week. Each session began with the prompt “3-2-1 begin” in order to alert the data collector(s) to begin recording. Each session ended with the prompt “stop” in order to alert the data collector(s) to stop recording. Videotaping of 5-minute generalization probes occurred at least twice during the baseline phase and every third session during the intervention phase. The same prompts indicating the beginning and end of the session were utilized for the generalization probes. Teacher praise statements (specific and non-specific); target children’s appropriate behavior (compliance); and problem behavior (aggression, disruption, and non-compliance) were measured by examining the frequency of these behaviors during each videotaped session. The investigator viewed the videotapes and used paper and pencil to record tally marks each time the teacher or the child demonstrated one of the behaviors. The data collection form for recording frequency of these behaviors can be found in Appendix C.

Engagement was recorded using a partial interval recording system. The 5-minute session was divided into 100 intervals of 6 seconds each. While viewing the same videotaped sessions previously described and using paper and pencil, the investigator recorded engagement if it occurs at any time during the 6-second interval. The investigator used an audiotape that cued 6-second intervals during the 5-minute sessions. The data collection form for measuring engagement can be found in Appendix D.

Frequency measures were converted into rate per minute of behavior by dividing the frequency of behavior by the number of minutes observed and multiplying by 60. The percentage of intervals was calculated for engagement. To obtain a percentage of intervals, the number of intervals the target behavior occurred was divided by the total

number of observed intervals. The ratio multiplied by 100 provided the percentage of intervals in which engagement occurred (Kazdin, 1982).

Each session was viewed twice: (1) to measure the percentage of times the target child complied and the rate of: target child problem behavior, teacher praise statements, teacher non-specific praise statements; and (2) to complete the measure of engagement. The dependent variables were coded on a data-recording sheet. The data collection form can be found in Appendix C.

Interobserver Agreement

The investigator served as the primary data collector for all 4 dyads. Videotapes were used to train a second data collector. The investigator trained the second data collector until an 80% agreement was reached on three consecutive sessions across all behaviors.

Interobserver agreement data were gathered on 33-42% of the sessions across the baseline, intervention, and generalization phases across participants. Interobserver agreement for frequency behaviors was determined by computing a frequency ratio. The smaller total was divided by the larger total. The ratio was multiplied by 100 to form a percentage (Kazdin, 1982). Agreement for engagement, compliance, and non-compliance was calculated by dividing total agreements by the total agreements plus disagreements multiplied by 100 to provide a percentage (Richards, Taylor, Ramasamy, & Richards, 1999).

Experimental Procedures

Pre-experimental Phase

Prior to beginning the investigation, investigator observed the target child during a transition time for sessions to confirm the target child demonstrated problem behavior

that interfered with his/her ability to participate in the transition activity as designated by the teacher. In addition, during the pre-experimental phase, the investigator completed the Battelle Developmental Inventory [BDI] screening to rule out children who have a developmental delay (Newborg et al., 1988). The BDI screening is a comprehensive screening instrument that checks a child's current level of development in the personal, social, adaptive, motor, communication, and cognition domains. In addition, the Child Behavior Checklist (CBCL) Teacher Rating Form (TRF) (Achenbach, 1997) was given to the teacher by the investigator. The CBCL TRF provides ratings from child care providers and teachers on what concerns them most about the child. The areas rated are: emotionally reactive, anxious/depressed, somatic complaints, withdrawn, attention problems, and aggressive behavior.

Baseline Phase

A transition time was videotaped for 5-minute sessions, with a minimum of 3 sessions per week. Baseline data were gathered for at least 3 sessions, until a stable trend was established. Data were gathered on the following behaviors: (1) teacher specific praise statements; (2) teacher non-specific praise statements; (3) target child's problem behavior (non-compliance, aggression, disruption); (4) target child's engagement behavior; and (5) target child's compliance and non-compliance behavior. For Teacher-Child Dyad 1 and Teacher-Child Dyad 2, baseline data began on the same day. Collection of baseline data continued with Teacher-Child Dyad 2 until a consistent trend was observed in the Teacher-Child Dyad 1 intervention data, at which time intervention with Teacher-Child Dyad 2 began. The same pattern was replicated for Teacher-Child Dyad 3 and Teacher-Child Dyad 4. During baseline, the teacher was instructed to interact with the child as he or she normally would during the transition activity.

Training Phase

Following the establishment of a stable baseline, each teacher individually attended a 1- to 2-hour training session. The session was conducted one day before the teacher began to use the intervention with the target child. The teacher chose the time and place of the training session (within the child care setting). The teacher was trained individually by the investigator and was instructed not to share the intervention with other teachers in their classroom or the child care center throughout the course of the investigation. To assist in controlling for carryover effects and independence, prior to the start of teacher training each participating teacher signed a statement that they would not share the intervention with the other teachers in their classroom or the center throughout the course of the investigation. The teacher training was conducted during a 1- to 2-hour training session. A brief description of the teacher training follows with a more detailed description provided in Appendix B.

Training sessions. Teacher training included:

1. A brief definition of appropriate and problem behavior for the target child was given to the teacher by the investigator.
2. An explanation of using specific praise statements to increase appropriate behavior and decrease problem behavior with young children who are exhibiting problem behavior was discussed.
3. The meaning of specific praise statements was presented.
 - a. Examples of specific praise statements and non-specific praise statements were explained.
 - b. Videotaped segments of the teacher and the child (videotapes from the baseline phase of the investigation) were viewed by the investigator and the teacher to find situations where specific praise statements might have been utilized.
4. Two verbal checks of understanding of specific praise were conducted for a criterion of 80% accuracy.

- a. The investigator read 10 praise statements aloud while the teacher read them silently. After each statement, the teacher indicated (using paper and pencil) if the statement was a specific praise statement or a non-specific praise statement.
 - b. The teacher listened to 10 praise statements previously recorded by the investigator. After each statement, the teacher indicated (using paper and pencil) if the statement was a specific praise statement or a non-specific praise statement.
5. Five cards with teacher-chosen examples of specific praise statements that might be used with the child were made for the teacher by the investigator. The cards were laminated and magnetized (if needed) and posted near the transition activity.

During training, the teacher was encouraged to ask questions and contribute information. As soon as training was complete, the teacher was instructed in the use of specific praise statements during a transition activity. The investigator, during the pre-experimental phase, observed the target child during the transition activity to confirm that the target child demonstrated problem behavior that interfered with his/her ability to participate in the transition activity. The teacher's use of specific praise statements was videotaped daily or as often as the dyad was available. Following teacher training, if the teacher was not using specific praise statements after sessions, a coaching session was planned; however, an occasion to implement this component of the intervention was never warranted.

Intervention Phase

As soon as training was completed, the teacher was instructed to use specific praise statements during the transition activity. The teacher was instructed to post the previously made specific praise statement cards in easy view. The child's name was not visible on the cards. Additionally, the investigator provided a written note or email to the teacher following each intervention session to briefly review the session. The note or email provided the teacher encouragement to continue to use specific praise statements during

the following session. Furthermore, the note or email reminded the teacher of the next session.

Once intervention data with Teacher 1 was stable or demonstrated an upward trend, intervention began with Teacher 2. Following the completion of the intervention phase with Teacher 1 and Teacher 2, the procedures were replicated with Teacher 3 and Teacher 4.

Generalization

Generalization probes during the baseline and intervention phases of the investigation were conducted to determine if the teacher's use of specific praise statements generalized to a second transition. Sessions were videotaped for 5 minutes. Generalization probes were conducted at least twice during baseline and every third session during the intervention phase. The same data procedures previously described were followed. Data and interobserver agreement were collected on the teacher's use of specific and non-specific praise statements, as well as the child's appropriate and problem behavior.

Treatment Integrity

The investigator, using the teacher training procedures previously discussed, conducted all training to ensure consistent training across teachers. To identify the parts of the training conducted, the teacher and the investigator completed a treatment integrity checklist (which was developed by the investigator) at the end of each teacher praise training session. The treatment integrity checklist can be found in Appendix D.

Design

A single-subject multiple baseline design across participants was used to conduct this investigation. Data collection began with the baseline phase for two of the dyads.

Once the baseline behaviors were stable for Dyad 1, intervention began with Dyad 1 while baseline continued for Dyad 2. Following a clear pattern in intervention data for Dyad 1, intervention began for Dyad 2. Generalization probes were taken during the baseline and intervention phases of the investigation. A replication began with the second two dyads after completing the investigation with the first two dyads. A multiple baseline design across participants was appropriate for this investigation because it demonstrates the effectiveness of an intervention with more than one participant who display similar behaviors targeted for change (Richards et al., 1999). The goal of this investigation was to learn if the effects of individual intervention, training, and implementation can effect change in a small group of participants (Kazdin, 1982).

In order to examine the effectiveness of the intervention on the teacher's behaviors as well as child target behavior, the baseline and intervention were graphically displayed for visual inspection of the results. The data were graphed following each observation as line graphs that included baseline and intervention data as well as generalization data. Visual inspection of the data was used to determine the reliability and consistent effectiveness of the intervention (Tawney & Gast, 1984). Each graph was inspected for (a) the magnitude of change from baseline to intervention, (b) the level of stability within the data points across phases, and (c) the trend of the data (Kazdin, 1982).

Social Validity

In order to examine each teacher's perceptions of the intervention, a questionnaire was completed at the end of the investigation. This 4-item questionnaire was administered to determine if the teachers found the training and intervention to be a worthwhile addition to their child management techniques. A 5-point Likert scale was

used to determine the social validity and teachers' opinions of the intervention. The intervention acceptability form can be found in Appendix E.

CHAPTER 4 RESULTS

The purpose of this investigation was to determine the effectiveness of an intervention provided to teachers in a child care center to use with children exhibiting problem behavior. The research questions were: (a) Following training, will teachers in a child care center implement specific praise statements during a teacher-identified activity? (b) What is the effect of teachers' use of specific praise statements on the appropriate and problem behavior of young children enrolled in a child care setting? (c) If specific praise statements increase after training, will teachers' use of specific praise statements generalize to an untrained setting?

To investigate these questions, 4 teacher/child dyads participated in the research. The participating teachers, who were selected by the directors of two child care centers UF-ERCCD and the UNF-CDRC, held at least a CDA certification. The participants were selected by their teachers based on the presence of problem behavior that interfered with their ability to participate in classroom routines and activities. Children's development and degree of their behavior problems were evaluated using standardized measures. Baseline data were collected regarding the teachers' use of specific and non-specific praise statements, the participant's appropriate behavior (compliance and engagement) and participant's problem behavior (non-compliance, disruption, aggression). During the intervention phase, the teachers were trained to use specific praise statements during a transition time. The effectiveness of the intervention was measured by comparing teacher

use of specific praise statements, child compliance, and child engagement as well as problem behavior before training and after training. Data were also collected in an untrained setting during a second transition time to determine generalization of the intervention on teacher and participant behavior.

A single-subject multiple baseline across participants was used. The dependent variables across all phases of the study were the teachers' statements and the children's behavior. Baseline and intervention data were completed with two dyads at the UF-ERCCD. The investigation was replicated 6 six weeks later at the UNF-CDRC.

The remainder of the chapter reports results of the investigation by phases, including interobserver agreement data graphically displayed in Figures 4-1 through Figure 4-8.

Baseline and Intervention

Teacher–Child Dyad 1

Baseline

During baseline sessions, Teacher-Child Dyad 1 was videotaped during a clean-up activity from a small group activity to a circle time. Data were collected from videotapes on the teacher's use of specific praise statements, the target child's percentage of compliant and non-compliant response following a teacher request, and rate of aggression and disruption. Finally, the percentage of time the child was engaged was measured. As seen in Figures 4-1 to 4-4, baseline data were collected for 6 sessions until a stable trend occurred in Teacher 1's rate of specific and non-specific praise statements. During baseline, Teacher 1's specific and non-specific praise statements occurred at a low rate with specific praise statements ranging from 0.0/minute to 0.180/minute, with a mean occurrence of 0.03/minute. (See Figure 4-1.) The rate of non-specific praise statements

by Teacher 1 ranged from 0.0/minute to 0.780/minute, with a mean rate of 0.330/minute. Child 1's non-compliance following a teacher request was variable and ranged from 29% to 91% with a mean level of non-compliance of 65% (see Figure 4-2). Child 1's compliance following a teacher request was variable and ranged from 8% to 71% with a mean level of compliance of 35% (see Figure 4-2). Child 1's rate of disruption and aggression occurred at very low rates and ranged from 0.0/minute to 0.60/minute with a mean rate 0.154/minute (see Figure 4-3). Finally, Child 1's percentage of time engaged was variable, ranging from 28% to 94% with a mean percentage of time engaged of 55% (see Figure 4-4).

