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A Curriculum-Based Approach for Social-Cognitive Skills Training: an Intervention Targeting Aggression in Head Start Preschoolers.

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A CURRICULUM-BASED APPROACH FOR SOCIAL-COGNITIVE SKILLS

TRAINING: AN INTERVENTION TARGETING AGGRESSION

IN HEAD START PRESCHOOLERS

By

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A THESIS

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A CURRICULUM-BASED APPROACH FOR SOCIAL-COGNITIVE SKILLS TRAINING: AN INTERVENTION TARGETING AGGRESSION IN HEAD START PRESCHOOLERS

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Thesis Advisor: Dr. Douglas Nangle

An Abstract of the Thesis Presented
in Partial Fulfillment of the Requirements for the
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The present study was designed to evaluate the effectiveness of a social-cognitive skills training curriculum targeting aggression in Head Start preschoolers. Developmental psychopathology research clearly suggests that early intervention with aggressive preschoolers is critical. Despite the fact that aggressive behavior becomes stable by the elementary school years, there has been relatively little interest in intervening with preschool-aged children. In the present study, the COMPASS program is a 12-session curriculum teaching basic individual social skills (e.g., sharing, questioning, listening). Following the work of Mize and Ladd (1983; 1990), the curriculum was puppet-facilitated and employed the components of instruction, modeling, rehearsal, and evaluation/feedback. Two Head Start centers comprised the treatment group and two centers comprised the control group, with a total of 80 preschoolers participating. Assessments were made at pre-treatment, post-treatment, and

three-month follow-up. The assessment battery consisted of the Social Skills Rating System-Teacher Form, teacher-rated relational aggression, Aggression subscale of the Achenbach Caregiver-Teacher Report Form, peer ratings of acceptance, and the Enactive Social Knowledge Interview. It was hypothesized that aggression would decrease, while prosocial skills and peer acceptance would increase, more so in the treatment than the control group. The SSRS-T, relational aggression ratings, and aggregate peer acceptance ratings had significant site differences at pre-treatment, which were controlled for statistically. No significant results emerged with respect to aggression and social skill levels. With respect to peer acceptance ratings, both the treatment and control groups decreased between post-treatment and follow-up, although the treatment group decreased slightly, but significantly, more than the control group. Several post-hoc hypotheses are offered as explanation for the generally null findings, including applicability of the Mize and Ladd model to a Head Start population, inability to adequately control for site differences, length of the treatment, and difficulty adding to the effectiveness of the Head Start program alone. Several directions for future research are discussed, including the addition of more sessions to the curriculum, a parent-involvement component, and a contingency management program. It would also be helpful to evaluate COMPASS in a larger number of Head Start centers and to extend follow-up assessment beyond three months.

ACKNOWLEDGMENTS

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INTRODUCTION

Aggressive behavior is an increasing cause for concern in today's youth. Within the mental health system, one third to one half of all child and adolescent clinic referrals involve concerns over aggressiveness, conduct problems, and antisocial behaviors (see Coie & Dodge, 1997, for a review). Aggressive behavior patterns become stable by the elementary school years (e.g., Coie & Dodge, 1997; Kazdin, 1987; Lochman & Lenhart, 1995) and remain stable into adolescence and even into adulthood (e.g., Farrington, 1990). Indeed, Olweus (1979) found aggression to be as stable as the construct of intelligence across time, with aggressive behavior correlated in the .60-.70 range over a 10-year childhood period. Moreover, aggressive behavior displayed early in development is predictive of psychopathology both in childhood (e.g., Oppositional Defiant Disorder and Conduct Disorder) and in adulthood (e.g., Antisocial Personality Disorder), with earlier onset of aggression being associated with greater difficulties (Kazdin, 1987; Lochman & Lenhart, 1995). In fact, children exhibiting aggression in elementary school are on a developmental trajectory that could lead to criminal behavior in adolescence and adulthood (Loeber, 1990). Specifically, boys identified as aggressive in middle childhood are more likely to abuse substances, have externalizing behavior problems, and to commit crimes against persons in adolescence (Coie, Lochman, Terry, & Hyman, 1992; Lochman & Wayland, 1992). Childhood aggression is also predictive of adult marijuana use, unemployment, domestic violence, cigarette smoking, drunk driving, and criminal conviction (Farrington, 1990).

Due to the difficulties associated with childhood aggression, there is a need for the development and evaluation of treatments. Given the early onset and stability of

aggression, the need for interventions targeting aggressive children prior to the elementary years is particularly critical. Unfortunately, little research exists on treatment for aggression in early childhood (Nangle, Erdley, Carpenter, & Newman, in press). Much of the intervention research on aggression has been conducted with elementary school aged children, when aggression has become stable and therefore more immune to treatment. A particular paucity of research exists at the preschool age, a time when aggression is less stable and is potentially more amenable to change. It is worthy of note, however, that one study did find remarkable stability in rank ordering of preschoolers with respect to aggression over three-month periods (i.e., Spearman rank order correlations of .56 and .60; LaFreniere & Charlesworth, 1983). This finding indicates that the most aggressive preschoolers at one point in time continue to be the most aggressive preschoolers three months later, although the absolute frequency of aggressive behavior may vary across time. It is critical, therefore, to devise effective treatments for reducing the overall frequency and severity of this aggressive behavior. Of the small number of treatment studies conducted on preschoolers, limited success has been achieved either through social skills training (e.g., Factor & Schilmoeller, 1983; Zahavi & Asher, 1978) or social-cognitive skills training (e.g., Rickel, Eshelman, & Loigman, 1983; Shure & Spivack, 1982). The most worthwhile approach may be to combine the effective components of these interventions in order to optimize treatment of aggression at the preschool level. Unfortunately, this literature has not been advanced in the past 16 years, despite evidence of the developmental trajectory from childhood aggressive behavior to criminal behavior in adulthood (Loeber, 1990).

The present study consists of a curriculum-based social-cognitive skills training program targeting aggression in preschool children. The goal of the treatment is to increase positive behavior and decrease aggressive behavior using both cognitive and behavioral social skill training methods. In this introduction, a review of relevant contextual factors will be presented. Specifically, the cognitive, emotional, and social functioning of typical preschool children will be described in order to better understand the developmental context of this population. Next, aggressive behavior in preschoolers will be examined in particular, with a review of the etiological and maintaining factors of aggression, including parenting, sibling relationships, social factors, and gender. Ladd and Mize's (1983a, 1983b) social-cognitive learning model of social-skill training will then be reviewed as the theoretical basis of the present study, thereby introducing the basic cognitive and behavioral social skill training methods that were employed in the present study. Following this presentation, past interventions targeting aggression in preschoolers will be reviewed, with a particular focus on social-cognitive skills training, but also including stimulant medication and parent training. Finally, an overview of the present study will be provided, including hypothesized findings.

<center>Overview of Developmental Context</center>

The developmental level of the "typical" preschooler is important to consider in determining the appropriate treatment package. With respect to physical-motor development, preschoolers are generally able to run smoothly, jump, and are beginning to learn how to skip and throw/catch a ball. Fine motor skills are also developing, with most preschoolers able to use buttons and snaps and to draw lines, circles, and simple faces (Craig, 1992). In addition, rapid advances are made in language and cognitive

development. Preschoolers learn to understand rules of language syntax, although this knowledge undergoes continued refinement throughout childhood. In fact, it may be the limited mastery of language that contributes to the use of aggression as a means of self-expression at the preschool level. Basic understanding of causation, early abilities to classify objects and to distinguish between appearance and reality, an understanding of quantity, and the use of cognitive scripts (i.e., a standard order of events in certain situations, such as the behaviors that usually happen when washing the dishes) are some of the cognitive achievements made by preschoolers (e.g., Ebeling & Gelman, 1994; Flavell, Green, Wahl, & Flavell, 1987; Flavell, Miller, & Miller, 1993; Gelman & Coley, 1990; Gelman & Gottfried, 1996; Piaget & Inhelder, 1956; Taylor & Gelman, 1993; Woolley & Wellman, 1990).

Cognitive advances are particularly important with respect to their implications for social-cognitive skills training. For example, not only are preschoolers using cognitive scripts, but children as young as two-and-a-half are capable of forming new scripts (Price & Goodman, 1990). The use of cognitive scripts indicates that preschoolers are able to cognitively sort behaviors based on context. In terms of social-cognitive skills training, preschoolers should be able to distinguish between different social situations and match these situations with the appropriate behavior, based on the newly learned cognitive script. Moreover, due to the fact that preschoolers encode information visually rather than auditorally or semantically (Hayes & Birnbaum, 1980; Hayes & Schulze, 1977), it is important to visually model the appropriate social skills in the training sessions. Motoric responding is also important in the encoding of information (Newman, 1990). Thus, the physical rehearsal of social skills should facilitate encoding.

Furthermore, this rehearsal should occur directly following the skill presentation, due to the fact that preschoolers do not yet know that increased time intervals increase the chance of forgetting new information (Lyons & Flavell, 1993). In general, preschoolers do not consciously employ strategies to aid in the transfer of information from short-term memory to long-term memory (Tenney, 1975). Therefore, the rehearsal component of social-cognitive skill training must be well-structured to ensure that the information is coded into long-term memory. Specific purposes need to be associated with the social skills in order to aid recall, given that young children hold events in memory based on purpose (Ratnor, Smith, & Dion, 1986). The recall of preschoolers is also enhanced when the children work in pairs (Hayes, 1997), indicating that recall of the social skills will be improved if rehearsal occurs in groups of two or more children.

Attention and memory capabilities are limited (e.g., Flavell et al., 1993; Wellman, Ritter, & Flavell, 1975), requiring concepts to be presented to preschoolers at the most basic level and in small time blocks. Preschoolers are also gaining perspective-taking abilities (e.g., Flavell et al., 1993), which are important for navigating social situations. By age four, children are accurate and nonegocentric in their ability to view the cognitive and emotional perspectives of others (Borke, 1971; Marvin, Greenberg, & Mossler, 1976). The ability to view a social interaction from the perspective of another child is valuable in teaching children the effect of their behavior on others.

Preschoolers have achieved a basic understanding of emotion, emotional expression, and emotion regulation (Saarni, Mumme, & Campos, 1998). At a more complicated level, preschoolers are better able to distinguish between varieties of positive emotional expressions than negative emotional expressions, possibly because mothers

have been found to focus more on inducing positive emotions and reducing negative emotions in preschoolers as opposed to older children (Fabes et al., 1994). Preschoolers are learning to regulate their emotions during difficult situations and are therefore becoming better able to maintain control over their behavior (Eisenberg, Fabes, Nyman, Bernzweig, & Pinuelas, 1994). Aggression is related to emotion regulation in that the inability to regulate emotions can result in angry outbursts and aggressive behavior. For example, young children unable to regulate their anger tend to respond to frustrating social situations in a hostile manner (e.g., Garber & Dodge, 1991). Although emotion regulation is still a challenge for preschoolers, it is possible that social-cognitive skills training can advance development in this area as well, by providing children with the behavioral responses necessary to express their emotions appropriately.

Socially, preschoolers are beginning to be able to exert self-control, delay gratification, tolerate frustration, and behave according to the demands of the situation (e.g., Maccoby, 1980). Gender becomes an important part of children's self-concept and impacts play preferences (e.g., Bem, 1989; Martin & Ruble, 1997). Interactions with peers increase in importance as preschoolers learn to maintain their friendships (Hartup, 1992). Peer interactions during the preschool years consist primarily of shared play activities and are described as less cohesive than social behavior exhibited in later years (Bierman & Montminy, 1993). Therefore, acquisition of the social skills necessary to initiate and maintain interactive and reciprocal play is a key developmental task of this age period. The ability to balance cooperation and competition while interacting with a peer varies at this age level, with some children able to attain this balance while children rated as aggressive by their teachers are not found to be able to do so (LaFreniere, 1996).

Preschoolers judged as socially competent typically display the ability to share with peers, respond positively to peers, and engage in give-and-take during peer interactions (e.g., LaFreniere & Dumas, 1995; Rubin, Hastings, Chen, Stewart, & McNichol, 1998). Consequently, social-cognitive skills training should strive to teach children the social skills necessary to promote positive peer interactions and to improve social competence.

<div align="center">Preschool Aggression</div>

Description

Aggression is one of the primary problematic behaviors reported by preschool teachers, along with inattention, disruptive behavior, and noncompliance (Campbell, 1995). Between the ages of two and four, physically aggressive behaviors (e.g., hitting, grabbing toys from others, and shoving) peak in normative samples (Bierman & Montminy, 1993; Nangle et al., in press). Instrumental aggression (i.e., aggressive behavior that is directed toward the acquisition of an object) is the primary type of aggression exhibited by preschoolers (Hartup & Laursen, 1993).

Etiological/Maintaining Factors

The present discussion will include a review of the factors involved in the development and maintenance of aggression in preschoolers. For ease of presentation, these factors will be discussed separately, although they most likely have an interactive influence. Understanding the development of aggression will aid in the construction of a social-cognitive skills training program effective in reducing aggression levels in preschoolers. The key to treating aggression may lie in its etiology.

Parenting. Much research has been devoted to the relationship between parenting and aggressive behavior. Patterson's (1982) coercive cycle provides one model for the

influence of parenting on aggression. In this model, parents first intrude on the child's ongoing activity, usually with a vague command given in a negative tone. The child responds with a counterattack, refusing the directive through whining, complaining, or other coercive behaviors. The parent then fails to enforce the directive, thereby negatively reinforcing the child. The child then ceases the coercive behavior and negatively reinforces the parent's behavior. Over time, the coercive behaviors escalate in steps one and two, hostility rises, and the episodes lengthen. The dyad is caught in a reinforcement trap whereby short-term gain is made at the cost of establishing a firm pattern of child noncompliance and disruptive behavior. In support of the coercion theory, Snyder and Patterson (1995) found that mothers of aggressive boys were more likely to negatively reinforce aversive behaviors than mothers of nonaggressive boys. Other researchers have also documented the coercion cycle between parents and children (see McMahon & Wells, 1998, for a review).

Patterson (1982) suggests three styles of inconsistent, harsh discipline that characterize parents caught in the coercion cycle: lack of rules, failure to monitor, and inconsistent reward and punishment. Patterson and Bank (1989) also contend that a child's temperament may impede his/her ability to learn rules and comply, instigating the inconsistent parenting and the coercive cycle. However, the best predictors of aggression and the coercive cycle by the preschool age are lack of parental social skills, parent and child traits, and distractor variables, such as divorce or low socioeconomic status. Importantly, if parents lack social skills, it may be difficult for children to adequately learn these skills in the home.

The path to aggression may begin with harsh physical discipline (e.g., Baumrind, 1993; Maccoby & Martin, 1983; Patterson, Reid, & Dishion, 1993). Indeed, multiple studies by Dodge and colleagues (Dodge, Bates, & Pettit, 1990; Dodge, Pettit, Bates, & Valente, 1995) have found relationships between early harsh physical discipline and preschool aggression. This relationship is particularly strong when discipline practices reach the level of physical abuse (Deater-Deckard & Dodge, 1997). In a prospective study by Cohen and Brooks (1995), harsh physical discipline in the first three years of childhood predicted Conduct Disorder ten years later. Other factors, such as low socioeconomic status and maternal rejection were also predictors of Conduct Disorder, although weaker. Dodge et al. (1995) found warmth to be the discriminating variable in the relationship between aggression and physical discipline. Physical discipline administered in a warm parent-child relationship did not lead to aggression.

Bates (1980) contends that it is actually child temperament that predicts the level of parent-child conflict. Indeed, Rubin et al. (1998) found that a combination of parenting practices and temperament best predicted the aggressive behavior of two-year-olds. A study conducted by Olweus (1980) best illustrates this relationship. He found that temperamentally "hot-headed" 4- to 5-year-old boys with mothers who were either high in negative dominance or permissiveness were most likely to be aggressive at age 12. Path analyses indicated a direct effect of early temperament ratings on later aggression and an indirect effect through permissiveness. Olweus suggested that a temperamentally difficult boy might exhaust the mother such that she becomes permissive and the boy becomes aggressive. Temperament is not the sole predictor of

parenting, however, given that negativity is child specific, whereas parental control is not (Plomin et al., 1993).

Many family stressors have been linked to the aggressive behavior of preschoolers, including stressful life events, hostility, maternal depression, and low socioeconomic status (e.g., Campbell, 1990; Cummings, 1994; Egeland et al., 1990). For example, Cummings (1994) found that marital stress interacts with parental practices to predict behavior problems. Similarly, Campbell (1990) found that hard-to-manage three-year-olds were most likely to come from families with high levels of stress. Moreover, these same children continued to have behavior problems at ages six to nine if high stress levels persisted in the family (Campbell & Ewing, 1991). Overall, Campbell (1994) found that preschoolers with behavior problems were best characterized as having a low intelligence quotient and coming from families with chronic stress and maternal depression. In general, however, the exact relationships among parenting, family factors, and childhood aggression are difficult to decipher.