Intervention

Once baseline data stabilized, Teacher 1 was trained using the teacher training manual (Appendix B) to use specific praise statements in her classroom. The training, which was held at the UF-ERCCD, lasted two hours. The teacher completed both written checks with 100% accuracy. Following training, Teacher 1 was able to give examples of 5 specific praise statements that could be used during the targeted activity. Due to the holiday weekend, the intervention was implemented 3 days following training.

Intervention data for Teacher-Child Dyad 1 were collected over 7 sessions (see Figures 4-1, 4-2, 4-3, 4-4). During intervention, Teacher 1's use of specific praise statements dramatically increased, ranging from 1.20/minute to 2.258/minute with a mean level of 2.00/minute (see Figure 4-1). The magnitude of change in Teacher 1's use of specific praise statements from baseline to intervention increased from 0.0/minute (during baseline) to 2.22/minute (during intervention) and an overall positive mean change of 1.70/minute. There was little difference (mean difference = 0.133) between baseline and intervention in the rate of non-specific praise statements, which ranged from

0.0/minute to 0.420/minute during intervention, with a mean of 0.197/minute. The magnitude of change from baseline to intervention in Teacher 1's use of non-specific praise statements was 0.780/minute (during baseline) to 0.420 (during intervention).

Child 1's non-compliance following an adult request during intervention decreased significantly, ranging from 0% to 38% with a mean of 12.28% (see Figure 4-2). This represents a decrease of 52.72% in the mean percentage of non-compliance from baseline to intervention. The magnitude of difference in Child 1's non-compliance from baseline to intervention was from 56% (during baseline) to 0% (during intervention). Child 1's compliance following an adult request increased considerably, ranging from 62% to 100% with a mean of 87.72% (see Figure 4-2). This represents an increase of 52% in mean percentage of compliance from baseline to intervention. The magnitude of difference in Child 1's compliance from baseline to intervention was from 44% (during baseline) to 100 % (during intervention).

There was little difference between the rate of aggression and disruption from baseline to intervention. The mean rate of aggression and disruption during intervention was 0.055/minute (see Figure 4-3). This is a reduction of 0.078/minute from baseline to intervention. The magnitude of difference in aggression and disruption from baseline to intervention was 0.60/minute (baseline) to 0.0/minute (intervention). Finally, the percentage of time engaged during intervention was 92%, which represents a positive change in a mean of 37% from baseline to intervention. The magnitude of difference in engagement from baseline to intervention was 68% (baseline) to 100% (intervention) (see Figure 4-4). This represents a moderate, but significant change in the percentage of time engaged from baseline to intervention.

Teacher-Child Dyad 2

Baseline

During baseline sessions, Teacher-Child Dyad 2 was videotaped during clean-up from a small group activity to a circle time activity. Data were collected from videotapes on Teacher 2's rate of specific and non-specific praise statements, Child 2's percentage of compliant and non-compliant responses following a teacher request and Child 1's rate of aggression and disruption. Finally, the percentage of time Child 2 was engaged was measured. As seen in Figures 4-1 to 4-4, baseline data were collected for 15 sessions until a stable trend occurred in Teacher 2's rate of specific and non-specific praise statements. During baseline, Teacher 2's specific praise statements occurred at a low rate. Specific praise statements ranged from 0.0/minute to 0.180/minute, with the mean occurrence of 0.012/minute (see Figure 4-1). Teacher 2's rate of non-specific praise statements was 0.0/minute to 0.420/minute, with the mean rate of 0.092. Child 2's non-compliance following a teacher request was variable and ranged from 0% to 89% with a mean level of non-compliance of 55% (see Figure 4-2). Child 2's compliance following a teacher request was also variable and ranged from 11% to 100% with a mean level of compliance of 44.67% (see Figure 4-2). Child 2's rate of disruption and aggression occurred at moderately low rates and ranged from 0.0/minute to 1.38/minute with a mean rate of disruption and aggression of 0.268/minute (see Figure 4-3). Finally, Child 2's percentage of time engaged was variable, ranging from 20% to 90% with a mean percentage of engaged time of 65.6%.

Intervention

Once the baseline was stabilized, Teacher 2 was trained using the teacher training manual as described in Chapter 3 to use specific praise statements in her classroom. The

training was held at the Educational Research Center for Child Development and lasted 1 hour and 45 minutes. The teacher completed both written checks with 100% accuracy. Following training, Teacher 2 was able to give examples of 4 specific praise statements that could be used during the targeted activity. The principal investigator provided a fifth example. Teacher 2 implemented the intervention the day following training.

Intervention data for Teacher-Child Dyad 2 were collected over 4 sessions (see Figures 4-1 to 4-4). During intervention Teacher 2's use of specific praise statements dramatically increased, ranging from 1.20/minute to 1.620/minute, with a mean level 1.455/minute (see Figure 4-1). The magnitude of change in Teacher 2's use of specific praise statements from baseline to intervention increased from 0.0/minute (baseline) to 1.620/minute (intervention) with an overall positive mean change of 1.443/minute. There was a slight difference (mean of 0.253/minute) between baseline and intervention in the rate of non-specific praise statements, which ranged from 0.0/minute to 0.780/minute during intervention, with a mean of 0.345/minute. The magnitude of change from baseline to intervention in Teacher 2's use of non-specific praise statements was 0.0/minute (baseline) to 0.180/minute (intervention).

Child 2's non-compliance following an adult request during intervention decreased notably, ranging from 0% to 25% with a mean of 15.5% (Figure 4-2). The magnitude of change in non-compliance from baseline to intervention was from 71% (baseline) to 25% (intervention). Child 2's compliance following an adult request increased significantly, ranging from 75% to 100% with a mean of 84.5% (Figure 4-2). The magnitude of change in compliance from baseline to intervention was from 29% (baseline) to 75% intervention. There was a slight change in the rate of aggression and disruption from baseline to intervention. The range of disruption and aggression during intervention was

0.0/minute to 0.360/minute with a mean rate of aggression and disruption of 0.09/minute. This is a reduction of 0.178/minute from baseline to intervention. The magnitude of change in aggression and disruption from baseline to intervention was 0.180/minute to 0.0/minute. The mean percent occurrence of engagement was 90%. This represents a positive change of 24.4% in the mean percentage of engagement from baseline to intervention. The magnitude of change in engagement from baseline to intervention was 50% to 92%.

Teacher-Child Dyad 3

Baseline

During baseline sessions, Teacher-Child Dyad 3 was videotaped during the transition from circle time to teacher-directed literacy activities. Data were collected from videotapes on Teacher 3's use of specific and non-specific praise statements, Child 3's percentage of compliant and non-compliant responses following a teacher request, and rate of aggression and disruption. Finally, the percentage of time Child 3 was engaged was measured. As seen in Figures 4-5 to 4-8, baseline data were collected for 4 sessions until a stable trend occurred in Teacher 3's rate of specific and non-specific praise.

During baseline, both Teacher 3's specific praise statements and non-specific praise statements occurred at a rate of 0.0/minute (see Figure 4-5). Child 3's non-compliance following a teacher request was fairly stable and ranged from 75% to 100% with a mean level of non-compliance of 87.6% (see Figure (4-6)). Child 3's compliance behavior following a teacher request was also fairly stable, ranging from 0% to 25% with a mean level of compliance of 11.25%. Child 3's rate of disruption and aggression was variable and occurred at relatively low rates, ranging from 0.0/minute to 1.02 /minute with a mean

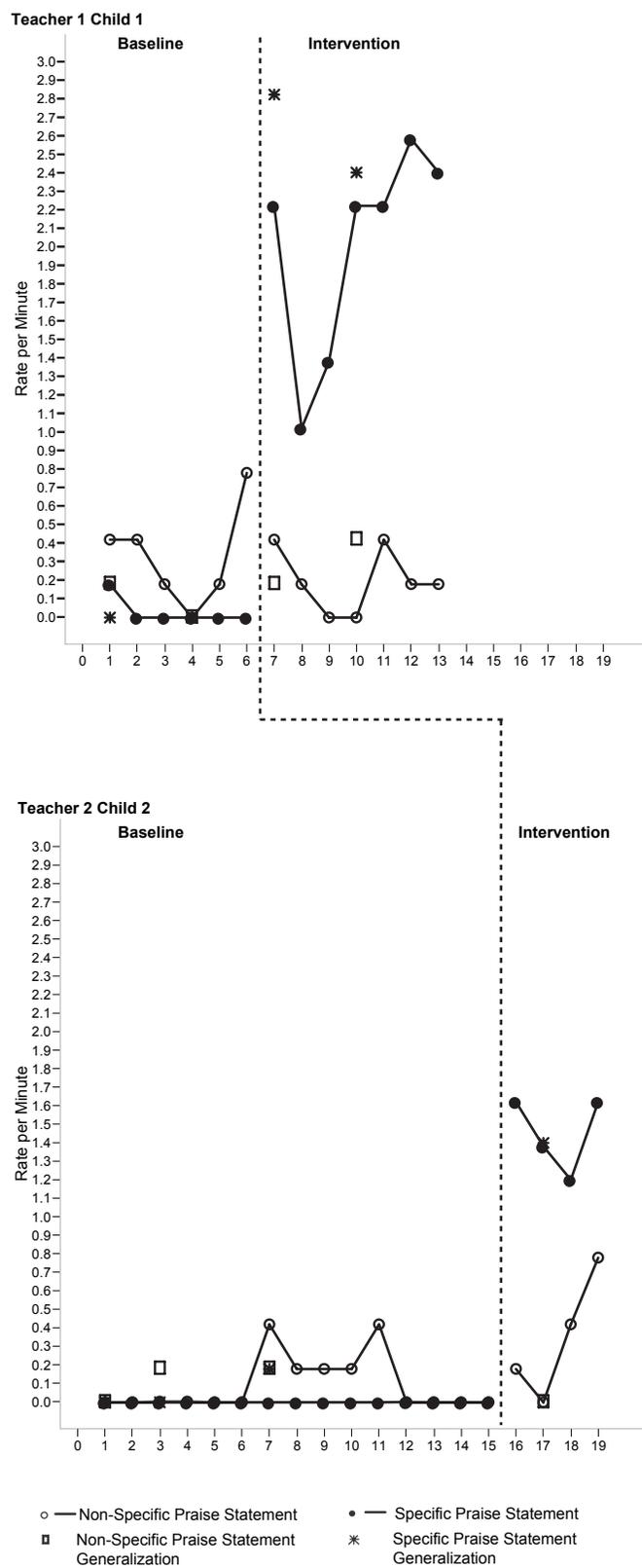


Figure 4-1. Teacher 1-Child 1/Teacher 2-Child 2: Specific/Non-Specific Praise Statements

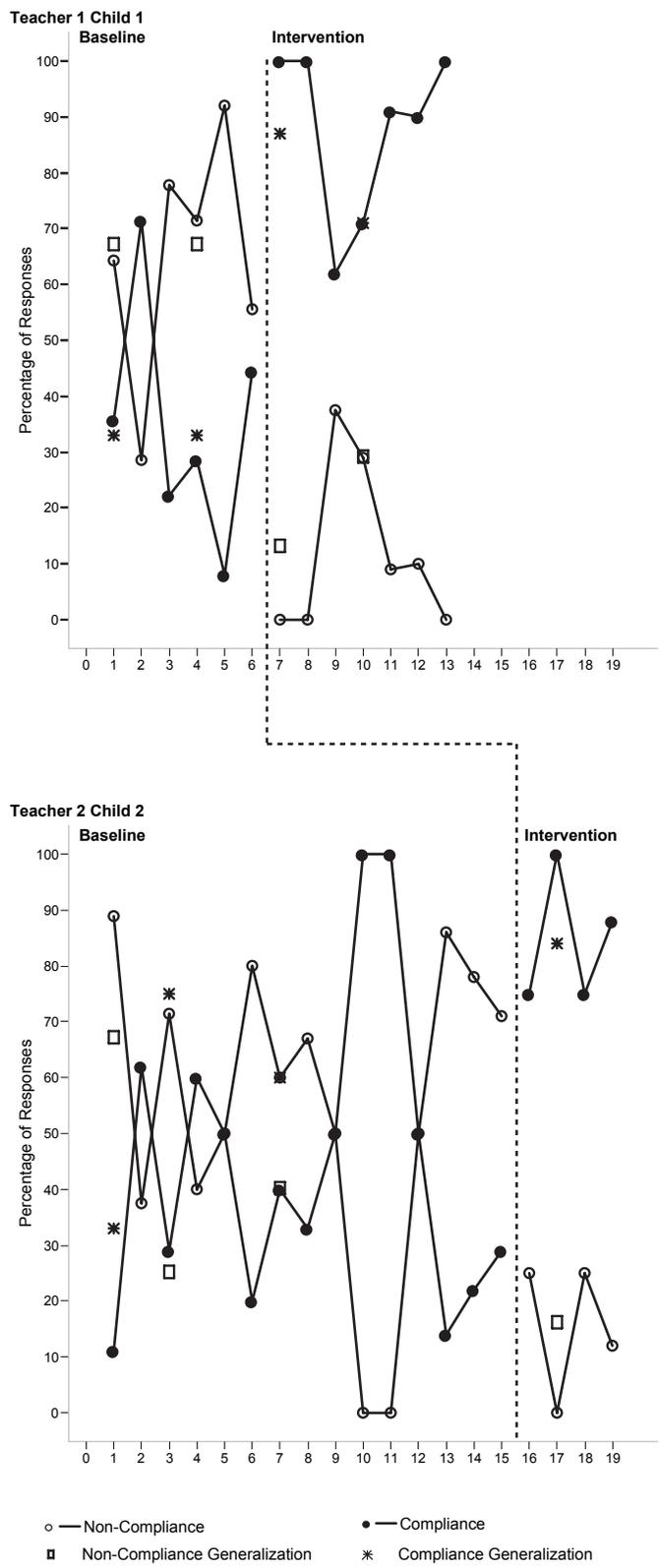


Figure 4-2. Teacher 1-Child 1/Teacher 2-Child 2: Non-Compliance and Compliance

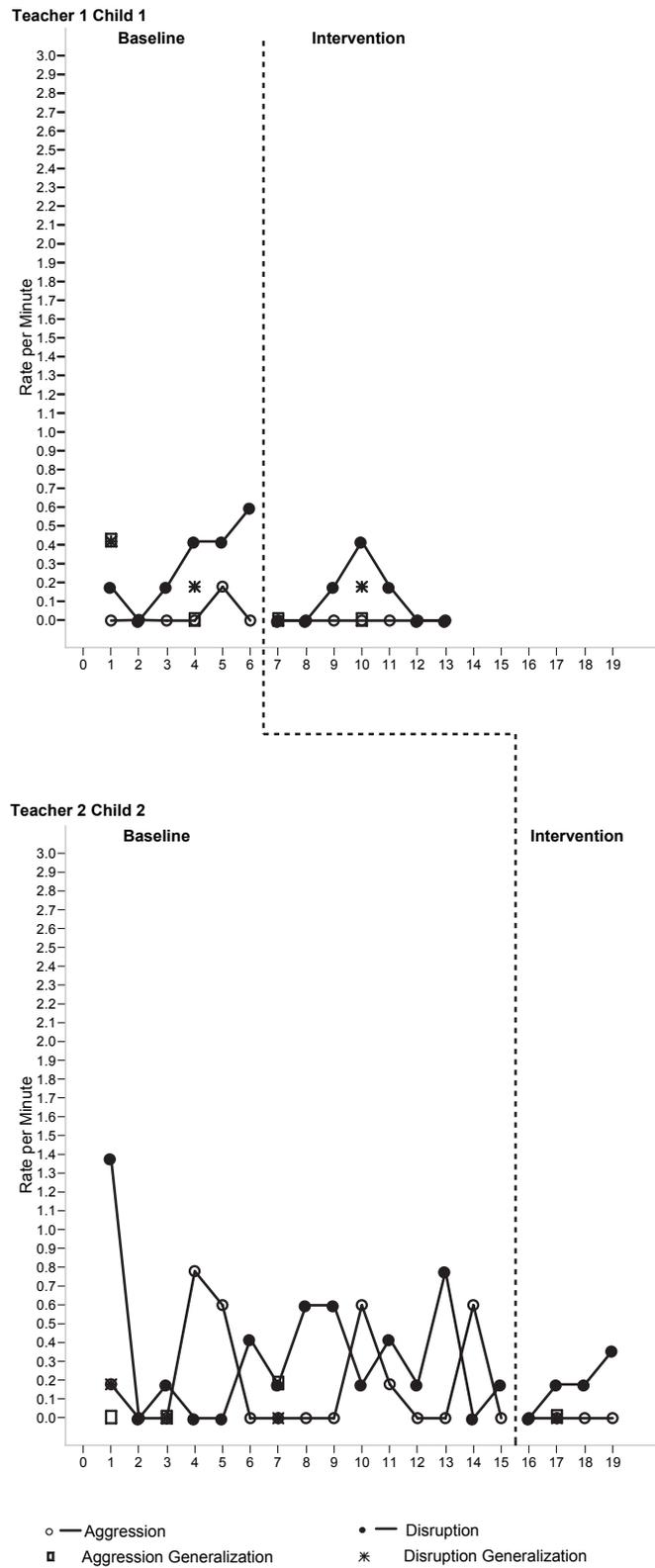


Figure 4-3. Teacher 1-Child 1/Teacher 2-Child 2: Aggression and Disruption

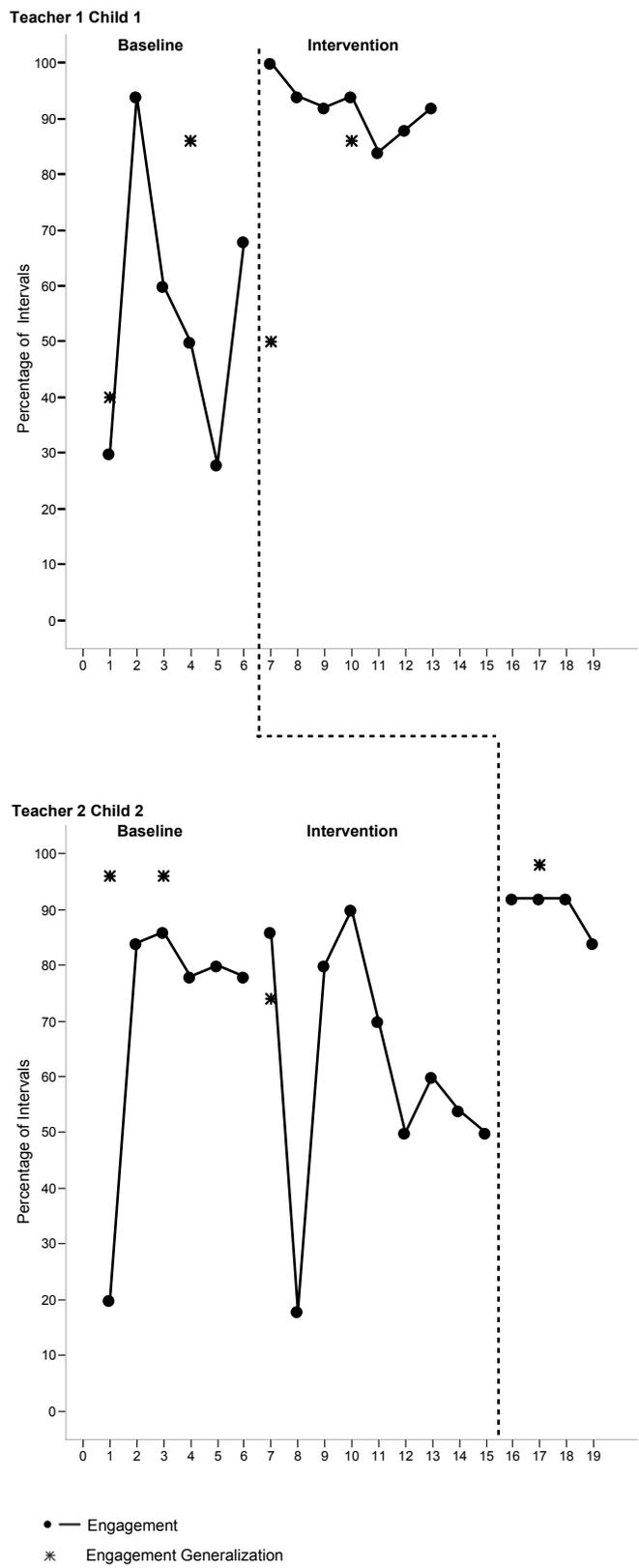


Figure 4-4. Teacher 1-Child 1/Teacher 2-Child 2: Engagement

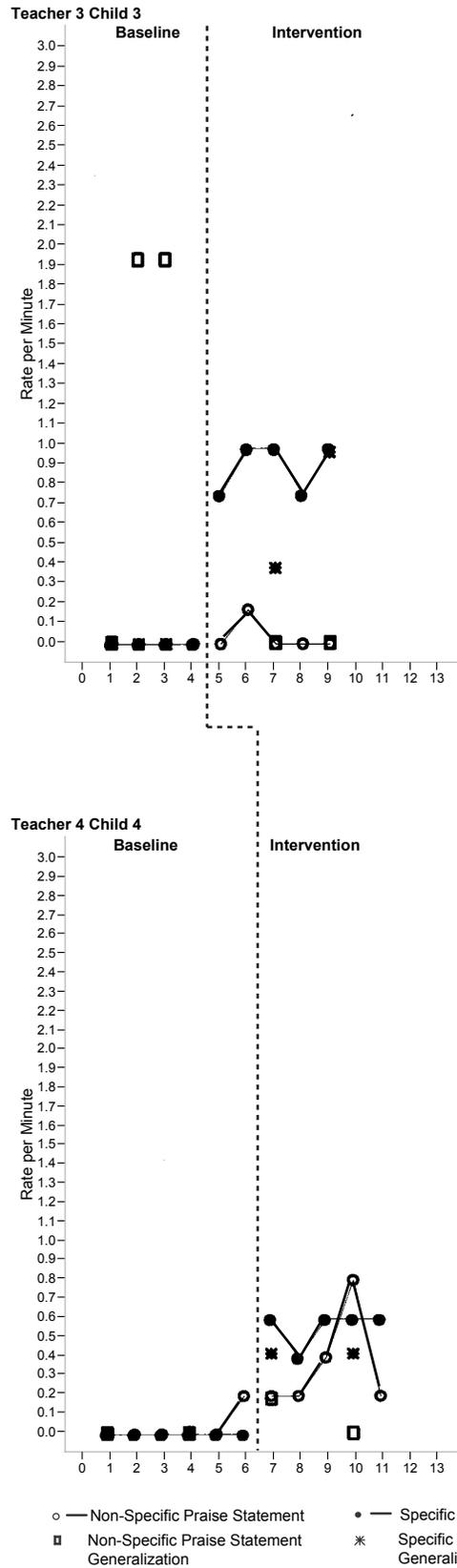


Figure 4-5. Teacher 3-Child 3/Teacher 4-Child 4: Specific/Non-Specific Praise Statements