Sibling Conflict. Sibling conflict has also been examined with respect to influences on preschool aggression. Relationships with siblings may help form interaction patterns that are carried over into other social relationships. Therefore, an understanding of aggression within the sibling relationship may prove valuable in the remediation of socially aggressive behavior. Dunn and colleagues conducted a series of studies in the 1980's examining sibling conflict (e.g., Dunn & Kendrick, 1982; Dunn & Munn, 1985; 1986; 1988), which are useful in understanding children's experiences at home and how these may affect social interactions in the preschool environment. Specifically, preschoolers were noted to engage in both destructive (i.e., intense anger)

and constructive (i.e., reconciliation and justification of position) sibling conflict, with the latter leading to prosocial behavior and the former to aggression. Most sibling conflicts involving a preschooler revolve around toys, personal space, and family rules. Interestingly, preschoolers are more sophisticated and elaborative in conflicts with friends than with siblings (Dunn & Kendrick, 1982; Dunn & Munn, 1985; 1986; 1988). Perhaps the consequences of conflicts with peers are greater than conflicts with siblings.

Abramovitch, Pepler, and Corter (1982) examined the conflict of siblings when the youngest child was one-and-a-half years old and the older child was one to four years older. Overall, the older child initiated the majority of both prosocial and agonistic behaviors. The younger child submitted to the aggression of the older child and also imitated the older sibling. On the rare instance that the younger child initiated aggression, however, the older child retaliated. Male dyads were more physically aggressive, but not more verbally or instrumentally aggressive, than female dyads. No sex differences emerged in the mixed-sex dyads. When the younger child was three, a follow-up study was conducted (Pepler, Abramovitch, & Corter, 1981). At this time, prosocial behaviors equalized although older siblings still were more verbally aggressive and continued to retaliate, while younger siblings submitted. No sex differences emerged, contrary to the peer literature, which states that boys are more aggressive than girls. Mixed-sex dyads increased in overall agonism, possibly due to a lessening of common interests or differential treatment by parents. Across both studies, there were no effects with respect to the age interval between the siblings.

Focusing specifically on aggression, rather than conflict, between siblings, Martin and Ross (1993) examined children at ages two-and-a-half and four-and-a-half and again

at ages four-and-a-half and six-and-a-half. Overall, the firstborn was more aggressive, but physical aggression decreased over time. At Time 2, both were more verbally aggressive. Parents responded to aggression about half of the time, mostly to the aggression of the older sibling or when the victim cried. Over time, the siblings progressed into a coercive cycle becoming more aggressive as a dyad. The results of research on sibling conflict and sibling aggression indicate that older siblings, as opposed to younger siblings, tend to be the aggressors in sibling relationships. It could be that these same children are the aggressors in peer relationships as well, due to the interaction pattern established in the sibling relationship. However, this research does not address the aggression levels of only children, rendering it difficult to adequately hypothesize the effects of having siblings versus not having siblings on peer relationships.

Social Factors. The home environment can be viewed as setting the stage for social behavior patterns. Just as sibling relationships can provide a "training ground" for future peer interaction, early parental interactions can also be linked with later social behavior. In fact, Dodge and his colleagues (Dodge et al., 1990; Dodge et al., 1995; Weiss, Dodge, Bates, & Pettit, 1992) propose that the path from harsh physical discipline to aggression is mediated by social information processing deficits which are then carried into social interactions. Two models are hypothesized (Dodge et al., 1990). One is based on attachment theory and proposes that children who receive harsh discipline become sensitized to hostile cues and do not attend to other relevant social cues. The other is based on social learning theory and proposes that children learn aggressive responses through harsh discipline and evaluations of these aggressive responses as effective. In a study examining these hypotheses, Dodge et al. (1995) measured physical discipline at

age four and social information processing at age five-and-a-half and found social processing deficits which included the failure to encode relevant social cues, hostile attribution bias (i.e., the tendency to attribute hostile intent to ambiguous social cues), and evaluation of aggressive responses as effective behaviors in social situations. These results provide support for both models proposed by Dodge et al. (1990), indicating deficits in both the encoding of social cues into memory and the ability to retrieve appropriate behavioral responses from memory in children with early harsh physical discipline. Of course, these social skills deficits could also be related to other family factors that are associated with harsh discipline, such as low socioeconomic status (Dodge, Pettit, & Bates, 1994) or parental divorce (Hetherington, 1991).

Regardless of the specific deficit in social information processing, aggression is the single strongest correlate of peer rejection at all ages (e.g., Coie, Dodge, & Coppotelli, 1982; Coie, Dodge, & Kupersmidt, 1990; Dodge, 1989). However, overt physical aggression is not as strongly linked to peer rejection in the preschool years as it is in the elementary school years and beyond, possibly due to the high normative base rates of aggression at this age. By the preschool age, children form "cliques," often of same-sex peers (Farver, 1996; Strayer, 1980). In general, social status is based on "toughness," defined as high leadership and physical coercion, with children's dominance appearing to be correlated with levels of aggression within the peer group (Strayer 1980; 1990). In general, preschool-aged peer groups tend to consist of children at the same level of aggression, social competence, and behavioral style (Farver, 1996). Children found to be "nuclear" to the group were also the most aggressive relative to that group. Because children tend to befriend others with the same level of aggression, aggressive children

may establish a pattern that is difficult to change. Moreover, peers reinforce aggressive behavior by paying more attention to aggressive than prosocial behavior (Solomon & Wahler, 1973) and by allowing other children to achieve the goal of the instrumental aggression (Patterson, Littman, & Bricker, 1967).

In one study examining the relationship between preschoolers' behavior and peer acceptance, however, cooperative play observed early in the year was associated with higher levels of peer acceptance later in the year. The opposite pattern was found for arguing, which is a form of verbal aggression (Ladd, Price, & Hart, 1988). This finding for verbal aggression, as opposed to physical aggression, is commensurate with studies linking aggression and peer rejection in middle childhood. It appears that although physical aggression is not as predictive of peer rejection in preschoolers as it is in older children, verbal aggression is linked with lower levels of peer acceptance for both preschoolers and children in middle childhood. Coie et al. (1982) examined the relationship between peer rejection and aggression in older children and found that children liked least by their peers were described as those who disrupt the group, aggress indirectly, start fights, get into trouble with the teachers, and have a short temper. Not only is being rejected by one's peers associated with aggression, but a predictive relationship has been found between early social difficulties and school drop-out, juvenile delinquency, psychiatric impairment, and suicide (Dodge, 1989). Clearly, peer rejection and aggression both merit further empirical investigation, especially with respect to strategies for intervention.

The exact relationship between aggression and rejection is subject to debate, although it is clear that the combination of aggression and peer rejection leads to more

negative outcomes than either one alone (e.g., Bierman, Smoot, & Aumiller, 1993; Bierman & Wargo, 1995). Studies by Dodge, Coie, and colleagues in the 1980's and 1990's (e.g., Coie et al., 1990; Coie et al., 1982; Dodge, 1989) suggest a child could be aggressive and then become rejected, which disallows the learning of appropriate social skills. Alternatively, the child could begin with a social skills deficit, causing him/her to rely on aggression in frustrating social circumstances that then leads to rejection. Both theories include a social skills deficit hypothesis, indicating the need for training social skills.

Gender. Given that peer groups in the preschool period tend to form based on gender, the influence of gender on aggression should be addressed. It has been firmly established that boys are more physically and verbally aggressive than girls. Moreover, these differences are evident by the preschool age and found cross-culturally (Maccoby & Jacklin, 1980). Despite these gender differences, Nangle and colleagues (in press) reviewed the literature of social skills training as a treatment for aggression and discovered that very few studies examine gender differences. This lack of attention to possible differential effects of treatment based on gender is a weakness in the empirical literature.

Although the treatment literature has failed to examine gender differences, the developmental literature has recently identified a type of aggression that may shed light on the finding that boys are more aggressive than girls. Crick and colleagues (e.g., Crick & Grotpeter, 1995) have introduced a heretofore unmeasured form of aggression, termed relational aggression, that appears to be more applicable to girls than boys, just as physical and verbal aggression appear to be more applicable to boys than girls. Boys and

girls may be equally aggressive if aggression is operationalized commensurate with these aggression types.

Relational aggression involves the undermining of relationships through withdrawal of friendship, ignoring, or spreading rumors. Girls tend to have relationship-oriented goals and, similarly, relational aggression is relationship-oriented. Boys tend to have goals of physical dominance and competition, thereby providing a match between overt physical aggression and their goals. Crick and Grotpeter (1995) examined relational aggression in third through sixth graders and found that girls were more relationally aggressive than boys. Moreover, relational aggression and overt aggression were two separate factors. Relational aggression was related to psychological maladjustment even when overt aggression was controlled. Most importantly, this relationship was stronger for girls than for boys, most likely because being relationally aggressive undermines girls' own relationship goals. An association also emerged between relational aggression and peer rejection.

Crick, Casas, and Mosher (1997) conducted a study on relational aggression in preschoolers and found that through a combination of teacher ratings and peer nominations, two separate factors once again emerged for relational and overt aggression. Relational aggression was related to psychological maladjustment in preschoolers. Results of the teacher ratings indicated that relational aggression was higher in girls and overt aggression was higher in boys. This gender difference was not found with respect to peer nominations, possibly due to a developmentally immature understanding of aggression or the belief of preschoolers that boys are higher in aggression of all kinds, in accordance with gender roles. Relationally aggressive girls were more rejected, but

relationally aggressive boys were in both the rejected and accepted groups, indicating that relational aggression was not viewed as negatively for boys (Crick et al., 1997). Overall, it seems that relational aggression may be applicable to preschool samples, although the social consequences are less clear. Further research is needed on the construct of relational aggression, especially with respect to response to treatment.

<center>Interventions for Aggressive Behavior</center>

Early intervention is warranted given the high stability of aggressive behavior in children (Olweus, 1979) and the fact that early aggression is predictive of later difficulties and psychopathology (e.g., Lochman & Lenhart, 1995; Loeber, 1990; Nangle et al., in press). Campbell (1997) points out that of children identified in preschool as aggressive, half will improve and half will worsen. Moreover, children not identified may begin to manifest aggression later in development. Therefore, treatment at the preschool age can function as both prevention and intervention. The most prominent treatments for aggression and general social skills deficits are stimulant medication, parent training, and social skills training.

Stimulant Medication

Most children receiving stimulant medication carry a diagnosis of Attention-Deficit/Hyperactivity Disorder (ADHD). Stimulant medication, primarily methylphenidate, has been shown to be effective for decreasing negative behaviors, including aggression and hyperactivity, in children with peer relationship problems (see McFadyen-Ketchum & Dodge, 1998, for a review). Moreover, although prosocial behaviors do not tend to increase, they do not appear to decrease in frequency either. Unfortunately, stimulant medication has not been found to ameliorate peer relationship

difficulties (McFadyen-Ketchum & Dodge, 1998; Mrug, Hoza, & Gerdes, 2001). It appears that although the negative behaviors decrease, these children may not have the social skills in their behavioral repertoire that are requisite for improving peer acceptance. Similarly, it could be that these children already have a negative reputational bias, which research has found to be difficult to change (e.g., Hymel, Wagner, & Butler, 1990). With respect to the preschool population, few children of this age are identified and diagnosed with ADHD (Barkley, 1998) and are therefore unlikely to be treated with stimulant medications.

Parent Training

Parent training has been found to be effective in the treatment of aggression (Brestan & Eyberg, 1998; McMahon & Wells, 1998). Parenting and family issues have been implicated in the development of aggression, and parent training has both short-term and long-term efficacy (Brestan & Eyberg, 1998). Parent training has been found to improve behaviors such as child compliance, physical and verbal aggression, temper tantrums, and destructive behavior (e.g., Wells, Forehand, & Griest, 1980).

Parent training typically involves the training of specific parenting skills through instruction, modeling, role-playing, supervised practice with the child, and homework. Due to the amount of time and effort involved in completing the components of parent training, this intervention is considered to place high demands on parents (Kazdin & Weisz, 1998). Past research has encountered difficulties with parental participation in treatment due to difficulties such as scheduling problems, lack of time to devote to an extra activity, or being too tired from working multiple jobs (Lochman & Wells, 1996). Furthermore, Patterson and Chamberlain (1988, 1994) found parental resistance in those

with the most maladaptive parent-child patterns, psychopathology, and social and financial stressors. It is precisely these children who require intervention the most.

Another concern is that parent training may not generalize to the classroom. The research findings are mixed: some studies (Breiner & Forehand, 1981; Patterson & Forgatch, 1995; Webster-Stratton, Hollinsworth, & Kolpacoff, 1989) have not found generalization from home to school, while other studies have (e.g., Serketich & Dumas, 1996). McMahon and Wells (1998) suggest that if aggression is present in the school environment, then intervention in the school environment is required.

Social Skills Training

The majority of studies investigating the treatment of aggression in children are conducted with elementary school-aged children (e.g., Frankel, Myatt, & Cantwell, 1995; Guevremont & Foster, 1993; Lochman, Burch, Curry, & Lampron, 1984). Considerably less empirical work has focused on preschool aggression. This neglect may be due to the challenge of distinguishing between normative levels of aggression and atypical aggressive behavior in this age group. It could also be that older, more cognitively advanced children have been more appropriate for examination of social-cognitive problem-solving skills, recently emphasized in the aggression treatment literature. Whatever the reasons for the neglect may be, it is clear that more treatment research is needed with preschool populations.

Given that the intervention evaluated in the present study is predicated on the social-cognitive model of social skills training put forth by Ladd and Mize (1983a, 1983b), it is useful to review the intervention literature with respect to this model's theoretical underpinnings. Moreover, the discussion of the empirical literature is

facilitated through reference to the Ladd and Mize (1983a, 1983b) model, as evidenced by its use as a guiding framework in a recent chapter on the treatment of social relationship problems in children (McFadyen-Ketchum & Dodge, 1998). Following presentation of the model, the social skills training literature will be reviewed.

Social skills training is based on the assumption that negative behaviors, including aggression, often result from a deficit in the skills needed for socially competent interactions with peers (Nangle et al., in press). It is expected that the provision of the appropriate social skills will result in decreased negative behavior. Social-cognitive skills training is a form of social skills training that emphasizes problem-solving skills, as opposed to overt behavioral skills. The goal is to adjust the thought processes that underlie the negative behavior, rather than targeting the negative behavior directly (Nangle et al., in press).

Ladd and Mize (1983a, 1983b) contend that successful social-cognitive skills training programs must include all of the components of their social-cognitive learning model of social-skill training. This model includes possible areas of social skill deficit and the methods necessary to remediate these deficits. Following the social skills deficit hypothesis, an inability to demonstrate appropriate social skills could be due to deficits in one of three areas: skill knowledge, skill performance, or knowledge of the appropriate contexts in which to employ the skill. Commensurate with this conceptualization of social skills deficits, Ladd and Mize's (1983a, 1983b) model of social-skill training involves three training goals: enhancing skill concepts, promoting skill performance, and fostering skill maintenance and generalization. Three main training procedures

accompany each of the three training goals. These procedures are verbal and modeled instruction, rehearsal, and feedback, respectively.

The first goal, enhancing skill concepts, involves supplying children with the appropriate skill concept, including its defining features (e.g., the behavioral components necessary to enact the skills involved). Ideally, this skill concept will function as a template for future social behavior. In order to do so, however, social-cognitive skill training needs also to define the *functional relevance* of the social concept to the children. If children are not provided with this information, the social concept will not be employed appropriately simply because the children do not understand the usefulness of the skill. The specific skills involved in the social concept and its functional relevance can be provided to the children through verbal and/or modeled instruction.

The instructional component can also provide information as to the generalizability of the social concept. It is important to provide both positive and negative instances of skill usage in order to improve generalizability. In other words, contexts or situations in which the use of the skill is appropriate versus inappropriate should be included in the instructions. For example, when being taught the skill of making suggestions during play, it is appropriate to suggest an idea when play is currently unstructured, but it is inappropriate to suggest an idea when a game is currently underway and being enjoyed by the children involved. Along these same lines, it is important to provide an example of an ineffective way of solving a conflict, such as the use of aggression, prior to modeling the skill being promoted in the training session.

The second goal, enhancing skill performance, involves mastery of the social concept previously instructed. The skills are recalled by the children to ensure that they

have been encoded into memory. Through rehearsal, the children attempt to behaviorally enact the skill, fleshing out their representation of the social concept. Early on, the environment should be constructed in order to ensure success, whereas less structured trials are conducted as mastery levels increase.

The third goal, skill maintenance and generalization, involves use of the skill in a naturalistic environment. First, the instructor provides feedback on the child's performance. The feedback is either evaluative, providing praise for correct skill usage, or informative, providing correction or bolstering memory for the concepts. Later, the child uses the skill more independently and is encouraged to self-monitor skill performance. Training around realistic performance evaluation may be necessary. Ideally, the child is able to modify his/her performance based on feedback.

Interpersonal Cognitive Problem Solving. It is interesting to note that much of the social-cognitive problem-solving skills research is adapted from work beginning in the 1970's by Shure and Spivack (e.g., 1978; 1982) with very young children, including preschoolers. Shure and Spivack outlined basic strategies, intended for implementation by parents and/or teachers, for encouraging effective and appropriate social problem solving. These researchers did not target aggressive children or aggressive behaviors, per se, but focused instead on the thought processes involved in general social behavior during conflict situations. In this interpersonal cognitive problem-solving intervention, children are taught how to listen to and observe others in order to learn that others have thoughts, feelings, and motives in problem situations (Shure & Spivack, 1978). More specifically, the Shure and Spivack intervention involves meeting in small groups of five to seven preschoolers for 15-20 minutes per day, four days per week for 11 weeks.

Twelve days are spent on training the children on language concepts prerequisite to the actual training. Eighteen days are spent on pre-problem-solving skills and 14 of the 44 total days are spent on the actual problem-solving training.

For instance, Shure and Spivack (1982) had teachers train a sample of four- and five-year-olds on problem-solving concepts using pictures, puppets, and simple role-playing techniques. The focus of the program was on generating alternative solutions to problems and then evaluating the consequences of each potential solution. Specific behavioral responses were not trained. Topics addressed such issues as how to obtain a toy from another child, what happens after grabbing a toy from a peer, and how to avert a parent's anger after damaging an object. Upon completion of the program, impulsive and inhibited behaviors were reduced, and behavior problems were not noted to occur in those children categorized as "adjusted" (versus inhibited or impulsive based on teacher ratings of behavior) prior to the intervention (Shure & Spivack, 1982). Overall, this intervention had positive effects on preschoolers' problem-solving abilities.

In general, the Shure and Spivack program adheres nicely to the Ladd and Mize (1983a, 1983b) model of social skill training. The program enhances the problem-solving process through verbal rehearsal, provides opportunities for rehearsal with peers, and allows for evaluative feedback from the instructor. Therefore, the Shure and Spivack program is comprehensive and contains those components highlighted by Ladd and Mize as necessary for ensuring internalization of the concepts taught. It is important to note, however, that the Shure and Spivack program does not provide social skill training in the literal sense, but purposely avoids training the children specific social skills (Shure & Spivack, 1979).

In the early 1980's, several research teams expanded upon the work originally conducted by Shure and Spivack (e.g., Rickel et al., 1983; Sharp, 1981; Vaughn, Ridley, & Bullock, 1984). Following Shure and Spivack, these researchers measured preschoolers' ability to verbalize alternative solutions to problems via the Preschool Interpersonal Problem-Solving Test, and the ability to verbalize the consequences of an act via the What Happens Next Game. Children were classified as adjusted, inhibited, or impulsive based on scores on the Hahnemann Preschool Behavior Rating Scale, which is comprised of teacher ratings of impatience, emotionality, and aggression. The impulsive and inhibited groups were collapsed into one group labeled "aberrant," which was compared to the "adjusted" group in analyses of treatment effects (e.g., Rickel et al., 1983).

A number of researchers (e.g., Rickel et al., 1983; Sharp, 1981) have found, contrary to Shure and Spivack's conclusions, that cognitive training in interpersonal problem solving did not lead to an improvement in behavioral adjustment, although improvements in cognitive problem-solving abilities were documented. Therefore, the link between cognitive training and behavioral change found by Shure and Spivack (1979; 1982) and other researchers (Winer, Hilpet, Gesten, Cowen, & Schubin, 1982; Vaughn et al., 1984) was not replicated. Sharp (1981) hypothesized that the use of teachers as both trainers and behavior raters biased Shure and Spivack's results, thereby accounting for the improved behavior ratings. However, Shure and Spivack did take the necessary steps to ensure that their results were not due to teacher bias. For example, in the 1982 study, Shure and Spivack used behavior ratings by independent observers along with teacher ratings and documented improved behavior in children classified as

"aberrant." Similarly, Ridley and Vaughn (1982) and Vaughn et al. (1984) found that children in the treatment group displayed a significant increase in the ability to generate relevant solutions to problem situations during role-plays with peers, indicating a behavioral improvement. Furthermore, Shure and Spivack (1979) attained behavioral ratings in a one-year follow-up from Kindergarten teachers unaware of the children's participation in the preschool program and found maintenance of treatment gains. In fact, some researchers have proposed that the use of teachers as trainers is the active ingredient in the intervention and is responsible for this long-term maintenance of effects (Ridley & Vaughn, 1982). However, the mixed results between research teams regarding improvements in actual behavior cast doubt on the efficacy of Shure and Spivack's program.

One of the difficulties in establishing the efficacy of the Shure and Spivack (1982) program could be that it requires abstract reasoning skills not typically found in preschoolers (see Nangle et al., in press, for a review). The first part of the intervention, for example, involves teaching the children the concepts and language involved in the training. Perhaps the necessity of this step highlights that the concepts were too complicated for children to fully internalize. In addition, the program was designed to teach children the process of problem solving, without providing the appropriate social skills required for effective problem solving. It may be necessary to include the behavioral component explicitly in the training. Due to the fact that learning appropriate social skills is a developmental task of the preschooler (Bierman & Montminy, 1993), training in these skills is critical. It may be necessary to provide social skill training in the strictest sense, as implied by the Ladd and Mize (1983a, 1983b) social-cognitive

learning model of social skill training, especially given that the goal of such training is behavioral change.

More recent research has taken the basic approach put forth by Shure and Spivack and revised the strategies in order to make them appropriate for use with older children (e.g., Lochman et al., 1984; Lochman & Lampron, 1988). Consistent with developmental theory, cognitive interventions do appear to be more effective with older children and adolescents (see Durlak, Fuhrman, & Lampman, 1991, for a review). Due to the increased latitude afforded by using a more cognitively advanced population, these interventions tend to be more comprehensive and sophisticated. An example of one of the more advanced models for intervention is Crick and Dodge's (1994) social information-processing model. Following this model, interventions with older children target social goals, interpretation and encoding of social cues, and retrieval of appropriate behavioral responses from memory. The complexity and comprehensiveness of these social-cognitive problem-solving skills interventions make them attractive to researchers and clinicians alike. As a result, intervention research with aggressive preschoolers has faltered and has rarely been extended beyond the research reviewed here.

Social Skills Training. In contrast to interpersonal cognitive problem solving (e.g., Shure & Spivack, 1982), social skills training focuses on overt behavior change. This approach is commensurate with the social skills deficit hypothesis, which states that children who are aggressive or disliked by their peers have deficits in skill knowledge, skill performance, and/or evaluation of skill performance (see Nangle et al., in press, for a review). For example, a child may not have knowledge of the appropriate skills to apply to social situations. Alternatively, a child may have skill knowledge, but might not

perform the skill effectively or might not accurately evaluate his/her performance of the skill.

In one of the few interventions employing a sample of aggressive preschoolers, Zahavi and Asher (1978) examined the effects of verbal instruction on instances of positive and aggressive behavior. The eight most aggressive children, based on behavioral observations, were employed as participants. The verbal instructions were administered by the child's teacher, who was trained to provide the verbal instructions effectively. The teachers verbally instructed participants on three concepts in one short individual session: aggression hurts others, aggression does not solve problems, and positive ways to solve conflicts are sharing, taking turns, and playing together. Behavioral observations indicated that aggressive behavior decreased and positive activity increased at post-treatment and these effects were maintained at a two-week follow-up. These results indicated that even brief verbal instructions can improve the behavior of aggressive preschoolers. Moreover, teachers were effective instructors and the provision of prosocial alternatives resulted in an increase in positive behaviors rather than withdrawn behaviors (Zahavi & Asher, 1978).

These results are particularly noteworthy given that this intervention only implemented one out of three of the steps outlined by Ladd and Mize (1983a, 1983b). Information about the appropriate social skills was provided verbally, enhancing skill knowledge, although this information was not modeled for the children. Maintenance beyond the two-week follow-up would need to be demonstrated prior to determining whether or not this abbreviated intervention was truly effective.

In a replication of Zahavi and Asher (1978) with a Head Start population, Carpenter and Nangle (in press) examined the effects of verbal instructions on the eight most aggressive preschoolers, contrasted with a non-aggressive control group, in one Head Start classroom. Limited support for the effectiveness of brief verbal instructions was found. Specifically, teacher ratings revealed significant improvements in treated children's prosocial skills from pre-treatment to post-treatment that were maintained at the one-month follow-up. Although significant improvements were found in observed positive and negative behavior between post-treatment and follow-up, it is difficult to conclude that these improvements were due to the treatment given the lack of commensurate post-treatment findings. It could be, however, that the behavioral improvements found between post-treatment and follow-up were a delayed effect of the treatment.

In general, these results indicate that the use of teacher-administered brief verbal instructions with a sample of aggressive Head Start preschoolers is promising. The effects from post-treatment to follow-up are intriguing, especially given that "sleeper effects" are common in social skills training research (e.g., Bierman, Miller, & Stabb, 1987). In addition to providing time for the skill concepts to become internalized, a delayed effect could also be due to the use of the teacher as the verbal instructor. Perhaps the teacher acted as a memory cue for the trained children such that the verbal instructions were recalled more readily in the daily presence of the classroom teacher. It is expected that if this intervention were extended commensurate with Ladd and Mize's (1983a, 1983b) full model, then the effects would be strengthened, especially with respect to reductions in aggressive behavior.

Factor and Schilmoeller (1983) also investigated the effects of a social skills training program on aggression and sociability in preschoolers. The training program involved teaching the concepts of communication, participation, cooperation, and validation/support to the children. Like Zahavi and Asher (1978), this program employed verbal instructions/prompts to teach concepts, but added the behavioral components of modeling, positive reinforcement (i.e., attention and praise), and rehearsal. In other words, Factor and Schilmoeller (1983) included a larger number of components from the Ladd and Mize (1983a, 1983b) model of social skill training than did Zahavi and Asher (1978). Skill knowledge was enhanced through verbal instructions and modeling of the social skills. Skill performance was trained through rehearsal and positive reinforcement, although corrective feedback was not provided to the children. The third step, fostering maintenance and generalization, was also only partially instituted in this program. The researchers provided rehearsals that gradually became more realistic as the children were encouraged to use their skills with an ever-widening group of other children. The children were not taught self-evaluation techniques, however, in order to self-monitor skill performance and outcome. These self-evaluation techniques would be challenging to teach to preschoolers, who have limited cognitive monitoring abilities (Revelle, Wellman, & Karabenick, 1985), and may therefore not even be appropriate for this population.

The researchers labeled this social skills training program an educational model of intervention, emphasizing the components of instruction and skill practice. Rather than targeting specific children for intervention, all children in a normal preschool class received the training in groups of four. The results indicated that the children displayed

lower verbal and physical aggression and received higher sociability scores (i.e., group positive behavior minus unoccupied, onlooker, solitary, and parallel play behaviors) in comparison to a control group, both measured through behavioral observations (Factor & Schilmoeller, 1983). This study highlights the utility of social skills training programs for all preschoolers, regardless of sociometric status or aggression level. However, generalization from the training setting to the classroom setting was not found at one-week follow-up. Generalization could be enhanced by using teachers as trainers and providing training in the classroom. In addition, long-term follow-up was not assessed by Factor and Schilmoeller (1983) and should be addressed in future research.

Although not specifically targeting aggression, Mize and Ladd (1990a) conducted social skills training with preschoolers judged to be of low social status based on sociometric ratings and nominations. The methodology is based entirely on the Ladd and Mize (1983a, 1983b) social-cognitive model of social skill training, emphasizing instruction, rehearsal, and feedback. Children were trained in positive social skills, such as joining another child in play or suggesting ways to elaborate play themes, through the use of toys and hand puppets modeling the social skills. Next, the children role-played with the puppets and then with a low social status peer. Finally, the children played with high social status play partners and were encouraged to use their newly acquired social skills. Feedback was provided by the skill instructors and self-monitoring was encouraged by asking the children to recall the play sessions, and to identify both instances of skill usage and the play partners' reaction to the social skills. Skill-trained children were found to more than double their frequency of positive social skill usage from pretest to posttest and exploratory one-month follow-up findings indicated a

significant gain in positive sociometric nominations. This intervention, however, did not reduce aggression levels (Mize & Ladd, 1990a). It appears likely that interventions seeking to promote prosocial skills need to include more direct efforts to target aggression in order to be effective (Bierman et al., 1987).

An important aspect of the Mize and Ladd (1990a) intervention may be the incorporation of higher social status peers in the training procedures. Similarly, Factor and Schilmoeller's (1983) intervention included all children in a preschool classroom. Perhaps widening the scope of the intervention beyond target children is a key aspect of the methodology. In fact, Ruther and Matherford (1991) found that peer-mediated interventions not only have positive treatment effects but aid in generalization across settings. It is also important to teach nonaggressive children to deal with the aggression of their peers so as not to maintain and reinforce the aggression of others by paying attention to it (Solomon & Wahler, 1973) or giving in to it (Patterson et al., 1967). Therefore, a curriculum-based intervention may prove to be the most effective treatment for preschool aggression.

<div align="center">The Present Study</div>

The present study evaluated a curriculum-based social-cognitive skills training procedure designed to reduce aggression levels and promote positive social skills in a classroom of Head Start preschoolers. Following the theoretical foundations set forth by Ladd and Mize's (1983a, 1983b) social-cognitive learning model of social-skill training, the present study emphasized the training procedures of instruction, rehearsal, and feedback in an effort to enhance skill knowledge, performance, and generalization/maintenance of social skill acquisition. The specific skills trained were

those used in the Mize and Ladd (1990a) and the Factor and Schilmoeller (1983) studies:

cooperation, validation/support, and communication (including questions, comments, and

leads). To further promote generalization and maintenance, regular classroom teachers

implemented the training to all children in the Head Start classroom as part of the general

curriculum. Although a caveat with respect to potential bias on teacher ratings,

employing teachers as trainers was considered to have more ecological validity and to

promote generalization from the training setting to general classroom activities (e.g.,

Lochman & Wells, 1996; Ridley & Vaughn, 1982). Furthermore, the effects of training

were considered to be more likely to be maintained with the classroom teacher in the role

of skill trainer. In order to adequately test for maintenance, a three-month follow-up

assessment was included in the present study. Past research has often failed to adequately

assess follow-up (e.g., Factor & Schilmoeller, 1983; Mize & Ladd, 1990a; Zahavi &

Asher, 1978). It was considered critical to determine not only whether the treatment was

successful, but also whether or not the treatment effects could be maintained.

A Head Start population was chosen for a variety of reasons. Head Start is a

federal program first started in 1965 for preschoolers from families living in poverty

(Ripple, Gilliam, Chanana, & Zigler, 1999). Head Start students are considered at-risk

for a variety of difficulties associated with economic disadvantage and begin Head Start

with lower socioeconomic status, lower ability level, and are less likely to have a father in

the house than students attending other types of preschools (Lee, Brooks-Gunn, Schnur,

& Liaw, 1990). Given that low socioeconomic status is related to aggression (e.g.,

Patterson & Bank, 1989), these preschoolers were also expected to exhibit higher levels

of aggression than found in a typical preschool.

Indeed, a formal review of the University of Maine Psychological Services Center's records indicated that of the 177 children referred from Maine Head Start centers between Fall 1991 and Spring 1999, 40% exhibited difficulties concerning aggression serious enough to warrant referrals for mental health consultation (Carpenter & Nangle, 1999). These results indicate that aggressive behavior is a cause for concern in Maine Head Start centers. Rather than address these concerns repeatedly on a case-by-case basis, the development of a systemic form of intervention might be more beneficial.

The main hypotheses of the present study were that, in the treatment group, in comparison to the control group, a) negative social behavior, including aggression, would decrease at post-treatment and follow-up, as measured by teacher ratings and an enactive interview; b) positive social behavior would increase at post-treatment and follow-up, also measured by teacher ratings and an enactive interview; c) peer ratings of social acceptance would increase at post-treatment and the three-month follow-up; and d) the largest effects would be found for the most aggressive subgroup of children.

Social-cognitive skills training was expected not only to improve the behavior of children currently experiencing behavioral difficulties, but also to prevent children without behavioral problems from developing difficulties. Moreover, the intervention was designed to teach children effective ways of handling aggressive peers and that aggression is not acceptable behavior. As a result, treatment effects were expected in the group as a whole on the basis of individual changes in behavior and skill knowledge.

Overall, it was expected that the largest treatment effects would be found for the most aggressive children in the classroom. It was hypothesized that the improvement of this extreme portion of the classroom would be largely responsible for improving the

overall dynamics in the classroom, resulting in positive group effects. It was expected that larger improvements in behavior would result for the aggressive subgroup than the sample as a whole, given that this group would have the largest potential for positive change. Examination of the effects of treatment on the aggressive subgroup would provide insight into the beneficial effects of social-cognitive skills training on aggression in preschoolers.

METHOD

Participants

Eighty preschool children enrolled in four local Head Start centers participated. Two of the classrooms were randomly assigned as active treatment sites (n=34), and two were randomly assigned as control sites (n=46). The treatment was implemented as part of the general curriculum for Head Start and informed consent was not required for children in the treatment condition. The curriculum was approved by a review board composed of parent representatives prior to the start of the school year. Informed consent was required, however, for the individual child interviews with research assistants (see Appendix A). One child in the treatment condition and one child in the Head Start control condition were not granted parental informed consent to participate in the interview portion of the data collection.

In the treatment condition, 47% of the sample were male (n=16) and 53% were female (n=18). The treatment group was primarily Caucasian (94% or n=32). One child was Hispanic and another was African-American. The mean age of the treatment group at pre-treatment was four years, two months (range=37-62 months). The control group was 59% male (n=27) and 41% female (n=19). Caucasians comprised 89% (n=41) of the control group. Two children were Hispanic, two were African-American, and one was Native American. The mean age of the control group at pre-treatment was four years, zero months (range=36-59 months).