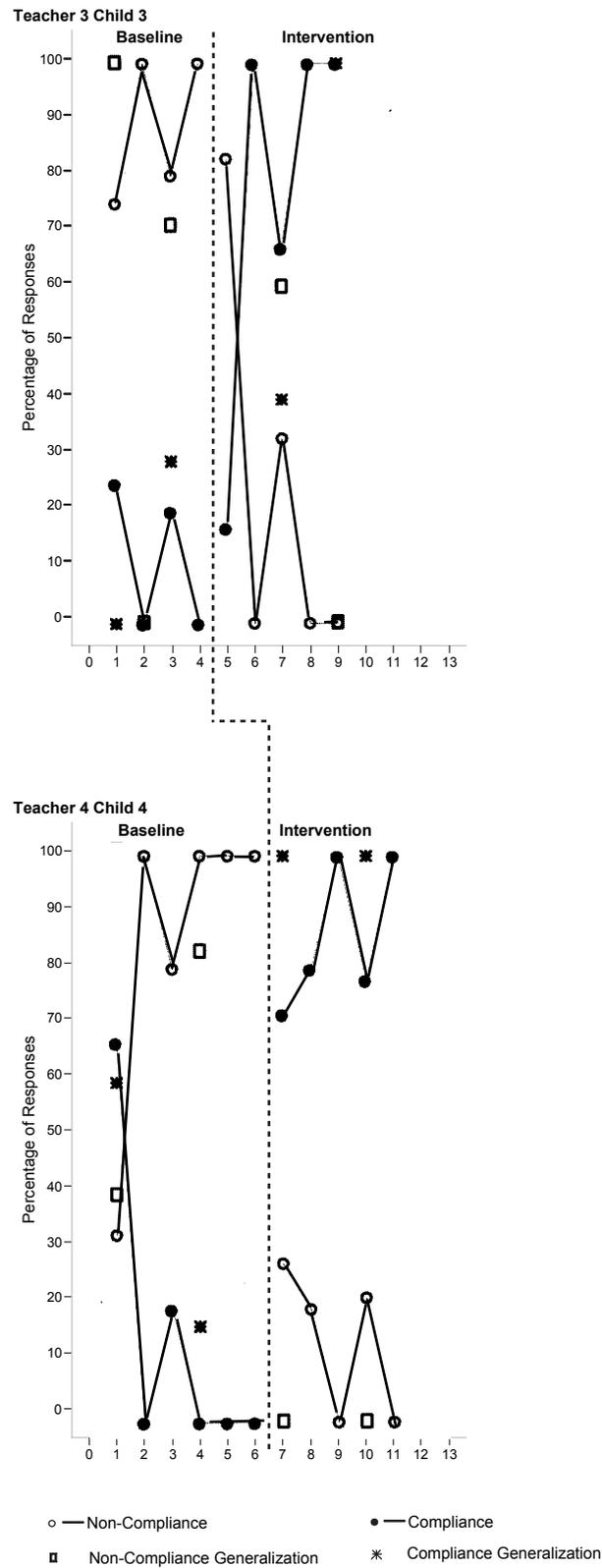


Figure 4-6. Teacher 3-Child 3/Teacher 4-Child 4: Non-Compliance and Compliance

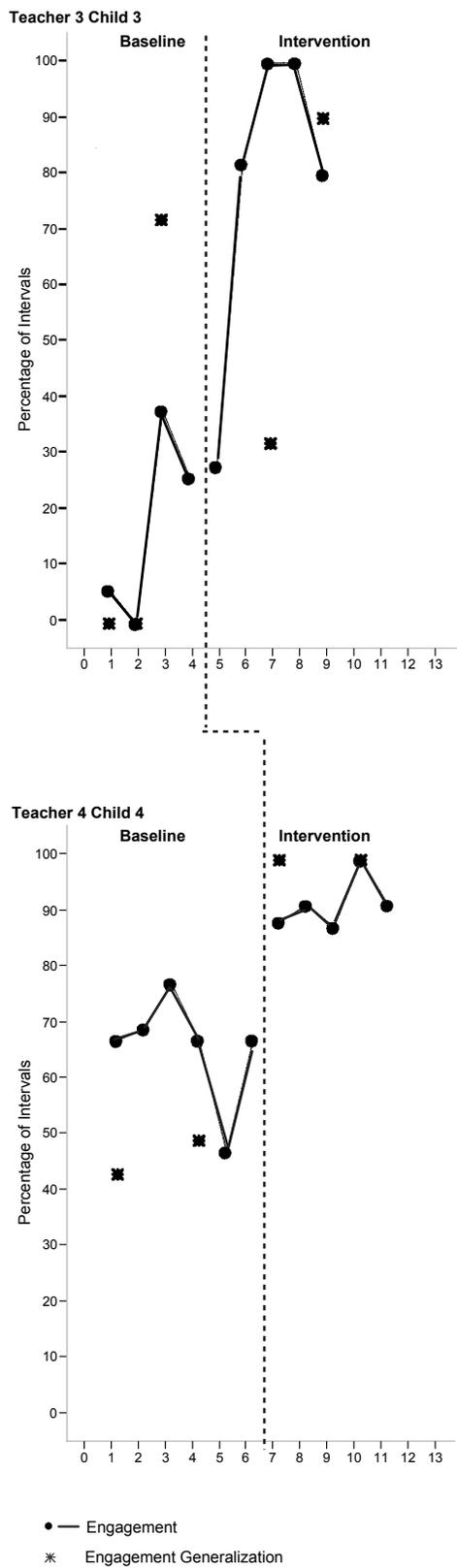


Figure 4-8. Teacher 3-Child 3/Teacher 4-Child 4: Engagement

level of disruption and aggression of 0.45/ minute (see Figure 4-7). Finally, Child 3's percentage of time engaged was exceptionally low, ranging from 0% to 38% with a mean percentage of time engaged of 17.5% (see Figure 4-8).

Intervention

Once the baseline was stabilized, Teacher 3 was trained using the teacher training manual described in Chapter 3 to use specific praise statements in her classroom. The training was held at UNF-CDRC and lasted 1 hour and 30 minutes. The teacher completed written check one with 100% accuracy and written check two with 90% accuracy. Following training, Teacher 3 was able to give examples of 5 specific praise statements that could be used during the targeted activity. Teacher 3 implemented the intervention the afternoon following training.

Intervention data for Teacher-Child Dyad 3 were collected over 5 sessions (see Figures 4-5 to 4-8). During intervention, Teacher 3's use of specific praise statements significantly increased, ranging from 0.78/minute to 1.02/ minute, with a mean level of 0.924 /minute (see Figure 4-5). The magnitude of change in Teacher 3's use of specific praise statements from baseline to intervention was from 0.0/minute (during baseline) to 0.780 /minute (during intervention) with an overall positive mean change of 0.780/minute. There was little difference (mean = 0.036/minute) between baseline and intervention in the rate of non-specific praise statements, which ranged from 0.0/minute to 0.18 /minute during intervention with a mean of 0.036/ minute. The magnitude of change from baseline to intervention in Teacher 3's use of non-specific praise statements was 0.0/minute (during baseline) to 0.036/ minute (during intervention).

Child 3's non-compliance following a teacher request during intervention was variable, ranging from 0% to 83%, with a mean of 23.2%. (see Figure 4-6). This

represents a significant reduction of 64.4% in the mean percentage of non-compliance from baseline to intervention. The magnitude of change in Child 3's non-compliance from baseline to intervention was 100% (during baseline) to 83% (during intervention). Child 3's compliance following a teacher request during intervention was also variable, ranging from 17% to 100%, with a mean of 76.8%. This is a notable increase of 65.5% in the mean percentage of compliance from baseline to intervention. The magnitude of change in Child 3's compliance to intervention was 0% (baseline) to 17% (intervention). From baseline to intervention, there was little difference in the rate of aggression or in the rate of disruption. The range of aggression and disruption during intervention was 0.0/minute to 0.42 /minute. The mean rate of aggression and disruption during intervention was 0.84 /minute (see Figure 4-7). This is a reduction of 0.366 /minute of aggression and disruption from baseline to intervention. The magnitude of change from baseline to intervention was 0. Finally, the percentage of time engaged during intervention was 95.5%. This represents a positive change in the mean of 53.5% baseline to intervention. The magnitude of difference in baseline to intervention was 26% (baseline) to 28% (intervention) (See Figure 4-8.) This represents very little change in the percentage of time engaged from baseline to intervention.

Teacher-Child Dyad 4

Baseline

During baseline, sessions, Teacher-Child Dyad 4 was videotaped from clean-up after free play to circle time. Data were collected from videotapes on Teacher 4's use of specific and non-specific praise statements, Child 4's percentage of compliant and non-compliant responses following a teacher request, and rate of aggression and disruption. Finally, the percentage of time Child 4 was engaged was measured. As seen in Figures 4-

5 to 4-8, baseline data were collected over 6 sessions until a stable trend occurred in Teacher 4's rate of specific and non-specific praise statements. During baseline, Teacher 4's both specific and non-specific praise statements occurred at a low rate with specific praise statements at 0.0/minute and non-specific praise statements ranging from 0.0/minute to 0.199/minute with a mean of 0.033/minute (see Figure 4-5). Child 4's non-compliance following a teacher request was variable, ranging from 33% to 100% with a mean level of non-compliance of 85.5% (see Figure 4-6). Child 4's compliance following a teacher request was variable, ranging from 0% to 67% with a mean level of compliance of 14.5% (see Figure 4-6). Child 4's disruption and aggression did not occur. Finally, Child 4's percentage of time engaged was variable, ranging from 48% to 78% with a mean percentage of engagement of 66.7% (see Figure 4-8).

Intervention

Once the baseline data stabilized, Teacher 4 was trained using the teacher training manual (Appendix B) to use specific praise statements in his classroom. The training was held at UNF-CDRC and lasted 1 hour. The teacher completed both written checks with 100% accuracy. Following training, Teacher 4 was able to give examples of 5 specific praise statements that could be used during the targeted activity. Teacher 4 implemented the intervention 1 day after training.

Intervention data for Teacher-Child Dyad 4 were collected over 5 sessions (see Figures 4-5 to 4-8). During intervention, Teacher 4's use of specific praise statements increased, ranging from 0.399/minute to 0.6 /minute, with a mean level of 0.559 /minute. The magnitude of change in Teacher 4's use of specific praise statements from baseline to intervention increased from 0.0/minute (during baseline) to 0.6/minute (during intervention) with an overall positive mean change of 0.6/minute. There was a change

(mean difference=0.321) between baseline and intervention in the rate of non-specific praise statements, which ranged from 0.19/minute to 0.799 /minute during intervention, with a mean of 0.354 /minute. There was no magnitude of change from baseline to intervention in Teacher 4's use of non-specific praise statements.

Child 4's non-compliance following a teacher request during intervention decreased considerably, ranging from 0% to 28% with a mean of 14% (see Figure 4-6). This represents a decrease of 71.5% in the mean percentage of non-compliance from baseline to intervention. The magnitude of change from baseline to intervention was from 100% (during baseline) to 28% (during intervention). Child 4's compliance following a teacher request during intervention increased from 72% to 100% with a mean of 86% (see Figure 4-6). The magnitude of change from baseline to intervention was from 0% (during baseline) to 72% (during intervention). Aggression and disruption remained at 0.0/minute during the intervention phase of the investigation. Finally, the percentage of time engaged during intervention was 92.25%, which represents a positive change in the mean 25.5% from baseline to intervention. The magnitude of change from baseline to intervention was 68% (baseline) to 89% (intervention) (see Figure 4-8). This represents a small, but notable change in the time engaged from baseline to intervention.

Summary of Baseline and Intervention Findings

Following training, the 4 teachers who served as participants in this study increased their rate of praise statements with no additional coaching sessions required. However, the teachers were provided with daily feedback via a handwritten note or email. For example, the researcher wrote Teacher 1: "You did a wonderful job giving N. specific praise statements today. Keep up the good work! I will see you on Thursday. E." As the teachers' specific praise statements increased, the target children's non-compliance

decreased, while compliance and engagement increased. Aggression and disruption also decreased as teachers' specific praise statements increased.

Teacher 1 significantly increased her specific praise statements with a positive mean change of 1.70/minute from baseline to intervention. Her non-specific praise statements decreased slightly with a mean change of 0.133. Child 1's appropriate behavior (compliance and engagement) increased following the introduction of specific praise statements. His compliance response following a teacher request increased considerably with a positive mean change of 52% from baseline to intervention. His engaged time increased moderately from baseline to intervention with a mean change of 32%. Child 1's problem behavior (non-compliance, aggression, and disruption) decreased following the introduction of specific praise statements. His non-compliance following a teacher request decreased with a mean change of 52.72% from baseline to intervention. Although the rate of aggression and disruption was relatively low for Child 1 there was a mean decrease from baseline to intervention of 0.078/minute.

Teacher 2 dramatically increased her specific praise statements with a positive mean change of 1.455/minute from baseline to intervention. Her non-specific praise statements increased slightly with a mean change of 0.345/minute. Child 2's appropriate behavior (compliance and engagement) increased following the introduction of specific praise statements. His compliance response following a teacher request increased moderately with a positive mean change of 39.83 % from baseline to intervention. His engaged time increased moderately from baseline to intervention with a mean change of 24.4 %. Child 1's problem behavior (non-compliance, aggression, and disruption) decreased following the introduction of specific praise statements. His non-compliance following a teacher request decreased with a mean change of 39.6 % from baseline to

intervention. Although the rate of aggression and disruption was relatively low for Child 2, there was a decrease in the mean change from baseline to intervention of 0.178/minute.

Teacher 3 noticeably increased her specific praise statements with a positive mean change of 0.924/minute from baseline to intervention. Her non-specific praise did not change from baseline to intervention. Child 3's appropriate behavior (compliance and engagement) increased following the introduction of specific praise statements. His compliance response following a teacher request increased significantly with a positive mean change of 65.5 % from baseline to intervention. His engaged time also increased significantly from baseline to intervention with a mean change of 53.3 %. Child 3's problem behavior (non-compliance, aggression, and disruption) decreased following the introduction of specific praise statements. His non-compliance following a teacher request decreased considerably with a mean change of 64.4 % from baseline to intervention. Although the rate of aggression and disruption was moderately low for Child 3, there was a decrease in the mean change from baseline to intervention of 0.366/minute.

Teacher 4 moderately increased his specific praise statements from baseline to intervention with a positive mean change of 0.6/minute. His non-specific praise changed slightly from baseline to intervention with a positive mean change of 0.321/minute. Child 4's appropriate behavior (compliance and engagement) increased following the introduction of specific praise statements. His compliance response following a teacher request increased significantly with a positive mean change of 71.5 % from baseline to intervention. His engaged time increased moderately from baseline to intervention with a mean change of 25.5 %. Child 4's aggression and disruption remained at 0.0/minute following the introduction of specific praise statements. His non-compliance following a

teacher request decreased considerably with a mean change of 71.5 % from baseline to intervention.

Generalization

Teacher-Child Dyad 1

Transition from outside play to inside was selected as the generalization setting for Teacher-Child Dyad 1. Generalization data were collected twice during baseline and twice during intervention. Data were collected from videotapes on Teacher 1's use of specific and non-specific praise statements and Child 1's compliance, non-compliance, disruption, aggression, and engagement in the activity. During baseline, Teacher 1's use of specific praise statements was 0.0/minute. Teacher 1's mean use of non-specific praise statements were 0.09/minute (0.0/minute and 0.180/minute). Child 1's non-compliance following a teacher request was 67% for both baseline generalization sessions. Child 1's compliance following a teacher directive was 33% for both generalization sessions. Child 1's disruption and aggression occurred at a rate of 0.180/minute and 0.420/minute ($M=0.255$ /minute). Child 1's engagement in the activity was 40% and 86% of the time with a mean level of engagement of 63%.

Similar to findings during the intervention sessions, Teacher 1's use of specific praise statements increased in the generalization setting following intervention. Teacher 1's use of specific praise statements during generalization was 2.4/minute and 2.82/minute ($M=2.61$ /minute). Her use of non-specific praise statements during generalization was 0.180/minute and 0.420/minute ($M=0.03$ /minute). The rate of child non-compliance in the generalization phase during intervention was 13% and 29% with a mean level of non-compliance of 21%. This represents an increase of 46% during generalization from baseline to intervention. The rate of aggression and disruption was

0.0/minute and 0.180/minute ($M=0.045$). This is a decrease of 0.21/minute during generalization from baseline to intervention. The percentage of time of child engagement in the generalization setting during intervention was 50% and 86% with a mean level of 68% of time engaged. This is an increase of 5% from baseline to intervention.

Teacher-Child Dyad 2

Transition from outside to play inside was selected as the generalization setting for Teacher-Child Dyad 2. Generalization data were collected three times during baseline and once during intervention. Data were collected from videotapes on Teacher 2's use of specific and non-specific praise statements and Child 2's compliance, non-compliance, disruption, aggression, and engagement in the activity. During baseline, Teacher 2's use of specific praise statements ranged from 0.0/minute to 0.18/minute with a mean of 0.12/minute. Teacher 2's mean use of non-specific praise statements was 0.012/minute (range 0.0/minute - 0.180/minute). Target Child 2's compliance following a teacher request ranged from 25% to 65% with a mean of 44%. Child 2's compliance following a teacher request ranged from 33% to 75% with a mean of 56%. Child 2's disruption and aggression ranged from 0.0/minute to 0.18/minute with a mean of .06/minute. Child 2's engagement in the activity during generalization ranged from 74% to 96% with a mean of 88.6%.

Similar to findings during the intervention sessions, Teacher 2's use of specific praise statements increased in the generalization setting following intervention. Teacher 2's use of specific praise statements during the generalization phase was 1.399/minute. This represents an increase of 1.387/minute during generalization from baseline to intervention. Her use of non-specific praise statements during generalization was 0.0/minute. This represents a decrease of 0.012/minute during this phase. The rate of

child non-compliance in the generalization phase during intervention was 14%. The rate of child compliance during this phase was 86%. When compared to the mean, this represents an increase of 30% from baseline to intervention during the generalization phase. The rate of aggression and disruption was 0.018/minute. When compared to the mean, this is an increase of 0.12/minute from baseline to intervention during the generalization phase. The percentage of time of child engagement in the generalization setting during intervention was 98%. This is an increase of 9.4% compared to the mean of baseline engagement from baseline to intervention.

Teacher-Child Dyad 3

Transition from a teacher-directed literacy activity to clean-up was selected as the generalization setting for Teacher-Child Dyad 3. Generalization data were collected twice baseline and twice during intervention. Data were collected from videotapes on the teacher's use of specific and non-specific praise statements and Child 3's compliance, non-compliance, disruption, aggression, and engagement in the activity. During baseline, Teacher 3's use of specific praise statements was 0.0/minute. Teacher 3's mean use of non-specific praise statements was 0.09/minute (0.0/minute and 0.180/minute). Child 3's non-compliance following a teacher request was 100% for both baseline generalization sessions. Child 3's compliance following a teacher directive was 0% for both baseline generalization sessions. Child 3's disruption and aggression occurred at a rate of 0.0/minute for both generalization sessions. Child 3's engagement in the activity was 0% for both generalization sessions.

Similar to findings during the intervention sessions, Teacher 3's use of specific praise statements increased in the generalization setting following intervention. Teacher 3's use of specific praise statements during generalization was 0.42/minute for each

observation with a mean increase of 0.42/minute from baseline to intervention during the generalization phase. Her use of non-specific praise during the generalization remained at 0.0/minute for both sessions. The rate of child non-compliance in the generalization phase during intervention was 40% and 0% with a mean level of non-compliance of 20%. The rate of child compliance in the generalization phase was 60% and 100% with a mean level of compliance of 80%. This represents an increase of 80% during generalization from baseline to intervention. The rate of aggression and disruption was 1.2/minute and 0.0/minute ($M=0.06$ /minute). This represents an increase of 0.06/minute during generalization from baseline to intervention. The percentage of time of child engagement in the generalization setting during intervention was 32% and 88% with a mean level of 60% of time engaged. This is an increase of 60% from baseline to intervention.

Teacher-Child Dyad 4

Transition from snack to quiet reading was selected as the generalization setting for the Teacher-Child Dyad 4. Generalization data were collected twice during baseline and twice during intervention. Data were collected from videotapes on Teacher 4's use of specific and non-specific praise statements and Child 4's compliance, non-compliance, disruption, aggression and engagement in the activity. During baseline, Teacher 4's use of specific praise statements and non-specific praise statements was 0. Child 4's non-compliance following a teacher's directive was 40% and 83% ($M=61.5\%$). Child 4's compliance following a teacher's directive was 60% and 17% ($M=38.5\%$). Child 4's aggression and disruption occurred at a rate of 0.06/minute and 0.42/minute ($M=0.24$ /minute). Child 4's engagement in the activity was 44% and 50% of the time with a mean level of engagement of 47%.

Similar to findings during the intervention sessions, Teacher 4's use of specific praise statements increased in the generalization setting following intervention. Teacher 4's use of specific praise statements during both sessions of generalization was 0.42/minute. This represents an increase in the mean from baseline to intervention of 0.42/minute. His use of non-specific praise statements was 0.0/minute and 0.18/minute ($M=0.09$ /minute). The rate of child non-compliance in the generalization phase during intervention was 0% for both sessions. The rate of child compliance in the generalization phase during intervention was 100% for both sessions. This represents an increase of 61.5% during generalization from baseline to intervention. The rate of aggression and disruption was 0.0/minute for both sessions during generalization. This is a decrease of 0.24/minute during generalization from baseline to intervention. The percentage of time of child engagement in the generalization setting during intervention was 100% for both sessions. This is an increase of 53% of time engaged from baseline to intervention.

Summary

Data were taken during the baseline and intervention during a generalization setting that included a second transition activity to determine if the teachers' use of specific praise statements generalized to a second setting and if target children's behaviors changed in the generalization setting. As with the intervention setting, all teachers demonstrated an increase in specific praise statements following training. However, Teacher 1's ($M=2.61$) and Teacher 2's ($M=1.387$) rates of specific praise increased at a much higher rate than Teacher 3's ($M=0.42$ /minute) and Teacher 4's ($M=0.42$) rates of specific praise. Non-specific praise was variable across the four teachers. Teacher 1 decreased her use of non-specific praise following training ($M=0.012$ /minute). Teacher 2 slightly increased her non-specific praise statements ($M=0.03$ /minute) following training.

Teacher 3's non-specific praise statements remained at 0 from baseline to intervention. Teacher 4's rate of non-specific praise while relatively low demonstrated the largest increase ($M=0.09/\text{minute}$).

Similar to the intervention setting, all the target children increased their appropriate behavior (compliance and engagement) in the generalization setting from baseline to intervention. Following a teacher request, Child 1 ($M=46\%$) increased his compliance. His engaged time increased slightly ($M=5\%$) from baseline to intervention. Child 2's rate of compliance following a teacher request increased in the generalization setting ($M=30\%$). His engaged time increased slightly ($M=9.4\%$). Child 3's rate of compliance increased significantly from baseline to intervention ($M=80\%$), and his engaged time also demonstrated an increase ($M=60\%$). Child 4's rate of compliance increased significantly from baseline to intervention during the generalization setting ($M=61.5\%$), and his engaged time also increased ($M=47\%$). The 4 target children decreased their non-compliant behavior in the generalization setting, but 2 children increased their rates of aggression and disruption from baseline to intervention. Following a teacher request, Child 1 decreased non-compliance 46% from baseline to intervention during generalization. Aggression and disruption also decreased 0.2/minute in the generalization setting from baseline to intervention. Child 2 decreased non-compliance 30% from baseline to intervention in the generalization setting. Aggression and disruption, while exhibited at low levels, increased slightly 0.12/minute from baseline to intervention. Child 3 decreased non-compliance 80% from baseline to intervention in the generalization setting. Aggression and disruption increased during this phase of generalization ($M=0.06/\text{minute}$). This increase may be attributed to 1 day when the transition routine was not followed due to inclement weather. Child 4 decreased non-

compliance 61.5% from baseline to intervention during the generalization setting. Child 4 also decreased aggression and disruption 0.24/minute from baseline to intervention.

Interobserver Agreement

Interobserver agreement was calculated on each dyad's sessions across baseline, intervention, and generalization phases. The researcher and a secondary data collector independently viewed the videotapes to determine agreement. For Teacher-Child Dyad 1, interobserver agreement was calculated on 47% of the sessions and ranged from 84.6% to 100%. Mean agreement was 95.2%. For Teacher-Child Dyad 2, interobserver agreement was calculated on 33% of the sessions and ranged from 86.8% to 100%. Mean agreement was 94%. For Teacher-Child Dyad 3, interobserver agreement was calculated on 38% of the sessions and ranged from 89.9 % to 97.8% with a mean agreement of 93.5%. Finally, for Teacher-Child Dyad 4, interobserver agreement was calculated on 33% of the sessions. Interobserver agreement ranged from 83.9% to 98% with agreement of 91.8%.

Treatment Integrity

The investigator used the teacher training procedures previously discussed in Chapter 3 to conduct all training sessions with the teachers (see Appendix B). The teacher and the investigator completed a treatment fidelity checklist (see Appendix D) at the end of each training session to ensure that all training steps were completed. The training steps were completed 100% of the time for all 4 teachers.

Social Validation

Following the completion of the investigation, participating teachers completed a social validity questionnaire to obtain information regarding their satisfaction with the intervention (see Appendix D). Specifically, the teachers completed 4 questions using a

5-point Likert scale. The questions addressed the usefulness and the effectiveness of the intervention.

The results indicated that Teacher 1 and Teacher 2 found the training to be somewhat time-consuming while Teacher 3 and Teacher 4 indicated that the training was not at all time-consuming; the range of responses was 1 to 3 with a mean of 1.75. Three teachers indicated that the intervention was very helpful to the classroom while Teacher 2 indicated that it was helpful; the range of responses was 4 to 5 with a mean of 4.75. The teachers all noted that the intervention had a positive effect on increasing the target child's appropriate behavior. All 4 teachers responded with a 4 rating. Finally, 3 teachers indicated that they were very likely to use the intervention in the future while Teacher 2 indicated that she was likely to use it in the future; the range of responses was 4 to 5 with a mean of 4.75.

Summary

The purpose of this investigation was to determine if 4 teachers holding at least a CDA certification implemented the use of specific praise statements following training. In addition, this investigation examined the potential effects of a change in teachers' use of specific praise statements on the appropriate and problem behavior demonstrated by target children. Finally, an examination of the generalization of praise statements to a second untrained setting was investigated. The data indicate that the teachers implemented the use of specific praise statements following training. The data also indicate that, following an increase in specific praise statements, the target children's engagement in the activity increased and non-compliance decreased. Furthermore, although aggression and disruption occurred at very low rates in both baseline and intervention conditions across the participants, there was also a slight decrease in these

behaviors following the teacher's use of a specific praise statement. A noteworthy finding was that the use of specific praise statements generalized to a second untrained setting with similar results.