Head Start populations are composed of economically disadvantaged children who are considered to be at-risk for educational disabilities (Trueting & Elliott, 1997). In

general, Head Start students have lower socioeconomic status and lower ability levels than children in other types of preschools (e.g., Lee et al., 1990).

<div align="center">Overview of Assessment and Treatment Procedures</div>

Baseline assessment consisted of a peer rating measure of sociometric status, the Social Skills Rating System for Teachers (SSRS-T; Gresham & Elliott, 1990), the Aggressive Behavior subscale of the Child Behavior Checklist Caregiver-Teacher Report Form (C-TRF; Achenbach, 1997), teacher ratings of relational aggression, and an enactive social knowledge interview (Mize & Ladd, 1988). During the baseline assessment period, teachers in the two active treatment centers participated in a teacher training meeting that focused on the first six sessions of the intervention. A second teacher training meeting occurred after the first half of the intervention and focused on the last six sessions of the intervention. These teacher training meetings included instruction, role-play, and problem-solving around obstacles to effective treatment delivery. The teachers were encouraged to contact the primary experimenter with any questions or concerns during the course of the intervention. At the beginning and the end of the intervention, the teachers completed a manipulation check questionnaire measuring expectancy for treatment success or failure and understanding of the social skill concepts contained in the intervention. At post-treatment and three-month follow-up, the same battery of child assessment measures were administered in both the treatment and control centers.

Totaling 12 treatment sessions, the social-cognitive skills training curriculum was delivered twice a week for six weeks in two of the Head Start centers. The teachers conducted the instructional portion of the sessions during "circle time," which is usually a

time when the children are instructed as a group on various academic readiness skills, such as the alphabet or color naming. The rehearsal component occurred either as a free play station or also during circle time, depending on the specific activity for each session. Teachers were encouraged to praise children for using the skills outside the training sessions.

Most of the activities chosen for rehearsal were taken from the Kindness Curriculum (Rice, 1995), which is an activity book provided to Maine Head Start teachers. Although not required, this curriculum is available for use by Maine Head Start teachers and the activities promote positive social behavior. Although academic readiness is its principal goal, Head Start strives to emphasize all aspects of development in their curriculum, including social competence. Therefore, because the control classrooms follow Head Start guidelines, these classrooms do not function as a "no treatment" control condition. Rather, Head Start is considered to be an early intervention and prevention program for low-income preschoolers. Results from longitudinal studies indicate that Head Start and similar preschool programs have a favorable impact on global measures of social competence, such as juvenile delinquency, teen pregnancy, special education placement, rates of grade retention, and school attendance (see Locurto, 1991, for a review). Measures of actual social skills are not included in this outcome research and these skills may mediate relationships between global social competence and outcome. Furthermore, examination of social development in Head Start samples is considered to be an under-researched area in general (Raver & Zigler, 1997). The present study was an investigation of the effectiveness of a formal social-cognitive skills training curriculum above and beyond the supports already provided by Head Start.

<u>Measures</u>

The following measures were completed at baseline (i.e., one month after the start of school), post-treatment (i.e., one-and-a-half weeks after the completion of treatment), and at 3-month follow-up (i.e., mid-February). Teachers completed three behavior rating scales for each child in their classroom. Additionally, each child met one-on-one with graduate or advanced undergraduate research assistants to complete peer ratings and an enactive social knowledge interview.

<u>Peer Ratings of Acceptance</u>

A sociometric rating scale was administered at each time period to provide a general measure of each child's acceptance by his/her peers (see Appendix B). The rating scale asked the children to rate how much they like to play with each of their classmates, shown in random order, by assigning a happy, neutral, or sad face to each child. Specifically, each child was asked, "How much do you like to play with (child's name)?" while shown a picture of the child in question (Asher, Singleton, Tinsley, & Hymel, 1979; Fantuzzo, Manz, & McDermott, 1998; Poteat, Ironsmith, & Bullock, 1986). The child pointed to a happy face (<u>I like to a lot.</u>), a neutral face (<u>Sometimes I do and sometimes I don't.</u>), or a sad face (<u>I don't like to at all.</u>). The happy face represented a score of "3," the neutral face was scored a "2," and the sad face was scored a "1." Average ratings, with a possible range of 1 to 3, were determined for each child by creating a mean rating based on each child's ratings by each of his or her classmates. For the purposes of the present study, these average ratings provided a peer report of each child's global social acceptance or likability and was therefore a measure of social validity.

Peer nominations were also considered as a possible mode of assessing

acceptance. With this method, each child nominates the three children he/she most likes

to play with or his/her three best friends. Peer ratings were chosen over peer nominations

because, in general, peer ratings are more reliable and stable than peer nominations due to

the fact that each child in the classroom is rated by every other child (e.g., Asher &

Hymel, 1981; Epkins, 1995). This results in the added advantage of gleaning information

for every child on an interval scale (Epkins, 1995). In other words, given that every child

receives ratings from his or her classmates, a larger, and therefore more reliable, data set

is generated for each child (Foster, Inderbitzen, & Nangle, 1993). This results in more

data points to use in the mean rating for each child. With peer nominations, the

possibility exists that certain children will not be nominated by the other children at all,

resulting in no data points for that child.

High test-retest reliability has been found for peer ratings in preschoolers (r's

ranging from .72 to .81) over periods of three to seven weeks (Asher et al., 1979; Boivin

& Begin, 1986; Olson & Lifgren, 1988; Poteat et al., 1986). Dorval and Begin (1985)

found a 22-week test-retest reliability of r=.65 in preschoolers. In general, peer ratings

are considered to be a reliable means of assessing social status in preschoolers (Hymel,

1983).

The validity of peer ratings has been investigated through examination of their

correlations with other assessment measures. Of particular interest for the present study,

Olson and Lifgren (1988) found that rating scores were significantly correlated with

teacher ratings of aggression (r = -.26) and positive peer interaction (r = .23) in a

preschool sample. Other researchers have documented moderately strong correlations

between peer ratings and direct observations of behavior, social problem-solving ability, and teacher ratings of social behavior, problem behavior, and popularity (Boivin & Begin, 1986; Hymel, 1983). Peer ratings are considered a valid form of assessing social acceptance in preschoolers.

Because peer ratings are conducted using a Likert scale, these ratings are considered to be more sensitive to changes in ratings from one point in time to another (Asher & Hymel, 1981). Combined with good test-retest reliability and convergent validity, sensitivity to change makes peer ratings the best sociometric assessment measure to use as a dependent variable in intervention research. However, social skills training research employing peer ratings with young children have not traditionally found treatment effects (e.g., Mize & Ladd, 1990a; Winer et al., 1982). Actually, this is a difficulty encountered in the literature at large (see Nangle et al., in press, for a review). It is possible that a sleeper effect exists with peer ratings, such that change is only detected at long-term follow-up assessments. In fact, treatment studies with older children indicate that greater improvements in peer acceptance are found at follow-up than at post-treatment (e.g., Bierman et al., 1987; Oden & Asher, 1977). It could be that it takes time for the other children to take note of changes in a classmate's behavior and for these changes to then impact peer acceptance ratings. Therefore, follow-up assessment is necessary in order to determine change in ratings of peer acceptance.

Social Skills Rating System-Teacher Form

The Social Skills Rating System-Teacher Form (SSRS-T; Gresham & Elliott,

1990) was included to provide a comprehensive assessment of social skills typically

displayed in the classroom (see Appendix C). The Preschool Level (ages 3-0 to 4-11) of

the SSRS-T consists of 40 items such as, "Finishes classroom assignments within time

limits," scored on a 3-point scale (0=Never, 1=Sometimes, 2=Very Often). The SSRS-T

is composed of two main scales: Social Skills (e.g., Makes friends easily; Gives

compliments to peers; Waits turn in games or other activities) and Problem Behaviors

(e.g., Has temper tantrums; Appears lonely). The Social Skills scale has Standard Scores

ranging from 40 to >130, whereas the Problem Behaviors scale scores range from <85 to

145. Both scales have a mean of 100 and a Standard Deviation of 15. The Social Skills

scale has three subscales: Cooperation, Assertion, and Self-Control. The Problem

Behaviors scale has two subscales: Externalizing and Internalizing.

The SSRS is currently considered the most comprehensive rating scale assessment

of social skills (e.g., Demaray et al., 1995; Furlong & Karno, 1994) and was used in the

present study as a broad measure of social behavior. One advantage is the fact that the

items are primarily behavioral and therefore required a low level of inference on the part

of the teacher (Benes, 1994). Furthermore, the psychometric properties of the SSRS-T

indicate adequate reliability and validity. Internal consistency using Cronbach's alpha

was .94 for the Social Skills scale and .82 for the Problem Behavior scale of the SSRS-T

(Gresham & Elliott, 1990). Four-week test-retest reliability coefficients were .85 for the

Social Skills scale and .84 for the Problem Behaviors scale of the SSRS-T at the

elementary level (Gresham & Elliott, 1990). These results indicate that the SSRS-T Preschool Level is reliable.

Enduring more rigorous validation than the preschool form, investigation of the elementary form has yielded correlations in the expected directions between .46 and .81 with various social behavior assessment measures (Gresham & Elliott, 1990). The SSRS-T also has been found to differentiate between popular and rejected kindergarten through sixth-graders (Stuart, Gresham, & Elliott, 1991), revealing differences commensurate with the empirically derived behavioral descriptions of these two groups of children (Coie et al., 1982). Although these findings pertain directly to the SSRS-T Elementary Level, it is reasonable to assume that the Preschool Level of the SSRS-T, similar in derivation and content, has comparable validity.

Successful attempts have been made to directly validate the SSRS-T Preschool Level. In several studies, the SSRS-T was able to discriminate between typical preschoolers and those who were developmentally delayed, diagnosed with Attention Deficit/Hyperactivity Disorder, and enrolled in Head Start (Byrne, Bawden, DeWolfe, & Beattie, 1998; Lyon, Albertus, Birkinbine, & Naibi, 1996; Treuting & Elliott, 1997). With respect to convergent validity, the Social Skills scale and the Problem Behaviors scale of the SSRS-T were found to correlate in the expected directions with the Socialization Domain of the Vineland Adaptive Behavior Scales, teacher ratings of prosocial behavior, and the Revised Conners Ratings Scales teacher form (Lyon et al., 1996; Treuting & Elliott, 1997).

Fantuzzo et al. (1998) attempted to validate the SSRS-T Preschool Level with Head Start children. The overall Social Skills scale and the Problem Behaviors scale

were found to be inversely related, indicating that these two subscales represent opposite poles of the overall construct of social competence. The degree of overlap between peer ratings/peer nominations and the SSRS-T was less than six percent (Fantuzzo et al., 1998), indicating that measurement of peer acceptance is relatively independent from the measurement of social competence in preschoolers. As such, the SSRS-T Preschool Level does not substitute for the measurement of peer acceptance.

Direct evidence of the validity of the SSRS-T Preschool Level is also found in studies that have employed the SSRS-T as a dependent variable. In a study examining the treatment of withdrawn, maltreated preschoolers attending Head Start, the SSRS-T Preschool Level was sensitive to treatment effects, as indicated by increased social skills and decreased problem behaviors (Fantuzzo et al., 1996). Similarly, McKinney and Rust (1998) found a pre-treatment to post-treatment decrease in Problem Behavior scores in a sample of African-American preschoolers. Therefore, the SSRS-T is an assessment device capable of revealing effects in treatment studies.

Aggressive Behavior Subscale of the Child Behavior Checklist Caregiver-Teacher Report Form for Ages 2-5

Teachers were asked to complete the Aggressive Behavior subscale of the Child Behavior Checklist Caregiver-Teacher Report Form for Ages 2-5 (C-TRF; Achenbach, 1997) for each child in their classroom at each time point (see Appendix D). The C-TRF is a broad-band assessment of children's behavior in a variety of domains, broken down into seven subscales (i.e., Anxious/Obsessive, Depressed/Withdrawn, Fears, Somatic Problems, Immature, Attention Problems, and Aggressive Behavior). The Aggressive Behavior subscale provides a comprehensive assessment of physical and verbal

aggression. The teacher rates each of the 23 items, such as "Gets into many fights," on a three-point scale (0=Not True, 1=Somewhat or Sometimes True, and 2=Very True or Often True). T-Scores on the Aggressive Behavior subscale range from 50 to 100, with the mean being 50 and a Standard Deviation of 10.

The Aggressive Behavior subscale is of particular interest given that one of the goals of the present study was to decrease aggressive behavior. This subscale is appropriate to use independently of the entire C-TRF based upon its reliability and validity. In fact, during validation of the C-TRF, the Aggressive Behavior subscale was found have the strongest psychometric properties of all the C-TRF subscales (Achenbach, 1997). For example, 9-day test-retest reliability was .90 and interrater reliability was .75 (Achenbach, 1997). Based upon these results, the Aggressive Behavior subscale of the C-TRF is considered to be adequately reliable.

With respect to validity, the Aggressive Behavior subscale was found to discriminate between children who had been referred for behavioral/emotional problems and normative samples of children, while controlling for socioeconomic status and ethnicity (Achenbach, 1997). In fact, the Aggressive Behavior subscale yielded the largest difference between the referred group and the normal group for boys and the second largest difference for girls, in comparison to the other subscales. The Aggressive Behavior subscale was also found to be the best able of all the subscales to correctly classify a child as referred versus normal. Moreover, in comparison to parent ratings on the Child Behavior Checklist (CBCL), the C-TRF Aggressive Behavior subscale correlated .63 with the CBCL for ages 2-3 and .39 with the CBCL for ages 4-18

(Achenbach, 1997). Together, these findings indicate that the Aggressive Behavior subscale of the C-TRF is a valid assessment of aggression in preschoolers.

Achenbach (1997) notes that the C-TRF is appropriate for use in research. An example is cited of a treatment study being documented through scores on the C-TRF decreasing between baseline and post-treatment assessments. Moreover, the C-TRF is considered to be appropriate for evaluating the effectiveness of interventions designed to enhance the functioning of all the children in a group, given that the C-TRF was developed to assess problems seen in preschool and other group settings (Achenbach, 1997). In addition, the comparison of children's scores to the normative tables provided by the C-TRF allows for examination of clinical significance. Overall, the Aggressive Behavior subscale of the C-TRF is considered to be a valuable measure of changes in aggression as a result of intervention.

Teacher Ratings of Relational Aggression

The relational aggression factor of the Preschool Social Behavior Scale—Teacher Form (PSBS-T; Crick et al., 1997) was completed by teachers at each of the three time periods (see Appendix E). The six-item relational aggression factor taps into the construct of relational aggression with items such as, "Tells others not to play with or be a peer's friend," rated on a one to five Likert scale (1=never or almost never true, 2=not true most of the time, 3=sometimes true, 4=true most of the time, 5=always true or almost always true). The resulting possible range of scores is therefore 6 to 25. The relational aggression factor was administered in the present study due to the emerging research indicating that relational aggression may be an important type of aggression that has been overlooked in the literature (e.g., Crick et al., 1997). Relational aggression may be

particularly important to the understanding of differential effects of the intervention by gender.

The PSBS-T was derived for use in the one study that has examined relational aggression in preschoolers (Crick et al., 1997). Therefore, the psychometric evaluation of this instrument is limited. The items were derived by face-validity standards and a factor analysis indicated that six of the original eight relational aggression items did emerge as a separate factor independent of the overt aggression, prosocial behavior, and depressed affect factors. A Cronbach's alpha of .96 on the relational aggression factor indicates very high internal consistency of the six items. Although information about reliability and validity is limited, the importance of advancing the literature with respect to relational aggression warranted the use of the relational aggression factor of the PSBS-T in the present study.

Enactive Social Knowledge Interview

Mize and Ladd's (1988) enactive social knowledge interview, an analogue behavioral measure, was individually administered to each child at each of the three time periods by trained graduate or advanced undergraduate research assistants (see Appendix F). The research assistants were trained through instruction, role-play, and pilot testing with Head Start preschoolers not involved in the present study. The materials necessary for training the researchers are contained in the administration and coding manual for the enactive interviews (see Appendix F). During training, the written materials were reviewed, followed by role-play between the research assistants. Once the research assistants were able to administer the enactive interview comfortably to each other, pilot testing was done on Head Start preschoolers. These pilot tests were observed by the

primary investigator and the performance of the research assistant was compared to the scripts located in the manual. After a criterion of two perfect administrations was met, the research assistants were considered fully trained.

In the enactive interviews, six hypothetical social dilemmas were presented to the child. The child was given a puppet and told to pretend he or she was the puppet. The child then acted out his or her response to each situation. The children's responses to the hypothetical social dilemmas were audiotaped and then transcribed verbatim. The transcriptions were then coded on a one to five Likert scale measuring degree of friendliness versus hostility, resulting in a possible mean score ranging from one to five, as well. In addition, following work by Eisenberg and colleagues (Eisenberg, Fabes, Minore, et al., 1994; Eisenberg et al., 1997) the presence versus absence of physical aggression was also coded for the responses to the vignettes. Up to three separate behaviors per vignette were rated for overt physical aggression (1=presence; 0=absence). Therefore, the possible range for mean physical aggression scores was zero to three.

Two advanced undergraduate research assistants were the primary interview coders, each coding one half of the interviews. Coding instructions were included in the enactive interview manual (see Appendix F), facilitating the coding process. Examples of typical responses and their appropriate codes are also listed in the manual. In order to ensure that the manual was comprehensive with respect to the types of responses found in the present sample, a graduate research assistant coded all of the pre-treatment data. She added response examples when necessary, determining the appropriate codes based on the continuum from friendliness to hostility outlined in the original manual. All of these materials were reviewed in detail in an interview coding training session with the two

primary coders. Once the coders achieved a criterion of three consecutive perfect matches between their ratings and the graduate research assistant's ratings on a small portion of the data, the primary coders began coding all of the data.

In order to assess the final interrater reliability of the friendliness ratings, the codes derived by the graduate research assistant at pre-treatment were compared with the pre-treatment codes of the primary coders through a Pearson correlation. The interrater reliability of the friendliness ratings of the enactive interviews was .92 for Coder 1 and .86 for Coder 2.

In order to protect against observer drift among the coders between the pre-treatment coding and the post-treatment and follow-up coding, the two primary coders and the graduate research assistant consensed any discrepant pre-treatment ratings in a session directly preceding the post-treatment and follow-up coding. Each pre-treatment response was reviewed and if the graduate research assistant's code did not match the primary coder's code, then the three coders discussed the discrepancy until a consensus was reached. These consensed pre-treatment scores were utilized in the final analyses.

The physical aggression scores were coded by the primary investigator. The graduate research assistant also coded a random one third of the interviews for physical aggression at each of the three time points. The interrater reliability, measured by Pearson correlation, was .98 between the primary investigator and the graduate research assistant with respect to physical aggression scores from the interview.

Mize and Ladd (1988) designed the enactive interview as a means of improving the ecological validity of verbal assessments of children's social knowledge. This assessment is considered to contain both social-behavioral and cognitive qualities,

thereby providing a match between the assessment and intervention methods of the present study. Furthermore, the enactive interview is capable of eliciting behavioral responses while circumventing the rigors of direct behavioral observation, as evidenced by correlations with observed behavior (Mize & Ladd, 1988). Therefore, the enactive interview provided an objective behavioral and cognitive assessment of children's social skills, balancing the teacher ratings of behavior and peer ratings of acceptance in the present study.

In a sample of preschoolers enrolled in publicly-funded daycare (i.e., lower socioeconomic status), the enactive social knowledge interview has demonstrated internal consistency among the six stories, as measured by Cronbach's alpha's of .64 for friendliness ratings (Mize & Ladd, 1988). Three-week test-retest reliabilities were r=.77 for friendliness ratings. With respect to validity, the friendliness ratings, measured on a continuum from hostile to friendly, were significantly correlated with teacher ratings of prosocial behavior (r=.56), teacher ratings of aggressive behavior (r=-.46), directly observed prosocial behavior (r=.32), and directly observed aggressive behavior (r=-.33). The friendliness ratings were not significantly related to peer ratings of acceptance in this sample (Mize & Ladd, 1988), again highlighting the need to conduct peer ratings in addition to measures of social knowledge or social competence. These authors speculate that the cognition-behavior-social status "links" are not as strongly developed in the preschool years, undermining the relationship between this behavioral assessment and peer acceptance ratings.

In order to assess the psychometrics of the physical aggression rating, Eisenberg, Fabes, Minore, et al. (1994) conducted a validation study with preschool and kindergarten

children. Interrater reliability was near perfect (kappa=.86) for physical aggression and

acceptable for friendliness ratings (84% exact agreement). Cronbach alphas were .70 for

friendliness ratings and .73 for physical aggression. Further evidence of the validity of

both the friendliness ratings and the physical aggression ratings is found through

significant correlations in the expected direction between each rating and types of

observed anger reactions, and adult ratings of instrumental coping, aggressive coping,

social skills, and negative emotionality. The reliability and validity of both the

friendliness versus hostility ratings and the presence of physical aggression in the

enactive social knowledge interview appears to be adequate. The enactive interview is

also viewed as particularly valid with children from low-income families, due to the

lower levels of language ability often characteristic of these children (Mize & Cox, 1989).

Given the correlations between the enactive hypothetical dilemma interviews and

behavioral observations, this measure is considered to be an economical behavioral

measure capable of assessing treatment effects commensurate with the social skills being

trained. Aggression is a low base-rate behavior and it is advantageous to measure

treatment gains through a method more likely to result in the exhibition of aggression

than naturalistic observations. For example, in the Eisenberg, Fabes, Minore, et al.

(1994) study, direct observations of physical and verbal aggression had to be omitted

from the analyses due to low frequency. Moreover, it is often difficult to collect enough

data points to represent adequately a preschooler's social behavior. Doll and Elliott

(1994) examined this issue and discovered that in order to reliably and validly capture a

preschooler's social behavior, each child must be observed for 50 minutes of social

interaction at each measurement interval. Ideally, data collection should be spread out

across time, a minimum of two to three weeks (Doll & Elliott, 1994). Practically

speaking, this translates into approximately 80 hours of observation time per

measurement period, excluding the amount of time necessary to train coders to criterion.

According to S.R. Asher, a leading researcher of aggression in children, analogue

behavioral assessments are often preferred over behavioral observations for the reasons

described above (personal communication, January 10, 2000). Therefore, it was

preferable to employ the enactive social knowledge interview (Mize & Ladd, 1988),

supplemented by teacher ratings of behavior and peer ratings of social acceptance.

<u>Manipulation Check of Treatment Integrity</u>

In order to determine the teachers' proficiency levels for administering the social-

cognitive skills training, along with the degree of positive expectancy (i.e., expectations

of the success of the treatment), a questionnaire was administered to the teachers pre-

treatment and post-treatment (see Appendix G). This questionnaire measured knowledge

of the material being trained during the intervention and expectations that the teachers

had as to the success of this type of intervention. Measurement of positive expectancy is

important to determine the degree of teacher bias on the teacher ratings. If, on the one

hand, the teacher ratings are the only form of assessment that indicate improvement post-

treatment, a low degree of positive expectancy would improve the validity of these

findings. On the other hand, a high degree of positive expectancy would indicate that

these findings were likely due to teacher bias.

Part I of the questionnaire is the measurement of expectancy and includes 6 items

scored on a one-to-five Likert scale. Differences between pre-treatment and post-

treatment expectancy are an indirect measure of social validity in that changes in

expectancy tap into satisfaction or dissatisfaction with the treatment. At both pre-treatment and post-treatment, the mean expectancy level was 4.65. Part II is the measurement of the teachers' knowledge of the social skills training procedure and material and is comprised of 8 free recall items, requiring a total of 19 responses. Pre-treatment tests were scored during the first teacher training meeting and missed items were reviewed. At pre-treatment, the mean score was 72.4%. Post-treatment scores indicate the level of expertise achieved by the teachers as a result of participating in the intervention as social skills trainers. At post-treatment, the mean score was 97.5%. Despite a lower level of curriculum knowledge at pre-treatment, the teachers were knowledgeable social skills trainers at the end of curriculum administration.

In addition, randomly selected treatment sessions comprising one third of the overall treatment were audiotaped by the primary investigator to ensure that teachers were adhering to the treatment manual guidelines. The primary investigator rated the treatment sessions while watching them in person. The tapes were also rated by an independent coder trained to assign treatment integrity ratings. The sessions were rated on several dimensions (i.e., introduction, instructions, modeling, rehearsal, and feedback) on a one to three Likert scale to determine the degree of match between the session and the description of that session in the treatment manual (1=no match or almost no match with the treatment manual, 2=partially matched with the treatment manual, and 3=perfectly or almost perfectly matched with the treatment manual). Interrater reliability, measured by Pearson correlation, was .37 ($p < .05$). It could be that the difference between coding the sessions in person and coding from an audiotape is responsible for this low level of agreement. Because interrater reliability did not reach an acceptable level, treatment

integrity ratings are reported separately by coder. The primary investigator found that Treatment Site 1 achieved a mean treatment integrity rating of 2.85, while Treatment Site 2 achieved a mean treatment integrity rating of 2.70. The independent coder found Treatment Site 1 to have a mean treatment integrity rating of 2.80 and Treatment Site 2 to have a mean treatment integrity rating of 2.70. These mean ratings indicate that teachers at both treatment sites adhered to the treatment manual to an acceptable degree. Moreover, the mean ratings were not significantly different by site, either according to the primary investigator's ratings, F (1, 24) = .83, p > .05, or according to the independent coder's ratings, F (1, 24) = .10, p > .05.

Treatment

Teacher Training Procedure

The Center Coordinators and Assistant Teachers from the two active treatment sites were present at the two training meetings. The initial training meeting was conducted just prior to the start of the intervention, approximately one month after the start of the school year, allowing the teachers to get to know the children and for the children to assimilate to the Head Start environment. The goal of the first teacher training meeting was to instruct teachers on how to conduct social skills training sessions with the children and the rationale behind social skills training. A treatment manual was used in order to promote standardization of treatment and adherence to treatment protocol (see Appendix H). The treatment manual was the training material for the teachers. Teachers were briefed on the social skills training procedures and scripts of each session from the treatment manual were reviewed in detail. Teachers were also encouraged to provide praise for children exhibiting the newly learned social skills outside the treatment setting.

The first training meeting reviewed the entire treatment plan and then focused on the details of the first half of the intervention. The second training meeting once again reviewed the rationale of the intervention and then focused on the details of the second half of the intervention. The hope was that using teachers as the social skills trainers, as opposed to outside experimenters, generalization of the newly acquired social skills from the treatment sessions to the classroom would be strengthened.

Skills Training Procedure

The teachers conducted the classroom intervention as part of the general curriculum by implementing the social skills training sessions during circle time. The experimenter acted as a consultant during the social skills training in order to ensure treatment integrity, but was not present during the social skills training sessions. The curriculum was based on Ladd and Mize's (1983a, 1983b) social-cognitive learning model of social-skill training. As a result, the curriculum format followed Mize and Ladd's (1990a; 1990b) social skills training of low social status preschoolers and included the components of instruction, feedback, and rehearsal to improve children's knowledge, performance, and monitoring of social skills.

The social skills training program, Curriculum on the Management and Promotion of Appropriate Social Skills (COMPASS) took place twice a week for six weeks (see Appendix H). Typically, Head Start teachers teach academic readiness skills (e.g., colors, categories of objects, etc.) to the children during a 15-minute circle time. Therefore, circle time was ideal for the instructional component of COMPASS. During the instructional component, the teachers modeled the inappropriate and appropriate behaviors with hand puppets. The social skills instructed at this time were: cooperation,

participation, validation/support, and communication (Factor & Schilmoeller, 1983). The first week concentrated on cooperation (i.e., sharing, taking turns, solving conflicts verbally with other children), with aggression as a counterexample of cooperation (i.e., that aggression hurts others, aggression does not solve conflicts, and aggression undermines friendships; Zahavi & Asher, 1978). Mize and Ladd (1983) note that counterexamples may be as critical as positive examples, especially when training skills in the natural environment.

The second week focused on validation/support (i.e., helping others and having fun during play; Factor & Schilmoeller, 1983; also including Mize and Ladd's (1990a; 1990b) supports) and the third and fourth week focused on communication (i.e., talking and listening to others, including Mize and Ladd's (1990a; 1990b) questions, comments, and leads). The fifth and sixth weeks concentrated on integrating the three skills.

The second component, rehearsal, consisted of the children role-playing the appropriate behaviors with hand puppets, and then role-playing the appropriate behaviors with a play partner. The rehearsal with a play partner occurred during a cooperative activity (e.g., puzzles, group drawing activity, etc., taken from Head Start's Kindness Curriculum; Rice, 1995) planned as a station during the free play time following circle time. Typically, three or four play stations are "open" for the children during free play. Often, structured activities are offered as one of the choices. Therefore, the rehearsal with hand puppets and with play partners was accomplished by rotating the children through this activity during free play. Teachers were responsible for ensuring that each child participated in this free play station, rotating the children through the station in groups of two or three.

COMPASS was conformed to the Head Start schedule in order to enhance generalization and maintenance. Rather than social skills training being separate from the general curriculum (e.g., conducted in a separate experimental room by an unfamiliar experimenter), COMPASS was incorporated into the Head Start day, increasing the likelihood of the children also incorporating these new skills into their own daily repertoire. Conducting the training in the classroom sent the message that these new skills are to be used in the classroom. By implementing COMPASS during circle time and free play, the children were taught that these new skills should be used during daily classroom activities. These factors were hypothesized to increase the generalizability of the skills training from the training session to other classroom activities. The classroom would then serve as a cue for using the social skills, thereby enhancing maintenance.

The third component, monitoring of social skill performance, also took place during the play station activity time. Following peer partner rehearsal, the children were asked questions about the play time, specifically exploring the use of the target skills and their effectiveness.

Control Sites

The control children received instructional lessons during circle time, as is typical in Head Start classrooms. In addition, the teachers were encouraged to use activities from the Kindness Curriculum (Rice, 1995) during free play, although lesson plans and timetables were not be provided. Moreover, the control sites continued to provide all of the regular Head Start services and supports. Therefore, as discussed earlier, the control sites served more as an alternative treatment group, rather than a control group, per se. Treatment effects would indicate that the social-cognitive skills training curriculum was

able to provide benefit over and above the supports and services provided by the Head

Start early intervention and prevention program.

RESULTS

Only children with data at each of the three time points were included in the

analyses, resulting in 14-17 of the original 80 children being excluded from any given

analysis. In addition, children at the treatment sites must have attended 75% of the 12

social skills training sessions. Two children in the treatment sites with data at all three

time points were excluded from the following analyses due to the attendance criterion.

<u>Overview</u>

Three primary hypotheses were examined in the following analyses. The first

hypothesis was that a greater decrease in aggressive behavior would occur at post-

treatment and follow-up in the treatment condition as opposed to the control condition.

The second hypothesis was that a greater increase in social skills would be evidenced in

the treatment condition in comparison to the control condition at post-treatment and

follow-up. Finally, peer acceptance, as measured by mean sociometric ratings, was

expected to increase to a greater extent in the treatment as opposed to the control

condition over time. Of secondary interest were gender differences. Specifically,

analyses were conducted to determine whether boys and girls responded to the treatment

in different ways. Finally, the same three hypotheses were examined with respect to the

most aggressive subgroup of preschoolers to determine whether the treatment was more

or less successful for this subgroup. In order to test these hypotheses, the data were first

examined for site differences and then a multivariate analysis of variance approach was

adopted.

<u>Preliminary Analyses</u>

Prior to examining the data for treatment effects, analyses were conducted to determine whether or not the four classrooms differed as a function of site. A multivariate analysis of variance (MANOVA) was conducted, with Site as the independent variable, to determine whether the four classrooms differed at baseline, or pre-treatment. Site was a between subjects factor with four levels: Treatment Site 1, Treatment Site 2, Control Site 1, and Control Site 2. Each of the seven pre-treatment variables comprised the dependent variables list (i.e., SSRS-T Social Skills and Problem Behavior scales; C-TRF Aggressive Behavior subscale; relational aggression scale; aggregate peer rating scores; friendliness and physical aggression ratings on the enactive interviews) in this analysis.

The overall $\underline{F}$-value of the MANOVA was significant, $\underline{F}$ (21, 179) = 4.50, $\underline{p}$ < .001. Therefore, the univariate analyses were examined. Three of the seven dependent variables differed significantly as a function of Site at pre-treatment: SSRS-Social Skills scale, $\underline{F}$ (3, 68) = 5.99, $\underline{p}$ < .01; relational aggression, $\underline{F}$ (3, 68) = 4.59, $\underline{p}$ < .01; and aggregate peer rating scores, $\underline{F}$ (3, 68) = 15.76, $\underline{p}$ < .001.

<u>Examination of Treatment Effects</u>

To control for site differences, difference scores were created to account for change between the three time points. The difference between pre-treatment and post-treatment scores accounts for change between pre-treatment and post-treatment time points. The difference between post-treatment and follow-up scores accounts for change between post-treatment and follow-up time points. Finally, the difference between pre-treatment and follow-up scores accounts for the general change between pre-treatment

and follow-up time points, regardless of post-treatment. Each of these three variables were created for each of the seven dependent variables in lieu of a repeated measures design. In other words, the within-subjects factor of Time was replaced by three separate scores representing the three time points. Moreover, the use of difference scores controlled for site differences by measuring score change, regardless of the actual levels of the original scores. In order to adopt this approach, all of the seven dependent variables were converted to difference scores, and not just those variables found to have site differences.

One advantage of adopting a difference score approach is that the original MANOVA plan can still be employed and each of the hypotheses can be examined under this protective scheme, diminishing the possibility of making a Type I error. Moreover, the use of difference scores clearly outlines the treatment effects with respect to time in the initial analysis. Because each difference score represents a particular change across time, post-hoc comparisons are rendered unnecessary, thereby simplifying the analyses.

Decreased Aggression Hypothesis

In order to determine whether the Treatment group experienced larger decreases in aggression across time than the Control group, a 2 X 2 (Condition X Gender) MANOVA was conducted. The between-subjects factor of Condition had two levels: Treatment and Control. The between-subjects factor of Gender also had two levels: Male and Female. To examine decreased aggression, the following four dependent variables were included in the MANOVA: SSRS-Problem Behaviors scale scores, C-TRF Aggressive Behavior subscale scores, Physical Aggression scores on the enactive interview, and relational aggression scores. Each dependent variable was broken down into three difference

scores: post-treatment minus pre-treatment, follow-up minus post-treatment, and follow-up minus pre-treatment. This method resulted in a total of 12 dependent variables. Thirty-seven preschoolers comprised the Control group, while 26 preschoolers were in the Treatment group. A total of 36 males and 27 females were included in the analysis.