The results of the social validation confirmed these findings. The teachers agreed that the intervention was useful and time-efficient. They also agreed that: (a) they were likely to use the intervention in the future and (b) target children's behavior improved following the intervention.

CHAPTER 5 DISCUSSION

This study was designed to investigate teachers' ability to implement a strategy of specific praise statements following training. The study further investigated the effectiveness of teachers' use of specific praise statements on the appropriate and problem behavior of young children enrolled in child care centers. Finally, the study examined whether, following training, teachers would generalize the specific praise statements to a second untrained setting.

The following questions were addressed:

1. Following training, will teachers in a child care center implement specific praise statements during a teacher-identified activity?
2. What is the effect of teachers' use of specific praise statements on the appropriate and problem behavior of young children enrolled in a child care setting?
3. If specific praise statements increase after training, will teachers' use of specific praise statements generalize to an untrained setting?

The participants included 4 teacher-child dyads. The teachers held at least a CDA degree. Two teachers were employed at the UF-ERCCD, and 2 were employed at the UNF-CDRC. The children, who ranged in age from 2 years 9 months to 4 years 4 months, displayed problem behaviors that interfered with their ability to participate in daily activities. Target children were judged to have problem behavior in the clinical range as indicated by a clinically significant score on the CBCL-TRF (Achenbach, 1997). However, a developmental screening [BDI-S (Newborg et al., 1988)] did not indicate

developmental delays ruling out a need for further assessment in the domains of cognition, speech-language, or motor skills.

A single-subject, multiple-baseline design across subjects was used to assess teacher use of specific praise statements, the effectiveness of the specific praise statements on appropriate and problem behavior of children, and teachers' ability to generalize specific praise statements. The study began with data collection on Teacher-Child Dyad 1 and Teacher-Child Dyad 2. The study was replicated 6 weeks later with Teacher-Child Dyad 3 and Teacher-Child Dyad 4.

There were three phases of the investigation: baseline, intervention, and generalization. Baseline data were collected on the teachers' use of specific and non-specific praise statements and the children's compliance and non-compliance following a teacher request. In addition, the children's rates of aggression and disruption were measured. Finally, data were collected on the percentage of time the children were engaged in the activity. During the baseline and intervention phases of the study, generalization data on the teachers' use of specific and non-specific praise statements and children's compliance and non-compliance following a teacher request were collected in the untrained setting. In addition, data were collected on the target children's rates of aggression and disruption as well as their time engaged in the generalization activity.

Summary of Research Findings

The investigation obtained positive results regarding: (a) teachers' ability to use specific praise statements following training and (b) the effectiveness of specific praise statements in influencing appropriate and problem behavior of young children enrolled in a child care setting. The investigation has several strengths that may impact future investigations. First, there was replication across settings, teachers, and children.

Although the settings were both university-affiliated child care centers, UF-ERCCD is a larger center that serves more children of a wider age range, is more ethnically diverse, and has a larger majority of children whose parents are students. The teachers had comparable levels of education, but they were a diverse group in gender, race, and age. For example, of the 4 teachers, 1 was male, 2 were African-American, and 2 were Caucasian. The study was also replicated across children of varying ages. The first 2 children were 2 years 11 months and 3 years 8 months. The second 2 children were 3 years 10 months and 4 years 3 months. Second, there was good internal validity on 2 of the 4 teacher-child dyads that ruled out alternative hypotheses. Third, the intervention was generalized across settings and participants. The teachers in both centers were able to incorporate the intervention into the second setting, and the children reacted positively in the second setting. Fourth, there was good social validity. Each teacher responded that the intervention was helpful in the short-term and useful for future children.

Limitations

Factors that may have impacted the findings of this study should be taken into consideration when interpreting the results. The children all had problem behaviors that interfered with their ability to participate in classroom activities, but were typically developing across other developmental domains. It is unknown if similar results could be replicated for children with problem behaviors that also demonstrated developmental delays in cognition, speech-language, or motor domains. The teacher participants had many years of experience and high levels of education. It is not known if similar results could be replicated for teachers with less experience and education. Furthermore, the investigation took place within NAEYC-accredited, university-based child care centers. It is not known if similar results would be obtained in less-than-optimal child care settings.

Therefore, the generality of the findings may be limited to participants with other characteristics and across settings.

The researcher did not return to the classrooms to investigate any maintenance effects of the training. It is not know if the classroom teacher continued to use specific praise statements once the investigation ended. Furthermore, it is not know if the child continued to sustain improvements after the conclusion of the investigation.

This investigation was conducted on 4 teacher-child dyads. Clearly, replication is needed in order to extend the findings. Additionally, the number of specific praise statements by the teachers was variable. Although the researcher taught the teachers to embed specific praise statements within the activity, a target number of specific praise statements was not provided. The type and rate of statements may have impacted the children's behavioral responses; too many statements may have lessened the impact of the statements while too few may not have been enough to change the child's behavior. Another limitation may be reactivity to the presence of the principal investigator and the video camera in the classroom during all phases of the investigation. The principal investigator's presence may have introduced a high level of reactivity as the teachers and, to a lesser extent, the children knew their behavior was being monitored (Kazdin, 1982). Although the principal investigator and the video camera were present during baseline, it was not until after intervention training that they were aware of the behavioral expectations. Potentially, the teachers may not have given specific praise statements if the principal investigator had not been present.

A final limitation was that the interventions for Teacher-Child Dyad 1 and Teacher-Child Dyad 2 were introduced when compliance was exhibiting an upward trend. Therefore, determining if the intervention impacted the children's behavior in these dyads

is unclear. However, the mean change as well as the magnitude of change from baseline to intervention was substantial, suggesting that the intervention did impact the children's behavior.

Although there are limitations, the findings indicate that, following intervention changes in teacher behaviors did occur and positive changes in the children's behavior occurred as well.

Discussion of Findings

These current findings are supported by previous research on the use of specific praise statements as time-efficient and effective intervention (Dobrinski, 2004). Furthermore, previous research has suggested that allowing the teachers to choose the child and the behavior to praise has been shown to increase the likelihood that the teachers will apply the strategy to a target child (Wills, 2002). In addition, Freeland (2003) used modeling, practice and feedback to train teachers to use a praise intervention with children exhibiting problem behavior. The current study demonstrated similar findings. Therefore, including these components in a teacher training program to reduce problem behaviors may be important for successful implementation of the training. For example, in the current study, the teachers were provided with information about children's behavior as well as their own responses to the behavior. With the researcher, the teachers viewed videotapes of themselves interacting with the target child; and opportunities to use specific praise statements were discussed. The teachers were given verbal and written checks of understanding and provided themselves with reminder prompts of specific praise statements. Throughout the intervention phase, the teachers were provided with daily feedback on their use of specific praise statements during the identified activity. Finally, the training was provided on an individual basis. Following

training, the findings suggested that the teachers were able to implement specific praise statements with the children.

The teachers' use of specific praise statements was variable. Teacher 1 provided the highest rate of specific praise, and Teacher 2 and Teacher 3 provided a similar but slightly lower rate of specific praise than Teacher 1. Teacher 4 provided the lowest rate of praise. Although Teacher 4's specific praise occurred at a lower rate in comparison to the other teachers, it did increase following training, but remained at a lower, but stable rate with daily feedback. One interesting finding was that Child 4 had the lowest rate of problem behavior. This finding may have impacted the teacher's performance on specific praise statements.

Following the intervention phase of the training, Teacher 2 and Teacher 4 increased their use of non-specific praise statements as well. These results are similar to a previous study where the teacher increased specific and non-specific praise (Sutherland et al. 2000). Although an increase in non-specific praise statements was not a part of the intervention training, both teachers began using non-specific praise at a higher rate following training. It is unclear why this change occurred, but this may have had an impact on the change in behavior of Child 2 and Child 4. It is possible that the changes in the children's behavior may be attributed to an overall increase in positive feedback rather than to an increase in specific praise statements.

The current investigation also evaluated the generalization of responses across phases. Generalization probes were taken at least twice during the baseline phase and every third session during the intervention phase. The probes were in place to determine if teacher training in the use of specific praise statements would be implemented by the teacher in a second untrained setting. The teachers did increase their use of specific

praise statements in the second setting. However, Teacher 3 used a lower rate of specific praise statements during the generalization setting than in the treatment setting. This may have been due to the fact that the second transition followed two teacher-directed activities (large group circle time, small group literacy activity) and was particularly problematic for Child 3. Teacher 3 may have had fewer opportunities to provide specific praise statements. Overall, the findings indicated that all 4 teachers were able to implement the intervention in a second setting. Furthermore, the children responded positively to the addition of specific praise statements in the second setting.

Future Research Directions

The current study investigated the use of specific praise statement on the behavior of children. However, due to a slight increase in non-specific praise statements by 2 teachers, the results do not firmly establish whether specific praise statements alone were the cause of the behavioral change in 2 of the children. Previous praise research has primarily investigated the teachers' use of either specific praise (Drobrinski, 2004; Smith, 2004; Sutherland & Wehby, 2001; Sutherland et. al., 2000) or non-specific praise (Freeland, 2003; Marten et al., 1997; Wills, 2002) to increase appropriate behavior in children. However, Sutherland et al. (2000) investigated the use of specific praise and reported results similar to the present study: the teacher also increased non-specific praise. Future research should be conducted to learn if specific praise is a more powerful intervention.

The study determined that child care teachers with at least a CDA credential can be successfully trained to use specific praise statements with a target child. Previous research studies with teachers do not provide the teachers' levels of education within the early childhood setting (Hiralall & Martens, 1998; Smith, 2004; Webster-Stratton et al.,

2001). Given the limited number of studies conducted in child care centers (Gross et al., 2003), future research should examine the effectiveness of the training with teachers in child care centers who do not have a CDA credential.

Another area of future research may be the effect of the intervention of children with developmental delays and problem behavior. The study examined in child care centers the effectiveness of an intervention strategy on children with problem behavior without suspected development delays. Previous research has examined the effective parental use of specific praise with children with developmental disabilities (Mandal et al., 2000; Marchant et al., 2004; Smith & Lerman, 1999) as well as teacher use of specific praise in self-contained classrooms for children with disabilities (Martens et al., 1997; Sutherland & Wehby, 2001; Sutherland et al., 2000). However, research has not been conducted on young children with development delays who demonstrate problem behaviors and are enrolled in child care centers. The current research should be extended to determine the effects of specific praise statements on young children with developmental delays as well as problem behaviors who are enrolled in child care centers.

The use of specific praise statements generalized to the untrained setting; however, the researcher did not examine whether or not the specific praise statements generalized to other children with problem behavior enrolled in the class or all the children in the class. Although Smith (2004) examined the effect of specific praise given to the group on a child's problem behavior, the effect on others in the class was not examined. Future research should focus on the generalization of the intervention to other children in the classroom who are exhibiting problem behavior.

Two possible research avenues for future researchers to investigate a maintenance effect include: (1) to examine trained teachers' use of specific praise statements with target children and (2) to examine trained teachers' use of the intervention with other children the following year.

The intervention training was effective with all four teachers; however, the researcher was an experienced teacher trainer. Future research should focus on the intervention training being provided by a lead teacher within the child care setting.

Finally, returning to the conceptual framework that supports the current study, the positive teacher-child interaction taught to the teacher may have contributed to an increase in the child's appropriate behavior. As with previous research, the teachers in the current investigation were able to change their behavior patterns and engage in positive interactions with children exhibiting behavior problems (Howes & Richie, 2002; Patterson et al., 1992; Reid et al., 2002). Although the current research did not investigate a change in the teachers' relationships with the children or their attitudes toward the children, this is an area of study that could be added to future praise research.

Summary

Previous research has examined the use of specific praise statements to decrease problem behavior in young children. The present study extended the outcomes of this research by isolating specific praise statements as the sole factor of intervention in a child care setting. As with past studies, it was shown that specific praise statements did have a positive impact on increasing appropriate and decreasing problem behavior in young children. Four target children demonstrated an increase in compliant behavior following a teacher request and increased engagement after an intervention was implemented. Furthermore, as with previous studies, following a relatively short teacher training

session, teachers were able to implement the intervention successfully. Although positive outcomes were found with the teachers, there were minor differences in their uses of the specific praise statements. The discrepancies may be explained by individual teaching styles or years of experience. The less-experienced teachers were more consistent than the teachers with more experience. The current study adds to both research and practice in specific praise statements by demonstrating that these statements are effective in increasing appropriate and decreasing problem behavior in young children enrolled in child care centers and by emphasizing the importance of providing teachers with effective intervention strategies.