The main effect of Condition was not significant at the multivariate level, F (8, 52) = 1.29, p > .05. Similarly, the main effect of Gender was not significant at the multivariate level, F (8, 52) = .90, p > .05. The interaction between Condition and Gender also was not significant at the multivariate level, F (8, 52) = .61, p > .05. Therefore, no analyses were conducted at the univariate level. These results indicate that there was no significant difference between the Treatment group and the Control group with respect to aggression levels across time (see Table 1). Moreover, no gender differences emerged with respect to aggression levels and gender did not moderate treatment effects on aggression (see Table 2).

Table 1

Table of Means: Control vs. Treatment at Pre-Treatment, Post-Treatment, and

Follow-Up

	Pre-Treatment		Post-Treatment		Follow-Up	
	Control	Treatment	Control	Treatment	Control	Treatment
SSRS-Problem Behaviors	96.3 (12.5) n=45	102.2 (13.6) n=30	94.2 (13.7) n=42	104.7 (13.6) n=34	94.4 (11.3) n=41	100.9 (10.8) n=31
C-TRF Aggressive Behavior	55.2 (6.4) n=45	57.9 (7.5) n=30	54.8 (6.4) n=42	58.8 (8.1) n=34	53.0 (4.4) n=41	56.0 (5.4) n=31
Interview-Physical Aggression	.37 (.46) n=44	.19 (.26) n=30	.45 (.59) n=42	.28 (.39) n=31	.29 (.45) n=40	.31 (.39) n=31
Relational Aggression	7.5 (3.4) n=45	8.0 (3.4) n=31	7.3 (2.9) n=42	9.7 (3.8) n=33	6.7 (1.4) n=40	8.8 (3.2) n=31
SSRS-Social Skills	99.9 (15.6) n=45	90.3 (17.5) n=30	101.0 (18.1) n=42	92.4 (16.7) n=34	110.7 (13.9) n=41	102.0 (13.5) n=31
Interview-Friendliness Ratings	2.8 (.56) n=44	2.9 (.60) n=30	2.8 (.61) n=42	3.0 (.58) n=31	2.8 (.70) n=40	3.0 (.65) n=31
Aggregate Peer Acceptance Ratings	2.4 (.30) n=43	2.4 (.15) n=30	2.4 (.29) n=42	2.4 (.27) n=32	2.3 (.26) n=40	2.2 (.27) n=34

Note. Means are presented followed by standard deviations in parentheses. The appropriate sample size is noted below the mean and standard deviation.

Table 2

Table of Means: Male vs. Female at Pre-Treatment, Post-Treatment, and Follow-Up

	Pre-Treatment		Post-Treatment		Follow-Up	
	Male	Female	Male	Female	Male	Female
SSRS-Problem Behaviors	96.6 (11.5) n=40	101.0 (14.8) n=35	97.4 (15.6) n=41	100.6 (13.3) n=35	96.8 (12.1) n=40	97.7 (10.9) n=32
C-TRF Aggressive Behavior	56.7 (6.7) n=40	55.9 (7.4) n=35	56.9 (8.4) n=41	56.2 (6.2) n=35	54.6 (5.5) n=40	53.8 (4.5) n=32
Interview-Physical Aggression	.37 (.43) n=40	.22 (.34) n=34	.51 (.53) n=41	.21 (.45) n=32	.40 (.48) n=40	.17 (.30) n=31
Relational Aggression	7.8 (3.5) n=40	7.6 (3.2) n=36	8.3 (3.5) n=41	8.4 (3.6) n=34	7.6 (2.5) n=39	7.6 (2.8) n=32
SSRS-Social Skills	97.6 (16.9) n=40	94.3 (17.0) n=35	99.6 (19.3) n=41	94.3 (15.9) n=35	109.4 (14.2) n=40	103.8 (14.0) n=32
Interview-Friendliness Ratings	2.8 (.59) n=40	2.9 (.55) n=34	2.8 (.63) n=41	3.0 (.55) n=32	2.8 (.72) n=40	3.0 (.60) n=31
Aggregate Peer Acceptance Ratings	2.4 (.24) n=39	2.4 (.26) n=34	2.4 (.29) n=41	2.4 (.26) n=33	2.2 (.25) n=40	2.3 (.30) n=34

Note. Means are presented followed by standard deviations in parentheses. The appropriate sample size is noted below the mean and standard deviation.

Increased Social Skills Hypothesis

In order to determine whether the Treatment group experienced more improvement in social skills across time than the Control group, a 2 X 2 (Condition X Gender) MANOVA was conducted. The between-subjects factor of Condition had two levels: Treatment and Control. The between-subjects factor of Gender also had two levels: Male and Female. To examine increased social skills, the following two dependent variables were included in the MANOVA: SSRS-Social Skills scale scores, and Friendliness Ratings on the enactive interview. Each dependent variable was broken down into three difference scores: post-treatment minus pre-treatment, follow-up minus post-treatment, and follow-up minus pre-treatment. This method resulted in a total of 6 dependent variables. Thirty-seven preschoolers comprised the Control group, while 26 preschoolers were in the Treatment group. A total of 36 males and 27 females were included in the analysis.

The main effect of Condition was not significant at the multivariate level, $\underline{F}$ (4, 56) = .53, $\underline{p}$ > .05. Similarly, the main effect of Gender was not significant at the multivariate level, $\underline{F}$ (4, 56) = .22, $\underline{p}$ > .05. The interaction between Condition and Gender also was not significant at the multivariate level, $\underline{F}$ (4, 56) = .40, $\underline{p}$ > .05. Therefore, no analyses were conducted at the univariate level. These results indicate that there was no significant difference between the Treatment group and the Control group with respect to social skill levels across time (see Table 1). Moreover, no gender differences emerged with respect to social skill levels and gender did not moderate treatment effects on social skills (see Table 2).

Increased Aggregate Peer Acceptance Ratings

In order to determine whether the Treatment group experienced larger increases in aggregate peer acceptance ratings across time than the Control group, a 2 X 2 (Condition X Gender) MANOVA was conducted. The between-subjects factor of Condition had two levels: Treatment and Control. The between-subjects factor of Gender also had two levels: Male and Female. To examine increased aggregate peer acceptance ratings, this variable was broken down into three difference scores: post-treatment minus pre-treatment, follow-up minus post-treatment, and follow-up minus pre-treatment. This method resulted in a total of 3 dependent variables. Thirty-seven preschoolers comprised the Control group, while 29 preschoolers were in the Treatment group. A total of 36 males and 30 females were included in the analysis.

The main effect of Condition was statistically significant at the multivariate level, F (2, 61) = 10.50, $p < .05$. Inspection at the univariate level revealed that the difference between pre-treatment and post-treatment was marginally significant, F (1, 62) = 3.14, $p < .10$, the difference between post-treatment and follow-up was significant, F (1, 62) = 20.18, $p < .001$, and the difference between pre-treatment and follow-up was also significant, F (1, 62) = 8.76, $p < .01$. An examination of the means revealed that the Control group increased slightly, while the Treatment group decreased slightly in sociometric ratings between pre-treatment and post-treatment (see Table 1). Between post-treatment and follow-up, both groups decreased, but the Treatment group decreased to a greater extent than the Control group. Similarly, between pre-treatment and follow-up, irrespective of post-treatment, the Treatment group decreased aggregate sociometric ratings to a greater extent than the Control group.

The main effect of Gender was not significant at the multivariate level, $\underline{F}$ (2, 61) = 1.82, $\underline{p}$ > .05. The interaction between Condition and Gender also was not significant at the multivariate level, $\underline{F}$ (2, 61) = .42, $\underline{p}$ > .05. Therefore, no examination was conducted at the univariate level. These results indicate that there were no gender differences with respect to aggregate peer ratings of acceptance and Gender did not moderate the main effect of Condition (see Table 2).

Aggressive Subgroup Analyses

Identification

Although the focus of the intervention was to decrease overall levels of negative behavior, including aggression, while increasing positive behavior across the classroom at large, it was of interest to examine the effect of the treatment on a subgroup of the most aggressive preschoolers. The children in the highest 30% on the C-TRF Aggressive Behavior subscale at pre-treatment in the Treatment group and the Control group were chosen. The C-TRF provides normative data based on gender, which means that these scores reflect the degree of aggressive behavior in comparison to same-gender peers. This scoring system allowed for an equal chance of boys versus girls attaining high scores. Given the limited psychometric data available on the teacher ratings of relational aggression and the physical aggression scores on the enactive interview, it was decided not to utilize either of these scores in identifying the aggressive subgroup. The highest 30% included those children with a T-Score of 59 or higher for the aggressive subgroup (N=8 from the Treatment group and N=10 from the Control group). On the Aggression subscale of the C-TRF, T-Scores from 67 to 69 are borderline clinically significant (i.e., between the 95th and 97th percentile), while T-Scores 70 and above are in the clinically

significant range (i.e., 98th percentile and above). Therefore, the aggressive subgroup identified in the present study does not possess clinical elevations of aggression.

Examination of the Aggressive Subgroup

The difference score method was employed for analysis of the aggressive subgroup. Again, three sets of analyses were conducted, one for each primary hypothesis.

In order to examine the decreased aggression hypothesis, a 2 (Condition: Treatment and Control)-way MANOVA was conducted with Condition as the between-subjects factor. The four dependent variables reflecting aggressive behavior were included in the MANOVA: SSRS-Problem Behaviors scale scores, C-TRF Aggressive Behavior subscale scores, Physical Aggression scores on the enactive interview, and relational aggression scores. Each dependent variable was broken down into three difference scores: post-treatment minus pre-treatment, follow-up minus post-treatment, and follow-up minus pre-treatment. This method resulted in a total of 12 dependent variables. The main effect of Condition was not significant at the multivariate level, F (8, 10) = .79, p > .05. Therefore, no examination was conducted at the univariate level. These results indicate that there was no significant difference between the Treatment aggressive subgroup and the Control aggressive subgroup with respect to aggression levels across time (see Table 3).

Table 3

Means for the Aggressive Subgroup: Control vs. Treatment at Pre-Treatment, Post-

Treatment, and Follow-Up

	Pre-Treatment		Post-Treatment		Follow-Up	
	Control n=11	Treatment n=8	Control n=11	Treatment n=8	Control n=11	Treatment n=8
SSRS-Problem Behaviors	112.4 (9.5)	110.8 (11.0)	108.9 (12.7)	112.6 (14.5)	104.9 (12.6)	109.8 (11.6)
C-TRF Aggressive Behavior	64.3 (4.3)	65.0 (3.8)	61.6 (6.6)	66.0 (9.2)	57.8 (5.3)	61.5 (5.2)
Interview-Physical Aggression	.38 (.42)	.10 (.12)	.38 (.48)	.38 (.42)	.36 (.47)	.35 (.48)
Relational Aggression	6.7 (2.4)	10.5 (5.2)	6.9 (1.7)	12.9 (4.5)	7.0 (2.0)	11.4 (3.4)
SSRS-Social Skills	83.6 (10.4)	90.9 (15.8)	87.6 (18.7)	93.5 (14.7)	100.5 (8.8)	96.6 (12.7)
Interview-Friendliness Ratings	2.7 (.49)	3.0 (.65)	2.7 (.66)	3.1 (.56)	2.6 (.75)	3.0 (.54)
Aggregate Peer Acceptance Ratings	2.2 (.30)	2.4 (.20)	2.3 (.22)	2.4 (.32)	2.3 (.26)	2.0 (.31)

Note. Means are presented followed by standard deviations in parentheses. The appropriate sample size is noted below the mean and

standard deviation.

With respect to the increased social skills hypothesis, a 2 (Condition: Treatment

and Control)-way MANOVA again was conducted with Condition as the between-

subjects factor. The two dependent variables reflecting social skills were included in the

MANOVA: SSRS-Social Skills scale scores, and Friendliness Ratings on the enactive

interview. Each dependent variable was broken down into three difference scores: post-

treatment minus pre-treatment, follow-up minus post-treatment, and follow-up minus pre-

treatment. This method resulted in a total of 6 dependent variables. The main effect of

Condition was not significant at the multivariate level, $\underline{F}$ (4, 14) = 1.13, $\underline{p}$ > .05.

Therefore, no examination was conducted at the univariate level. These results indicate

that there was no significant difference between the Treatment aggressive subgroup and

the Control aggressive subgroup with respect to social skill levels across time (see Table 3).

A 2 (Condition: Treatment and Control)-way MANOVA was conducted with Condition as the between-subjects factor to examine the increased aggregate peer ratings of acceptance hypothesis, as well. Therefore, this variable was broken down into three difference scores: post-treatment minus pre-treatment, follow-up minus post-treatment, and follow-up minus pre-treatment. This method resulted in a total of 3 dependent variables. The main effect of Condition was statistically significant at the multivariate level, $\underline{F}$ (2, 15) = 8.16, $\underline{p}$ < .05. Examination at the univariate level revealed that the difference between pre-treatment and post-treatment was not significant, $\underline{F}$ (1, 16) = .45, $\underline{p}$ > .05, the difference between post-treatment and follow-up was significant, $\underline{F}$ (1, 16) = 11.62, $\underline{p}$ < .01, and the difference between pre-treatment and follow-up was also significant, $\underline{F}$ (1, 16) = 12.62, $\underline{p}$ < .01. An examination of the means revealed that the Control aggressive subgroup's aggregate ratings of peer acceptance remained fairly constant across time, while the Treatment aggressive subgroup's ratings decreased between post-treatment and follow-up, resulting also in a significant decrease at follow-up in comparison to baseline ratings (see Table 3).

Overall, the findings for the aggressive subgroup followed the same general pattern of results as that of the sample as a whole.

<u>Clinical Significance</u>

Due to the availability of normative data for the SSRS-Problem Behavior scale and the C-TRF Aggressive Behavior subscale, post-treatment scores were compared to

these normative values to determine if the treated group now fell within normal limits on these scales.

C-TRF Aggressive Behavior Subscale

With respect to the C-TRF Aggressive Behavior subscale, five children in the Control group and five children in the Treatment group had T-Scores greater than or equal to 67, which is the lowest score in the borderline clinically significant range (i.e., greater than or equal to the 95th percentile). In the Control group, three of the original five children remained in the clinically significant range at post-treatment, and one remained in the clinically significant range at follow-up. In the Treatment group, four of the original five children remained in the clinically significant range at post-treatment, while one remained in the clinically significant range at follow-up. In contrast, of the 34 children in the Control group who were not in the clinically significant range at pre-treatment, two children fell in the clinically significant range at post-treatment and one at follow-up. Of the 22 children in the Treatment group who were not in the clinically significant range at pre-treatment, one fell in the clinically significant range at post-treatment, while no children were in this range at follow-up.

SSRS-Problem Behaviors Scale

On the SSRS-Problem Behaviors scale, two children in the Control group were in the clinically significant range (i.e., greater than or equal to the 95th percentile) at pre-treatment and both of these children fell within normal limits at both post-treatment and follow-up. Similarly, two children in the Treatment group were in the clinically significant range at pre-treatment and both of these children were within normal limits at both post-treatment and follow-up. Of the 37 children who were within normal limits at

pre-treatment, two children were in the clinically significant range at post-treatment, whereas none of the children were in the clinically significant range at follow-up. Of the 25 children in the Treatment group, two also were in the clinically significant range at post-treatment, while none were in the clinically significant range at follow-up.

<center>Exploratory Analyses</center>

In order to further understand the dataset, a number of exploratory analyses were conducted. It was necessary to determine if the treatment had effects beyond those originally hypothesized. It is important to be able to inform future research as to possible avenues of intervention with respect to social-cognitive skills training for preschoolers. Perhaps additional analyses would shed light on the null findings described above.

Correlations Among the Dependent Variables

Seven separate correlational matrices were created to examine whether or not the dependent variables were related in theoretically consistent ways. It could be that treatment effects were not found due to peculiar inconsistencies among the outcome measures. Therefore, correlational matrices of the seven dependent variables were created for the entire sample at pre-treatment, separately for males and females at pre-treatment, and separately by condition at post-treatment and follow-up.

At pre-treatment, the correlational analyses resulted in theoretically consistent relationships (see Table 4).

Table 4

Pre-Treatment Correlation Matrix

	1.	2.	3.	4.	5.	6.	7.
1. SSRS-Problem Behaviors	---						
2. C-TRF Aggressive Behavior	.83***	---					
3. Interview-Physical Aggression	-.04	.10	---				
4. Relational Aggression	.15	.26*	.01	---			
5. SSRS-Social Skills	-.52***	-.49***	-.01	.22*	---		
6. Interview-Friendliness Ratings	-.04	-.15	-.64***	.17	.23*	---	
7. Aggregate Peer Acceptance Ratings	-.18	-.26*	-.13	-.10	.36**	.09	---

Note. Pairwise sample sizes range from 72 to 75.

*p<.05. **p<.01. ***p<.001.

The SSRS-Social Skills scale was significantly inversely correlated with both the SSRS-Problem Behaviors scale (r = -.52) and the C-TRF Aggressive Behavior subscale (r = -.49), while being significantly positively related to the aggregate rating of peer acceptance (r = .36), the Friendliness Ratings of the enactive interview (r = .23), and relational aggression (r = .22). As expected, the SSRS-Problem Behaviors scale and the C-TRF Aggressive Behavior subscale were significantly correlated (r = .83). The C-TRF Aggressive Behavior subscale was also correlated with relational aggression scores (r = .26) and negatively correlated with aggregate peer acceptance ratings (r = -.26). With respect to the enactive interview, Friendliness Ratings and Physical Aggression scores were significantly inversely correlated (r = -.64).

When looking only at males at pre-treatment, the correlations between the SSRS-Social Skills scale and Friendliness Ratings dropped below levels of significance, as did correlations between the C-TRF Aggressive Behavior subscale and both relational

aggression scores and aggregate peer ratings of acceptance (see Table 5). The correlational matrix for females at pre-treatment also failed to show a significant correlation between the SSRS-Social Skills scale and both Friendliness Ratings and relational aggression, and also did not reveal significant correlations between aggregate peer ratings of acceptance and both the SSRS-Social Skills scale and the C-TRF Aggressive Behavior subscale (see Table 5). In addition, relational aggression does not appear to be related to levels of aggressive behavior, again measured by the C-TRF, in males, but is related to aggressive behavior in females.

Table 5

Pre-Treatment Correlation Matrix by Gender

	1.	2.	3.	4.	5.	6.	7.
1. SSRS-Problem Behaviors	---	.89***	-.07	.01	-.46**	.07	-.22
2. C-TRF Aggressive Behavior	.82***	---	.05	.12	-.44**	-.07	-.26
3. Interview-Physical Aggression	.06	.16	---	.02	-.06	-.60***	-.15
4. Relational Aggression	.30	.41*	-.05	---	.31*	.10	-.15
5. SSRS-Social Skills	-.58***	-.57***	.03	.11	---	.22	.51**
6. Interview-Friendliness Ratings	-.18	-.22	-.70***	.26	.28	---	.12
7. Aggregate Peer Acceptance Ratings	-.21	-.25	-.03	-.04	.25	.09	---

Note. Correlations for males are above the diagonal and correlations for females are below the diagonal. Pairwise sample sizes range from 39 to 40 for males and from 33 to 35 for females.

*p<.05. **p<.01. ***p<.001.

Although the strengths of the relationships differed, the exact same correlational pattern was obtained for the Treatment and the Control conditions at post-treatment (see Table 6). This correlational pattern was also very similar to that obtained for the sample as a whole at pre-treatment with four exceptions. As in both the male and female matrices at pre-treatment, the correlation between the SSRS-Social Skills scale and the

Friendliness Ratings dropped below levels of significance, as did the correlation between aggregate peer ratings of acceptance and the C-TRF Aggressive Behavior subscale and the SSRS-Social Skills scale and relational aggression. In addition, a new significant correlation emerged between teacher ratings of relational aggression and the SSRS-Problem Behaviors scale (r = .37 for Control and r = .39 for Treatment group).

Table 6

Post-Treatment Correlation Matrix by Condition

	1.	2.	3.	4.	5.	6.	7.
1. SSRS-Problem Behaviors	---	.91***	.01	.37*	-.60***	-.07	-.23
2. C-TRF Aggressive Behavior	.73***	---	.09	.36*	-.58***	-.10	-.16
3. Interview-Physical Aggression	.31	.07	---	.17	.01	-.70***	-.04
4. Relational Aggression	.39*	.59***	-.10	---	.04	-.01	-.13
5. SSRS-Social Skills	-.52**	-.43*	-.10	.09	---	.06	.46**
6. Interview-Friendliness Ratings	-.20	.01	-.77***	.25	.26	---	.24
7. Aggregate Peer Acceptance Ratings	-.19	-.21	.14	-.02	.37*	-.03	---

Note. Correlations for the control condition are above the diagonal and correlations for the treatment condition are below the diagonal. Pairwise sample sizes were 42 for the control condition and range from 31 to 34 for the treatment condition.

*p<.05. **p<.01. ***p<.001.

At follow-up, in comparison to the results obtained at post-treatment, the correlational patterns were somewhat different between the Treatment group and the Control condition (see Table 7). For the Treatment group, the significant inverse relationship between the C-TRF Aggressive Behavior subscale and the aggregate peer ratings of acceptance re-emerged. However, the relationship between the C-TRF Aggressive Behavior subscale and the SSRS-Social Skills scale was no longer significant. For the Control group, the relationships between the SSRS-Social Skills scale and

aggregate ratings of peer acceptance along with the SSRS-Problem Behaviors scale and relational aggression scores disappeared. A new relationship emerged, however, between Physical Aggression scores and relational aggression (r = .55).

Table 7

Follow-Up Correlation Matrix by Condition

	1.	2.	3.	4.	5.	6.	7.
1. SSRS-Problem Behaviors	---	.81***	.09	.31*	-.72***	-.06	-.04
2. C-TRF Aggressive Behavior	.81***	---	.16	.37*	-.49***	-.16	-.22
3. Interview-Physical Aggression	.12	.12	---	.55***	.07	-.70***	-.28
4. Relational Aggression	.53**	.73***	.09	---	-.08	-.24	-.24
5. SSRS-Social Skills	-.46**	-.34	.17	.02	---	-.12	.02
6. Interview-Friendliness Ratings	-.20	-.06	-.73***	.15	.13	---	.19
7. Aggregate Peer Acceptance Ratings	-.53**	-.47**	-.03	-.28	.41*	.13	---

Note. Correlations for the control condition are above the diagonal and correlations for the treatment condition are below the diagonal. Pairwise sample sizes range from 39 to 41 for the control condition and from 30 to 31 for the treatment condition.

*p<.05. **p<.01. ***p<.001.

Main Effect of Time

Given that the treatment did not demonstrate significant effects above and beyond the services and supports typically provided by Head Start, it was of interest to examine the main effect of Time, collapsed across Condition. The post hoc hypothesis was that the children generally improved on the outcome measures over the course of the year spent in Head Start. Therefore, a repeated measures MANOVA was conducted with Time as the within-subjects factor (pre-treatment, post-treatment, and follow-up). The multivariate main effect of Time was significant, F (14, 48) = 7.34, p < .001. Examination at the univariate level revealed significant effects for three out of the seven

outcome measures: SSRS-Social Skills scale, F (2, 122) = 23.83, p < .001; C-TRF Aggressive Behavior subscale, F (2, 122) = 8.50, p < .001; and aggregate ratings of peer acceptance, F (2, 122) = 11.76, p < .001. In order to determine the exact nature of these effects, post hoc comparisons were conducted for each of these three measures.

On the SSRS-Social Skills scale, the difference between pre-treatment and post-treatment was not significant, F (1, 61) = 1.01, p > .05. The differences between post-treatment and follow-up and pre-treatment and follow-up were both significant, F's (1, 61) = 25.26 and 42.04, respectively, p < .001. The means indicate that scores on the SSRS-Social Skills scale significantly increased between post-treatment and follow-up, rendering also a significant increase between pre-treatment and follow-up scores.

On the C-TRF Aggressive Behavior subscale, the difference between pre-treatment and post-treatment was not significant, F (1, 61) = .133, p > .05. The differences between post-treatment and follow-up and pre-treatment and follow-up were both significant, F's (1, 61) = 13.16 and 15.20, respectively, p < .001. The means illustrate that scores on C-TRF Aggressive Behavior subscale significantly decreased between post-treatment and follow-up, resulting also in a significant reduction in scores when comparing pre-treatment to follow-up data.

On the aggregate ratings of peer acceptance, the difference between pre-treatment and post-treatment was not significant, F (1, 61) = .244, p > .05. The differences between post-treatment and follow-up and pre-treatment and follow-up were both significant, F's (1, 61) = 22.30 and 13.87, respectively, p < .001. Inspection of the means shows that mean sociometric scores significantly decreased between post-treatment and follow-up, such that a significant decrease between pre-treatment and follow-up scores also emerged.

In sum, all of the Head Start children in the study with data at all three time points (n = 62) improved significantly over the year in the areas of social skills and aggression. Peer ratings of acceptance decreased over the year, although this main effect is superceded by the differences between the Treatment and Control groups with respect to peer acceptance ratings outlined earlier.

The main effect of Time was also examined in the aggressive subgroup, in order to determine whether or not the aggressive subgroup matured in the Head Start setting in the same manner as the sample as a whole. Again, a repeated measures MANOVA was conducted with Time as the within-subjects factor (pre-treatment, post-treatment, and follow-up). The multivariate main effect of Time was F (14, 48) = 7.34, with a p-value of .055. Given the controversial nature of this multivariate p-value, the exact univariate F-values will not be reported. In general, the same pattern of findings emerged for the SSRS-Social Skills scale and the C-TRF Aggressive Behavior subscale in the aggressive subgroup, although sociometric scores did not appear to be affected by the passage of time. Overall, it appears as if the aggressive subgroup was not differentially affected by the Head Start setting in comparison to the group as a whole.

<u>Age as a Covariate</u>

Anecdotally, the teachers administering the curriculum questioned whether or not the younger children were able to benefit from the social-cognitive skills training. The teachers hypothesized that the older children understood the lessons better than the younger children. In order to test this post-hoc hypothesis, a 2-way (Condition: Treatment vs. Control) MANCOVA design was employed using difference scores, with age as the covariate. With respect to the decreased aggression hypothesis, no significance

was found at the multivariate level for the main effect of Condition, F (8, 53) = 1.38, p >

.05. Analysis of the increased social skills hypothesis also did not reveal significance at

the multivariate level, F (4, 57) = .49, p > .05. Covarying out age did not eliminate the

main effect of Condition at the multivariate level for aggregate peer ratings of acceptance,

F (2, 62) = 9.62, p <.001. Examination at the univariate level revealed, again, that the

Treatment group decreased significantly more than the Control group between pre-

treatment and follow-up, with significant differences found between pre- and post-

treatment, F (1, 63) = 4.63, p < .05, post-treatment and follow-up, F (1, 63) = 6.25, p <

.05, and pre-treatment and follow-up, F (1, 63) = 19.21, p < .001. These results indicate

that statistically removing the effect of age did not change the overall pattern of the

results. In other words, age did not moderate the effects of the treatment.

SSRS Subscales

The SSRS is comprised of two scales: Social Skills and Problem Behaviors. The

Social Skills scale is comprised of three subscales: Cooperation, Assertion, and Self-

Control. The Problem Behaviors scale is made up of two subscales: Externalizing and

Internalizing. It was hypothesized that perhaps the treatment had effects on some of these

subscales and not on others and these effects were being washed out in examination at the

scale level rather than the subscale level. Unfortunately, 2-way (Condition: Treatment

vs. Control) ANOVAs, using difference scores, for each of the five subscales did not

reveal any effects of treatment. In other words, the individual subscales did not appear to

be differentially affected by the treatment.

<u>Enactive Interview Stories</u>

The Enactive Social Knowledge Interview is composed of six individual stories. It was again hypothesized post-hoc that examination of each individual story might reveal significant findings. Because site differences did not emerge on the Enactive Social Knowledge Interview ratings of friendliness or physical aggression, all of the ratings were entered into one 2 X 3 MANOVA, with Condition as the between-subjects factor (Treatment vs. Control) and Time as the within-subjects factor (pre-treatment, post-treatment, and follow-up). However, the interaction between Time and Condition was not significant at the multivariate level, $\underline{F}$ (24, 33) = .87, $\underline{p}$ > .05. Therefore, inspection of each individual story did not reveal treatment effects for either friendliness ratings or physical aggression scores.

DISCUSSION

The present study evaluated the efficacy of a social-cognitive skills training curriculum targeting aggression in Head Start preschoolers. Specifically, three main hypotheses were tested through comparison of the treatment group to a control group. First, it was hypothesized that aggression would decrease in the treatment group to a greater extent over time than the control group. Second, the treatment group was hypothesized to increase the use of prosocial skills to a greater degree than the control group at post-treatment and follow-up. Contrary to these hypotheses, however, no significant differences between the treatment and control groups in either aggression or prosocial skills emerged at the post- or three-month follow-up assessments. Similarly, hypothesized concomitant improvements in the peer acceptance ratings of the treatment group were not found. In fact, over time the aggregate ratings of peer acceptance decreased slightly more in the treatment group in comparison to the control group. Despite the statistical significance of these findings, it is important to note that the differences were clinically very small, a mere one tenth of a point difference on a three-point scale. Finally, consistent with these null findings, separate examinations of the most aggressive subgroups of these children also showed no improvements.

Explaining Null Findings

Attempting to explain null findings can be as, or more, challenging than accounting for significant results. The following section provides a discussion of some of the more promising hypotheses for the present study's failure to evince significant changes in children's social behavior. These include the applicability of the Ladd and Mize (1983a, 1983b) model to Head Start populations, pre-treatment site differences, and

length of follow-up assessment period. Additional hypotheses will be offered subsequent to the presentation of post-hoc analyses in a later section.

<u>Applicability of the Model</u>

Before questioning the applicability of the Ladd and Mize (1983a, 1983b) model for Head Start populations, it is worth considering whether the present study's null findings detract from the model itself. This appears to be unlikely. As reviewed at length earlier, the model is very well founded in developmental research and adheres to the social skills deficit hypothesis, the leading conceptual framework for understanding peer difficulties (see McFadyen-Ketchum & Dodge, 1998, and Nangle et al., in press, for reviews). The model sets forth three major training goals, including enhancing skill concepts, promoting skill performance, and fostering skill maintenance and generalization, as well as specific teaching methods, including verbal and modeled instruction, rehearsal, and feedback, for achieving them. In addition, Mize and Ladd (1990a) found empirical support for the model in an intervention with low social status preschoolers. Using treatment procedures very closely adhering to the Ladd and Mize (1983a, 1983b) model and mirroring those used in the present study, these researchers found that skill-trained children more than doubled their frequency of positive social skill usage from pretest to posttest. Exploratory one-month follow-up findings also indicated significant sociometric gains in these children. Here it seems worth noting that the Ladd and Mize model (1983a, 1983b) is so well respected that leading researchers have used it as an organizing framework for reviews of the social skills training literature (e.g., McFadyen-Ketchum & Dodge, 1998).

Assuming the model is valid, the actual implementation of the model in the present study might still be questioned. The COMPASS curriculum was modeled after the guidelines given by Mize and Ladd (1990b) for interventions targeting preschool children. For example, hand puppets were used to facilitate the review of the defining features of the skill and the functional relevance of the social concept. In order to promote skill performance, the children rehearsed the new skills in groups of two to four, recalling the skill and behaviorally enacting the skill in both a structured and less structured way. Further, to foster skill maintenance and generalization, the intervention was completed in the natural classroom environment and teachers provided feedback to the children. The teachers also praised the children for skill usage outside the training session. Another possibility is that although the model and curriculum were adequate, classroom teachers did not implement the intervention properly. At post-treatment, however, the teachers scored an average of 97.5% accuracy on a free recall test of social skill knowledge. Moreover, treatment integrity ratings were near perfect according to two independent raters. Although these manipulation checks are not flawless, these two findings comprise a convincing argument in favor of the use of teachers as competent social skills trainers. It is difficult to determine, however, the exact time point at which the teachers solidified their abilities to implement the curriculum.

Next is the question of whether or not the model is applicable to Head Start populations. The one study that implemented the model with preschoolers derived their four- and five-year-old participants from church-supported daycares and a university laboratory school (Mize & Ladd, 1990a). As an at-risk sample, Head Start children may have limitations that hamper intervention effectiveness. For example, past research with

Head Start samples has found that they tend to have lower overall ability levels than children in other types of preschools (e.g., Lee et al., 1990). Similarly, low-income children have a tendency to be less verbal than children in typical preschools (Mize & Cox, 1989), which may have compromised their ability to understand the instructional portion of the intervention. In addition, verbal ability is necessary to fully benefit from corrective feedback. Mize and Ladd (1990b) discuss the general difficulty of teaching preschoolers complicated social concepts. It is possible that this difficulty is exacerbated in Head Start samples.

Pre-Treatment Site Differences

The fact that two brief and less comprehensive interventions (Carpenter & Nangle, in press; Zahavi & Asher, 1978) managed to evince significant improvements in aggression and prosocial behavior while the present study did not is difficult to reconcile. Notably, however, both of these studies were conducted *within* single classrooms, which effectively controls for interactions between unique classroom characteristics and treatment versus no treatment effects. In contrast, the present study found significant site differences for teacher-rated social skills, teacher-rated relational aggression, and aggregate peer ratings of acceptance.

Actually, statistically significant differences between centers are not uncommon in the preschool literature (e.g., Doyle & Connolly, 1989). The children at the four different sites in the present study may constitute four different samples based on the aforementioned site differences. Or, the site differences could be a function of the Head Start centers themselves. Head Start classrooms are unique and it is not possible for federal funds to ensure consistency across the sites. For example, across our four sites,

the children were under the guidance of different teachers, experienced different adult to child ratios, competed for varying classroom resources, had different daily schedules, and conducted their play according to different classroom dimensions and arrangements.