APPENDIX A
CONSENT FORMS AND IRB APPROVAL

UNIVERSITY OF FLORIDA INSTITUTIONAL REVIEW BOARD

1. **TITLE OF PROTOCOL:** Examining the Effects of an Increase in Teachers' Use of Specific Praise Statements on the Problem Behavior of At-Risk Toddlers Enrolled in Center Based Child Care.

2. **PRINCIPAL INVESTIGATOR(s):**

Elizabeth Kirby Fullerton, Doctoral Student, Department of Special Education, P.O. Box 117050, G-315 Norman Hall, Gainesville, Florida 32611-7050, 392-0701

3. **SUPERVISOR:** Maureen Conroy, Ph.D., Department of Special Education, P.O. Box 117050, G-315 Norman Hall, Gainesville, Florida 32611-7050, 392-0701

4. **DATES OF PROPOSED PROTOCOL:** From May 21, 2004 to May 20, 2005

5. **SOURCE OF FUNDING FOR THE PROTOCOL:** Unfunded

6. **SCIENTIFIC PURPOSE OF THE INVESTIGATION:** The purpose of this investigation is: (1) to determine if early childhood teachers in center based child care will use specific praise statements in their classrooms after training; (2) to examine the effects of teachers' use of specific praise statements on problem behavior demonstrated by the children in their classrooms.

7. **DESCRIBE THE RESEARCH METHODOLOGY IN *NON-TECHNICAL* LANGUAGE.** Each teacher will nominate a child in his/her classroom who is exhibiting problem behaviors that interfere with his/her ability to participate in learning. The children will be included if they meet the following criteria:

1. The child demonstrates problem behavior that interferes with the child's ability to function in the classroom.
2. The child has a good record of attendance at the child care center as defined by 80% attendance or an average of 4 out of 5 days per week.
3. The child's guardian provides informed consent.

The children will be excluded from the investigation if they meet the following criteria.

1. The child is younger than 24 months or older than 36 months at the start of the investigation.

2. The child is diagnosed with a developmental delay.

In order to rule out a developmental delay, the children will be evaluated by the principal investigator using the Battelle Developmental Inventory (Newborg et al., 1988).

The investigation will occur in phases. The first phase will be individual teacher training sessions. This phase will include the definition of the problem behavior of each target child. The importance of using specific praise statements with young children who are exhibiting problem behavior will be provided. The meaning of specific praise statements will be provided. Examples of specific praise statements and non-specific praise statements will be explained and modeled by the researcher. The researcher and the teacher will role-play the use of specific praise statements. Two verbal checks of the teacher's understanding of specific praise statements will be conducted. The second phase will include implementation of the intervention in the classroom. The teacher will use specific praise statements for a fifteen minute period during morning activities typically available in a child care center. Additionally, data will be collected during this phase on the teacher's use of specific praise statements as well as the target child's problem behavior as well as engagement in the activity. Data will be collected using partial interval recording procedures. The observation will be divided into 10-second intervals. The third phase will include generalization probes. In this phase the teacher and the child will be observed and data recorded on the same behaviors as above during a fifteen minute afternoon activity typically available in a day care center. The fourth phase will be the maintenance phase. Six to eight weeks following the conclusion of the investigation the researcher will return to observe and collect data to discover if the teachers were able to maintain the intervention. A single subject multiple baseline across participants will be used to conduct research. The first three phases: training, intervention and generalization will take approximately 8-12 weeks. The final phase, maintenance, will take approximately two weeks. Once all the phases have been completed, findings will be used for the principal investigator's doctoral dissertation.

8. POTENTIAL BENEFITS AND ANTICIPATED RISK. This investigation poses no risks to the participants. The potential benefits include training early childhood teachers in an effective intervention strategy to decrease problem behavior in their classrooms. An additional benefit is a decrease in the problem behavior of young children giving them more opportunities to participate in the learning environment.

9. DESCRIBE HOW PARTICIPANT(S) WILL BE RECRUITED, THE NUMBER AND AGE OF THE PARTICIPANTS, AND PROPOSED COMPENSATION (if any): The principal investigator will approach and provide a verbal explanation of the investigation to 5 early childhood teachers working in center based child care who will be nominated for the investigation by the administrative staff at center. The principal investigator will approach and provide a verbal explanation of the investigation to the guardians of 5 children, ages 24-36 months, who have been nominated by their teachers.

Each teacher will be given a \$50.00 gift certificate upon completion of the investigation.

10. DESCRIBE THE INFORMED CONSENT PROCESS. INCLUDE A COPY OF THE INFORMED CONSENT DOCUMENT (if applicable). See Attached.

Please use attachments sparingly.

Principal Investigator's Signature

Supervisor's Signature

I approve this protocol for submission to the UFIRB:

Dept. Chair/Center Director Date

University of Florida
Department of Special Education
P.O. Box 117050/G-315 Norman Hall
Gainesville, Florida 32611-7050
Teacher Consent

Protocol Title: Increasing the Teachers' Use of Specific Praise Statements to Decrease the Problem Behavior in At-Risk Toddlers Enrolled in Center Based Child Care.

Purpose of the research investigation: The purpose of the study is to see if trained early childhood teachers will use specific praise statement with children in their classrooms and if the use of specific praise statements will decrease problem behavior among the children in their care.

Time Required: Two hours of training, up to 2 hours of additional training if needed, daily 15-minute observation for up to 1 year.

Risk and Benefits: This investigation poses no risk. The potential benefits include: (1) learning a new intervention strategy to improve the problem behavior of the children in your care and (2) increasing knowledge and skills.

Teacher's Role: You will nominate a child in your classroom who is exhibiting problem behavior that interferes with the child's participation in classroom activities. You will attend 1- to 2-hour training session and an additional 2-hour training session if needed. Upon completing the training you will be asked to use the strategy during a specific time during the day. The principal investigator or a research assistant will observe or videotape a 15-minute session for up to 3 months.

Compensation: You will receive a \$50.00 gift certificate upon completion of the investigation.

Confidentiality: Results of the investigation may be shared with colleagues in the field of education; for purposes of confidentiality, your name and identity will be kept confidential to the extent provided by law. Videotapes may be coded during the investigation and may be viewed by the primary investigator (Elizabeth Kirby Fullerton), a graduate assistant, and members of the primary investigator's doctoral committee (Dr. Maureen Conroy, Dr. Vivian Correa, Dr. Terry Scott, and Dr. Tina Smith).

Voluntary participation: Your participation is completely voluntary. There is no penalty for not participating.

Right to withdraw from the investigation: You have the right to withdraw from the investigation at any time without consequence.

Contact persons:

Elizabeth Kirby Fullerton, Doctoral Student, Department of Special Education, P.O. Box 117050, G-315 Norman Hall, Gainesville, Florida 32611-7050, 392-0701

Maureen Conroy, Ph.D., Department of Special Education, P.O. Box 117050, G-315 Norman Hall, Gainesville, Florida 32611-7050, 392-0701

Contact regarding your rights as a research participant:

UFIRB office, Box 112250 University of Florida, Gainesville, Fl. 32611-2250; 392-0433.

Agreement:

I have read the above procedures. I give my consent to participate in the investigation. I have received a copy of this description.

Teacher

Date

Witness

Date

University of Florida

**Department of Special Education
P.O. Box 117050/G-315 Norman Hall
Gainesville, Florida 32611-7050
Parent Consent**

Protocol Title: Increasing the Teachers' Use of Specific Praise Statements to Decrease the Problem Behavior in At-Risk Toddlers Enrolled in Center Based Child Care.

Purpose of the research investigation: The purpose of the investigation is to see if trained early childhood teachers will use specific praise statements with children in their classrooms and whether the use of specific praise statements will decrease problem behavior among the children in their care.

Time Required: Daily 15-minute observation for up to 3 months.

Risk and Benefits: This investigation poses no risk. The potential benefits include helping your child's teacher learn a new intervention strategy to decrease problem behavior which may improve learning opportunities for your child.

Child's Role: Before the start of the investigation, your child will be evaluated using the Battelle Developmental Inventory (BDI). BDI (Newborg et al., 1988) is a developmental assessment that looks at five areas of your child's development: adaptive, motor, personal-social, communication, and cognition. Your child's teacher will attend one 2-hour training session where she/he will be trained to use specific praise statements and an additional 2-hour training session if needed. As your child's teacher begins to use specific praise statements with your child, we will observe to see if your child's behavior changes. The principal investigator or a research assistant will observe or videotape a 15-minute session for up to 1 year.

Compensation: There will be no compensation for participation.

Confidentiality: Results of the investigation may be shared with colleagues in the field of education; for purposes of confidentiality, your name and identify will be kept confidential to the extent provided by law. Videotapes may be coded during the investigation and may be viewed by the primary investigator (Elizabeth Kirby Fullerton), a graduate assistant, and members of the primary investigator's doctoral committee (Dr. Maureen Conroy, Dr. Vivian Correa, Dr. Terry Scott, and Dr. Tina Smith).

Voluntary participation: You and your child's participation are completely voluntary. There is no penalty for not participating.

Right to withdraw from the investigation: You and your child have the right to withdraw from the investigation at any time without consequence.

Contact persons: Elizabeth Kirby Fullerton, Doctoral Student, Department of Special Education, P.O. Box 117050, G-315 Norman Hall, Gainesville, Florida 32611-7050, 392-0701

Maureen Conroy, Ph.D., Department of Special Education, P.O. Box 117050, G-315 Norman Hall, Gainesville, Florida 32611-7050, 392-0701

Contact regarding your rights as a research participant:

UFIRB office, Box 112250 University of Florida, Gainesville, Fl. 32611-2250; 392-0433.

Agreement:

I have read the above procedures. I give my consent to participate in the investigation. I have received a copy of this description.

Parent

Date

Witness

Date

APPENDIX B
TEACHER TRAINING

Teacher Training (Investigator's Guide)

Letter of Agreement

Problem Behavior

Explanation of problem behavior: (Attached)

Definition of aggression, non-compliance, disruption, compliance, engagement:
(Attached)

Target child's specific problem behavior(s): (Attached)

Specific Praise Statements vs. Non-Specific Praise Statements

Definition of specific and non-specific praise

Examples of specific and non-specific praise

View video of the child and teacher

Teachers verbally identify specific and non-specific praise statements with 80% accuracy
(Check 1). (Attached)

Teachers identify specific and non-specific praise statements from a tape recording with
80% accuracy (Check 2). (Transcript Attached)

Target Praise Statements

Teacher will generate list of specific praise statements that may be used with the child.

The teacher will post this list in the classroom as a reminder.

(The target child's name will not be indicated on the visual reminder.)

May 2005

Dear Teacher:

Thank you for agreeing to participate in the investigation of the use of specific praise statements to increase appropriate behavior and decrease problem behavior in young children. I hope that the investigation will provide us with important information to help teachers of young children work more effectively with children who have problem behavior.

In order for the investigation to work effectively, it is important that you do not share any aspect of the teacher training or the intervention with your colleagues at Baby Gator. Once the investigation is complete, you are free to share any and all aspects of the teacher training and intervention.

Please sign the statement below agreeing not to share any aspect of the investigation until it is complete.

Thank you for your cooperation,

Elizabeth Kirby Fullerton

I agree not to share any aspect of the teacher training or investigation of the use of specific praise statements to increase appropriate behavior and decrease problem behavior in young children.

Signature of Teacher

Signature of Investigator

Date

Problem Behavior

What is problem behavior?

Problem behavior is a behavior that:

- causes injury to the child or another person.
- causes damage to the classroom or playground.
- gets in the way of learning a new skill.
- keeps a child from making friends.
- interrupts classroom learning.

Definition:

Problem Behavior

Aggression: Aggression is defined as any negative physical behavior directed toward another person, including: hitting, biting, pinching, kicking, pulling or pushing, throwing an object at another person, or spitting at another person.

Disruption: Disruption is defined as behavior that interferes with the ongoing activity, such as verbal talk that is loud or out of context, making inappropriate noises, screaming/yelling, dropping to the ground and remaining there, attempting to leave an area/room, or leaving the area/room without teacher permission.

Non-compliance: Non-compliance is defined as failing to comply within 5 seconds after being given a teacher directive. The directive may be given directly to the child or to a group of children.

Appropriate Behavior

Engagement: Engagement is defined as attention to or active participation in an activity in which the child is involved.

Compliance: Compliance is defined as the completion of an instruction or beginning to follow the instruction within 5 seconds after the teacher request has been given.

Describe the behaviors of Name that are interfering with learning and playing with friends.

Praise

Praise: We give praise to tell a child that s/he did a good job. For example, after a child puts away a puzzle you might use general praise and say, "Good Job."

This praise is known as non-specific praise because you are not telling the child the specific behaviors that s/he demonstrated and why you are praising him/her.

A second type of praise is called specific praise. Specific praise lets the child know the specific behavior you are praising. For example, after a child puts away a toy, you might use specific praise and say, "Tom, you did a super job picking up the pegs and putting them in the basket."

Specific praise informs the child about the specific behavior that s/he is being praised for and communicates to the child that you want to see the behavior in the future. It encourages the child to increase the positive behavior. In addition, it may increase confidence and feelings of self-esteem. It helps the child feel more positive towards you and school.

Specific praise can be given for a child's effort as well as a completed task.

Examples of Non-specific Praise:

You did a great job! Super!

Awesome!

Way to Go!

Thanks for being a good sport!

Examples of Specific Praise:

Name, you were such a good friend when you helped Tamika take off her backpack.

Name, I was so proud of you when you tried to sweep up the spilled rice.

Name, that was a great job putting all the little cars in the red bin.

Now we are going to watch a video of you (the teacher) and (name) and look for instances where you might be able to use praise.

Teacher Check #1

I am going to read 10 praise statements. Please tell me if each is a specific praise statement (SPS) or a non-specific praise statement (NSPS).

Statement	Non-Specific	Specific Praise
Great Sitting, Jon! (NSPS)		
Tomas, I was so proud of you when you asked me to help you with your shoes. (SPS)		
Ellie, you did an awesome job putting all the doll clothes away. (SPS)		
Sara, you were a nice friend when you gave Al a hug. (SPS)		
Way to go Jamal! (NSPS)		
Thank you for cleaning up. (NSPS)		
Wow, Jena, you worked so hard putting the bike in the shed. (NSPS)		
Maria, you are a good friend. (NSPS)		
Marcus, I am so pleased that you held my hand when we walked outside. (SPS)		
Clara, amazing! (NSPS)		

Teacher Check #2

I want you to listen to a tape recording of specific praise statements and non-specific praise statements. Please mark whether you hear a non-specific praise statement or a specific praise statement.

Statement 1	NSPS	SPS
Statement 2	NSPS	SPS
Statement 3	NSPS	SPS
Statement 4	NSPS	SPS
Statement 5	NSPS	SPS
Statement 6	NSPS	SPS
Statement 7	NSPS	SPS
Statement 8	NSPS	SPS
Statement 9	NSPS	SPS
Statement 10	NSPS	SPS

Transcript:

Statement	Answer
Susie, you did a super job holding my hand when we walked next door.	SPS
Maria, you are a good pal.	NSPS
Sam, it was great when you asked Tom to sit with you. You are a good friend to Tom.	SPS
Marcus, awesome!	NSPS
Terrence, it was wonderful when you asked me to help with your backpack.	SPS
Jaun, that was a terrific job putting the pegs in the peg bucket.	SPS
Thank you for sitting.	NSPS
Wow, Melody!	NSPS
Tom, you worked so hard putting all the sand toys away. I am so proud of you.	SPS
Mark, that was an awesome job taking turns with the truck with William.	SPS

Together we are going to make a list of five specific praise statements you might use with _____ in your classroom. We will use the praise statements each day during _____.

1. _____
2. _____
3. _____
4. _____
5. _____

I am going to make you visual reminders with these statements to hang in your room. I will bring them tomorrow so we can get started right away.

Coaching session. As indicated, a coaching session is given to the teacher if the teacher did not use specific praise statements during the first 2 intervention sessions following training.

1. The investigator reviews the meaning of specific praise statements.
2. The teacher and the investigator view the videotapes of the first two intervention sessions following training.
3. The investigator provides the teacher examples of where specific praise statements could have been used with the target child during the first sessions.
4. The teacher gives the investigator examples of where specific praise statements could have been used with the target child during the second session.

Praise Investigation Teacher Guide

Problem Behavior

What is problem behavior?

Problem behavior is a behavior that

- causes injury to the child or another person
- causes damage to the classroom or playground
- gets in the way of learning a new skill
- keeps a child from making friends
- interrupts classroom learning.

Definition:

Problem Behavior

Aggression: Aggression is defined as any negative physical behavior directed toward another person including: hitting, biting, pinching, kicking, pulling or pushing, throwing an object at another person, or spitting at another person.

Disruption: Disruption is defined as behavior that interferes with the ongoing activity, such as verbal talk which is loud or out of context, making inappropriate noises, screaming/yelling, dropping to the ground and remaining there, attempting to leave an area/room or leaving the area/room without teacher permission.

Non-compliance: Non-compliance is defined as failing to comply within 5 seconds after being given a teacher directive. The directive may be given directly to the child or to a group of children.

Appropriate Behavior

Engagement: Engagement is defined as attention to or active participation in an activity in which the child is involved.

Compliance: Compliance is defined as the completion of an instruction or beginning to follow the instruction within 5 seconds after the teacher request has been given.

Describe the behaviors of Name that are interfering with learning and playing with friends.

Praise

Praise: We give praise to tell a child that s/he did a good job. For example, after a child puts away a puzzle you might use general praise and say, "Good Job."

This praise is known as general praise because you are not telling the child the specific behaviors that s/he demonstrated and why you are praising him/her.

A second type of praise is called specific praise. Specific praise lets the child know the specific behavior you are praising. For example, after a child puts away a toy you might use specific praise and say, "Tom, you did a super job picking up the pegs and putting them in the basket."

Specific praise always begins with the child's name and informs the child about the specific behavior that s/he is being praised for and communicates to the child that you want to see the behavior in the future. It encourages the child to increase the positive behavior. In addition, it may increase confidence and feelings of self-esteem. It helps the child feel more positive towards you and school.

Specific praise can be given for a child's effort as well as a completed task.

Examples of Non-specific Praise:

You did a great job! Super!

Awesome!

Way to Go!

Thanks for being a good sport.

Examples of Specific Praise:

Name, you were such a good friend when you helped Tamika take off her backpack.

Name, I was so proud of you when you tried to sweep up the spilled rice.

Name, that was a great job putting all the little cars in the red bin.

.

Teacher Check #1

I am going to read 10 praise statements. Please tell me if it is a specific praise statement (SPS) or a non-specific praise statement (NSPS).

Statement	Non-Specific Praise	Specific Praise
Great Sitting, Jon		
Tomas, I was so proud of you when you asked me to help you with your shoes.		
Ellie, you did an awesome job putting all the doll clothes away.		
Sara, you were a nice friend when you gave Al a hug.		
Way to go, Jamal!		
Thank you for cleaning up.		
Wow, Jena, you worked so hard putting the bike in the shed.		
Maria, you are a good friend.		
Marcus, I am so pleased that you held my hand when we walked outside.		
Clara, amazing!		

Teacher Check #2

I want you to listen to a tape recording of specific praise statements and general praise statements. Please mark whether you hear a general praise statement or a specific praise statement.

Statement 1	NSPS	SPS
Statement 2	NSPS	SPS
Statement 3	NSPS	SPS
Statement 4	NSPS	SPS
Statement 5	NSPS	SPS
Statement 6	NSPS	SPS
Statement 7	NSPS	SPS
Statement 8	NSPS	SPS
Statement 9	NSPS	SPS
Statement 10	NSPS	SPS

Together we are going to make a list of 5 specific praise statements you might use with (name) in your classroom. We will use the praise statements each day during (activity).

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____

I am going to make you visual reminders with these statements to hang in your room.

I will bring the reminders tomorrow so we can get started right away.

APPENDIX C
DATA COLLECTION FORM AND CODING DEFINITIONS

Data Collection Summary Form

Name:	Observer:
Date:	IOA Session: Yes No
Time:	Session #:
Activity:	
Comments:	

		Frequency
Disruption		
Aggression		
Teacher Request		
Compliance		
Non-Compliance		
Specific Praise Statement		
Non-Specific Praise Statement		

	1	2	3	4	5	6	7	8	9	10	Time
Begin	E	E	E	E	E	E	E	E	E	E	1 minute
	E	E	E	E	E	E	E	E	E	E	2 minute
	E	E	E	E	E	E	E	E	E	E	3 minute
	E	E	E	E	E	E	E	E	E	E	4 minute
	E	E	E	E	E	E	E	E	E	E	5 minute

Coding Definitions

Code as Specific Praise Statement (SPS)

Specific Praise Statement: Positive declarative specifically directed to the target child that assesses the child's behavior.

- Sam, you did a nice job washing your hands.
- Good job, lining up as soon as I called your name.
- Wow, you put away all the cars.

Code as Non-Specific Praise Statement (NSPS)

Non-Specific Praise Statement: Positive declarative that may be directed to the target child, but does not assess the child's behavior.

- Good Job!
- Please
- Way to Go

Code as Aggression (A)

Aggression: Aggression is defined as any negative physical behavior directed toward another person, including hitting, biting, pinching, kicking, pulling or pushing, throwing an object at another person, or spitting at another person.

- Target child hits an adult or child.
- Target child bites an adult or child.
- Target child pushes an adult or child.
- Target child pinches an adult or child.
- Target child kicks an adult or child.
- Target child throws an object at an adult or child that can cause the adult or child harm.
- Target child spits at an adult or child.
- Target child pulls the hair of an adult or child.
- Target child squeezes the face of an adult or child.

Do Not Code as Aggression (A)

Child throws a ball in the playground and it hits a child in the arm.

Child knocks over a block tower and one of the blocks hits a child who is lying on the rug in the head.

Code as Disruption (D)

Disruption: Disruption is defined as behavior that interferes with the ongoing activity, such as verbal talk which is loud or out of context, making inappropriate noises, screaming/yelling, dropping to the ground and remaining there, attempting to leave an area/room or leaving the area/room without teacher permission.

- The child continually shouts or whines.
- The child bangs a door repeatedly.
- The target child jumps in the middle of a group.
- The target child sits on top of another child.
- The target child sits on top of a stack of cots.

Do Not Code as Disruption (D)

- The child lies on the carpet during morning meeting.
- The child leaves an activity to run to the door and greet his mother.
- The child leaves a teacher-directed activity to quietly read a book in another area of the room.

Code as Non-compliance

Non-compliance: Non-compliance is defined as the child not completing a request 5 seconds after it is made. Non-compliance will be coded if a specific request is made to the child or a general request is made to the entire group.

Example of Group Request:

- Line up.
- Wash your hands.
- Time to clean up.
- Sit down for the story.

Code as Engagement

Engagement: Engagement is defined as attention to or active participation in an activity in which the child is involved.

Example:

- The child sits at a table cutting with scissors.
- The child looks at book during free choice time.
- The child attends to a finger play during small group time.

Non-Example:

- The child moves from area to area without interacting with people or materials.

- The child turns his body away from the teacher or group during a learning activity.

Code as Compliance

Compliance: Compliance is defined as the completion of an instruction, or to begin to follow the instruction within 5 seconds after the teacher request has been given.

- The dyad will be coded for 10 minutes.
- Specific praise statements not given by the target teacher will not be coded.
- Non-specific praise statements given to the target child or the class will not be coded. For example, if the teachers says, “Good job!” when the class is finished cleaning up, it will not be coded.

APPENDIX D
TREATMENT INTEGRITY

Treatment Integrity Checklist

Complete Explanation of Problem Behavior	Yes	No
Define Aggression, Disruption, Non-compliance/compliance, and Engagement	Yes	No
Define Specific and Non-specific Praise Statements	Yes	No
Provide Examples of Specific and Non-Specific Praise Statements	Yes	No
View Video of Teacher and Child	Yes	No
Teacher Check #1	Yes	No
Teacher Check #2	Yes	No
Generate 5 Praise Statements for Target Child	Yes	No
Post Visual Reminder in the Classroom	Yes	No

APPENDIX E
INTERVENTION ACCEPTABILITY

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BIOGRAPHICAL SKETCH

Elizabeth Kirby Fullerton grew up in West Point, New York. She has spent the past 23 years living and working throughout the United States, Europe, Central America, and South America.

Elizabeth received a Bachelor of Arts degree in early childhood from Trinity College. She received a Master of Education degree in special education with an emphasis in early childhood from the University of Florida in Gainesville. She will graduate from the University of Florida with a Doctor of Philosophy degree in special education in May, 2006.

Elizabeth has worked for many years in the field of early childhood education as a teacher of young children, administrator of early intervention programs, department head, parent trainer, and teacher trainer. Her research interests include early intervention, young children with behavioral challenges, and teacher training within the early childhood setting. Presently, Elizabeth is working as the Early Education Coordinator at the Centro Ann Sullivan del Peru.