Controlling for the many variables underlying these site differences is a difficult, if not impossible, task because the variables themselves cannot all be identified. Statistical control of site differences is not capable of accounting for the dynamic interaction of all of these variables throughout the school year. The use of difference scores, employed in the present study, is only capable of subtracting the site differences present at baseline from the post-treatment and follow-up measurements. These subtractions do not account for the changing influences of these site differences throughout the school year. For example, one-on-one workers are sometimes assigned to particular children during the course of the year based on teacher concerns at the beginning of the school year. Therefore, it is possible that between pre-treatment and post-treatment a classroom may have benefited from an extra adult being in the classroom to help with a particularly challenging child. Along these same lines, toys may have been donated to a classroom, a college student may have begun volunteering, or the classroom may have been redecorated. All of these happenings would impact the effect of the treatment on the behavior of the children.

Another approach would be to treat site as a separate independent variable. This approach, however, would require rather large samples to achieve the power needed to detect differences.

Length of the Follow-Up Assessment Period

One aspect of the treatment that is important to consider is the length of the follow-up (Bierman & Montminy, 1993). Past social skills training research has highlighted the possibility of a sleeper effect in this literature, with greater change found at follow-up than at post-treatment (e.g., Bierman et al., 1987; Carpenter & Nangle, in press). Bierman (1986) proposes that long-term follow-up may be necessary in order to fully capture the process of change in social skills interventions. Specifically, once the treatment has effectively changed behavior, it takes time for these behavioral improvements to generalize to other settings and to then be noticed by others (e.g., teachers, peers). If so, then perhaps long-term follow-up beyond three months would have revealed positive findings in the present study.

The length of follow-up has implications for sociometric findings in particular, as can be seen through examination of the correlational matrices of the outcome measures across the three time-points of the study. At pre-treatment, peer acceptance was positively correlated with the SSRS-Social Skills scale and negatively correlated with the C-TRF Aggressive Behavior scale, which is theoretically expected. At post-treatment in both the treatment and the control groups, peer acceptance was only correlated with the SSRS-Social Skills scale. This finding is not altogether unexpected, either. Developmental researchers have documented the fact that low social status and high rates of physical aggression are not necessarily linked in preschoolers (e.g., Farver, 1996; Strayer, 1980; 1990). In fact, these researchers have found that social status is based on "toughness" at this age level, which includes both high leadership and physical coercion (Strayer, 1980; 1990). In the present study, all of the Head Start children valued high

levels of social skills in their peers, but were not using physical aggression levels as a criterion for choosing their friends at the post-treatment time point.

At follow-up, however, peer acceptance was not correlated with any of the seven outcome variables in the control group. In the treatment group, peer acceptance was negatively correlated with both the SSRS-Problem Behaviors scale and the C-TRF Aggressive Behavior scale and positively correlated with the SSRS-Social Skills scale. These results suggest that at three-month follow-up, the treatment group was able to more clearly define those qualities and behaviors that are valued in their peers than the control group. It could be that the treatment helped to shape this development. By middle childhood, the children who are least liked by peers are those that disrupt the group, aggress indirectly, start fights, get into trouble with the teachers, and have a short temper (Coie et al., 1982). Sometime between preschool and middle childhood, children develop the attitudes and values that form these friendship preferences. Perhaps social-cognitive skills training targeting aggressive behavior was effective in teaching children that aggressive children do not make good friends. It is possible that long-term follow-up would reveal not only attitude change, but also behavior change in the treatment group.

Post Hoc Analyses

A number of post hoc analyses were performed in order to further elucidate the findings. Given that the treatment group did not fare better than the control group at post-treatment and follow-up, it was interesting to see if both groups improved over time, regardless of condition. The main hypotheses were re-examined, collapsing across treatment condition. A main effect of time was revealed in these analyses, indicating that social skills, as measured by the SSRS-Social Skills scale, improved in both the treatment

condition and the control condition at post-treatment and follow-up. Similarly, aggressive behavior, measured via the C-TRF Aggressive Behavior subscale, decreased at post-treatment and follow-up in both conditions. Therefore, it appears that COMPASS did not provide treatment effects by the three-month follow-up above and beyond the treatment effects exhibited by the Head Start program alone. In other words, over the course of the Head Start year, all of the children in the study, on average, decreased levels of aggression and improved on social skills.

There are two possible explanations for the results of the time analyses. First, it could be that Head Start is a powerful treatment in and of itself. Perhaps COMPASS could not improve upon the gains that Head Start already manifests in its students with respect to aggression and social skills. Or, it could be that maturation alone is responsible for the improvements over time. It is possible that neither Head Start nor COMPASS added significantly to maturational effects. Preschoolers may mature over the course of the year at a rate that is difficult to supercede.

Head Start as an Active Treatment

Rather than comprising a "no treatment" condition, the two Head Start classrooms that did not receive the COMPASS program should be considered the "treatment-as-usual" group. Head Start has many interventions for their children, from health and hygiene to academic readiness (e.g., Raver & Zigler, 1997; Ripple et al., 1999; Zigler, 1998). Results from longitudinal studies indicate that Head Start and similar federally-funded preschool programs have a favorable impact on global measures of social competence, such as juvenile delinquency, special education placement, rates of grade retention, and school attendance (Lee et al., 1990; see Locurto, 1991, for a review). It has

been suggested that due to the dynamic influence that the areas of physical health, academic competence, and social competence impress upon each other at the preschool age, that Head Start is able to indirectly improve social competence without directly targeting social skills (Raver & Zigler, 1997). When viewed as a test of differential effectiveness of two active treatments, the null findings of the present study might be expected. Demonstrations that one treatment is superior to another are relatively rare in the child clinical intervention literature (Durlak et al., 1991; Kazdin & Weisz, 1998).

Another interesting alternative explaining the control group's efficacy is the possibility that the control teachers were influenced by virtue of their inclusion in the present study. Specifically, control group teachers might have been particularly diligent in their efforts to foster improvements in both social skills and aggression due to the fact that the present study was examining these variables.

Maturation

Maturation is also a possible explanation for the general improvements in aggression and social skills across time in the present study. It is important to note that maturation is not limited to simply the passage of time, but the unfolding of many dynamic learning processes, such as socialization. Children enrolled in preschool are exposed to many socializing agents likely to contribute to non-specific socialization effects on maturation. As such, it is instructive to overview the developmental changes experienced by children in both aggression and prosocial skills across the ages of three to five.

Overall, preschoolers' aggression declines across the preschool period, predominantly due to a decline in instrumental aggression (Hartup & Laursen, 1993).

The acquisition of language allows children an alternate means of resolving conflicts over objects. In fact, children in the late preschool period who present to clinics with language delays have a high rate of comorbid behavior problems (Cantwell, Baker, & Mattison, 1979), indicating that a lack of language is related to aggressive behavior. Specifically, physical aggression, such as hitting, has been found to increase until age two, when these behaviors begin to be replaced by verbal aggression (Coie & Dodge, 1998). In day care centers, high rates of peer fighting, tantrum behaviors, and difficulties tolerating frustration have been found in three-year-olds, with these behaviors declining after age three (Crowther, Bond, & Rolf, 1981). Additional factors that may be responsible for the decline in aggression include the development of perspective-taking, delay of gratification, and empathy (see Coie & Dodge, 1998, for a review). It could be that the natural decline in aggressive behavior is responsible for the decrease in aggression found across time in the present study.

Prosocial skills also mature across the preschool age period. In fact, merely attending preschool is considered to accelerate social skill development by providing youngsters with more opportunities for peer interaction (e.g., Raver & Zigler, 1997). Social competence is difficult to define for young children, but is considered critical in the evaluation of programs such as Head Start (Raver & Zigler, 1997; Saunders & Green, 1993). Social skills contributing to social competence that improve over the preschool years include social negotiation, reciprocal interaction, responding to and sharing with peers, peer initiation, complexity of pretend play, conversation, displays of empathic concern, perspective taking, and sharing (Doyle & Connolly, 1989; Chandler et al., 1992; Zahn-Waxler, Radke-Yarrow, Wagner & Chapman, 1992). Older preschoolers have

more reciprocal friendships than younger preschoolers, and those children with reciprocal friendships have higher levels of social competence (Vaughn et al., 2000). Improvements in the social cognition of preschoolers include more sophisticated perceptions of the social situation, being able to hypothesize a peer's intent, and expectations for positive outcomes (Musun-Miller, 1993). Early in the preschool period, children are more likely to be unsure of solutions to and outcomes of social problems, whereas older preschoolers are able to generate solutions and outcomes, with girls developing these skills more rapidly than boys (Musun-Miller, 1993). Typical social development across the preschool period could be responsible for the improved social skills across time found in the present study.

Additional Analyses

A number of exploratory analyses were performed in order to further understand the findings in the present study. For example, various scales were broken down in subscales and age was used as a covariate. These exploratory analyses were not successful in illuminating the reasons for the results of the three main hypotheses.

Future Directions

Several modifications to the COMPASS program may be needed to enhance its efficacy with Head Start preschoolers. One such modification would be to add more teaching sessions to the curriculum (Chandler, Lubeck, & Fowler, 1992; Kazdin, 1987). Giving the children more opportunities to encode the eight individual social skills and to then rehearse those skills may improve the likelihood of generalization and maintenance of gains (Chandler et al., 1992; Lochman, 1985; 1992). In a review of the preschool intervention literature, Chandler et al. (1992) discovered that interventions with a greater

number of treatment sessions resulted in more durable behavior change. Preschoolers

may require multiple sessions to reinforce the content of each individual social skill.

Repetition may be required at this age level to ensure encoding of the skill into each

child's behavioral repertoire (Chandler et al., 1992; Craig, 1992). Moreover, past

research with elementary-aged children has found that interventions with more sessions

result in more significant behavior changes along with increased maintenance of those

changes (Lochman, 1985;1992).

Because Head Start spans ages three to five, it is even more important to provide

opportunities for rehearsal. An incredible amount of cognitive, social, emotional, and

physical development occurs between the ages of three to five (e.g., Bierman &

Montminy, 1993; Craig, 1992; Eisenberg et al., 1994; Flavell et al., 1993; Gelman &

Gottfried, 1996; Maccoby, 1980; Saarni et al., 1998; Woolley & Wellman, 1990),

rendering it difficult to determine an appropriate developmental level at which to aim the

COMPASS program. One solution would be to tailor the model more specifically to the

preschool level by emphasizing the training goal of rehearsal rather than verbal

instructions. It might also be useful to include verbal abilities as a covariate in future

research designs in order to more fully understand the role of verbal skills in the

effectiveness of COMPASS. In addition, it is undoubtedly important to apply the

evaluation and feedback component outside the training sessions in order to enhance

treatment effects.

Second, a parent-involvement component should be added to foster generalization

to the home setting and to allow for parental reinforcement of the newly learned social

skills. Carolyn Webster-Stratton developed a traditional parent-training program called

PARTNERS (e.g., Webster-Stratton et al., 1989), which has been successfully implemented with Head Start parents (Webster-Stratton, 1998). Traditional parent training is aimed at improving interactions between parents and children through disciplinary techniques and contingency management (e.g., Wells, Forehand, & Griest, 1980), rather than directly targeting children's social behavior. These parent training programs tend to focus on the reduction of negative behavior, rather than teaching children prosocial skills.

Social skills training programs that include a parent-involvement component specifically focusing on social skill development have been effective with older children (e.g., Frankel, Myatt, & Cantwell, 1995). In Frankel's program, the parent sessions review for the parents the lessons that the children are learning and effective ways to reinforce these behaviors at home. For example, parents are taught how to monitor their child's play date and correct negative play behavior as it occurs. Given the instrumental role that parents play in facilitating a preschooler's social development (e.g., Ladd, Profilet, & Hart, 1992), it is likely that the addition of a parent-involvement component will aid in the effectiveness of the COMPASS program with a preschool population. Specifically, providing parents with training on how to foster their child's social skill development is necessary.

Third, a contingency management program that is explicitly linked to the COMPASS program may be helpful, given the effectiveness of classroom contingency programs on behavior problems (e.g, Barkley, 1998; Bierman et al., 1987; Kazdin, 1987). For example, a classroom token economy plus response cost program was found to increase on-task behavior and academic accuracy in ADHD children (Pfiffner & O'Leary,

1987). A contingency management program for COMPASS would require reinforcement of positive *social* behavior. Past research has found that reinforcement of social behavior in the classroom is surprisingly low (McMahon & Wells, 1998). In addition, programs that include secondary, or tangible, reinforcers are more effective than those using social reinforcers alone (Barkley, 1998). Therefore, although the teachers were encouraged to praise the children for the use of social skills outside the training sessions, a formalized reinforcement plan should be developed. For example, as each social skill is learned, it could be posted in the classroom in pictorial format as a reminder to the children. This would also serve as a reminder to the teacher to reinforce the use of the skill in the classroom. Additionally, each child could have a social skills sticker chart hanging in the classroom to monitor and reinforce the use of social skills. Perhaps stronger reinforcement for social skill usage would increase the likelihood of finding treatment effects, and also bolster generalization and maintenance of the program. In fact, Chandler et al. (1992) found that preschool interventions that utilize positive reinforcement and prompting of skill usage have higher generalization and maintenance of treatment effects.

Fourth, COMPASS should be evaluated in a larger number of Head Start classrooms in order to account for site differences (e.g., Doyle & Connolly, 1989; Gravetter & Wallnau, 1992). The ability to successfully account for these site differences may be the key to documenting the effectiveness of the COMPASS program. Moreover, the improved statistical power provided by a large sample size is a more reasonable test of the COMPASS program's overall ability to increase the use of positive social skills and to decrease negative behavior, especially aggression.

Finally, a long term follow-up beyond the three months employed in the present study should be included in future research designs (Bierman & Montminy, 1993). It is possible that if the participants in the present study had been followed up one year post-treatment, a sleeper effect might have been revealed with respect to behavior change. Examination of the correlation matrices shows that, in both the treatment and control groups, the relationships among social skills, aggression, and peer acceptance were in flux across time. For example, relational aggression was not associated with teacher-rated problem behaviors at pre-treatment, but was associated in both the treatment and control groups at post-treatment and follow-up. Also, the Friendliness Ratings from the interview were related to teacher-rated social skills at pre-treatment, but were not related at post-treatment or follow-up in either condition. Apparently, during the preschool years, firmly established relationships among these variables are not present.

Critics might argue that the lack of a clear relationship pattern among the dependent variables indicates that preschoolers are too young for intervention targeting social skills, aggression, and peer relations. It can also be argued, however, that the preschool period is the perfect time not only for intervention, but for prevention of difficulties associated with these dependent variables (Mize & Ladd, 1990b). Taking advantage of the instability of these relationship patterns may be precisely what is warranted in order to effect change. The drawback may be that the effects on behavior change are delayed. It could be argued, though, that because the intervention occurs prior to the establishment of reliable relationships among the variables of interest, that any effect of the intervention would be more durable. It is still considered preferable to aid in the solidification of appropriate attitudes and behavioral patterns, rather than attempting

to treat entrenched maladaptive behaviors later in childhood. Future research is needed in order to determine the most effective way to reach this goal in a preschool population.

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Appendix A

Informed Consent Letter

Dear Parents/Guardians,

Your child's Head Start center has been chosen as the site for a special program this fall. This program involves work that the University of Maine is doing with Head Start staff to improve the behavior of preschoolers. This research project has received the approval of Penquis CAP and the Head Start Policy Council. The coordinators of this research project from the University of Maine are Erika Carpenter, a clinical-developmental psychology graduate student, and Dr. Douglas Nangle, an Associate Professor in the Psychology Department.

What's Involved? A total of four Head Start centers will be involved in this project. The teachers in two of these centers will be teaching the children lessons about social behavior. The teachers will fill out questionnaires that ask about your child's behavior at school. We would also like to conduct interviews with all of the children in the class. These interviews would include asking them how they would react in certain situations and how much they like to play with the other children in their class. For example, your child will be asked what he or she would do if another child knocked over a block tower that your child was building. Another question involves what your child might do if he or she wanted to play with another group of children. The interviews will be audiotaped in order to code the responses. The tapes will be destroyed after this coding.

We will compare the children in these two centers with the children in the other two centers. If these comparisons show that the social skills lessons are helpful, then the lessons will become part of the general Head Start curriculum for all Head Start centers.

Will the Data be Private? All the information we gather will be kept private. The children's full names will not be attached to any information at any time. We will use first names while conducting the interviews and to match the observations of the children with the correct forms filled out by the teacher. After we gather all sources of information, we will assign each child a number and even the first names will no longer be used.

Risks/Benefits: We have taken care to consult with Head Start staff in the design of this project to create the least amount of intrusion in the classroom. The risk involved in the project is no greater than what children experience in daily school life. And, the results will help us improve the behavior of preschoolers in Head Start classrooms.

What do I Need to do? Please read and sign the bottom of the second page of this letter to indicate whether or not you give permission for your child to be interviewed individually for this project. If you decide not to let your child participate, your child's Head Start services will continue normally.

Please return the bottom of this page of the letter to your child's teacher as soon as possible.

We really appreciate your help with this project! If you have any questions or concerns, please feel free to call either of the University of Maine coordinators at (207) 581-2030.

Sincerely,

_____   _____
Erika M. Carpenter, M.A.   Douglas W. Nangle, Ph.D.
Doctoral Candidate   Associate Professor

****
**

Child's Name: _____

_____I **AGREE** to let my child be interviewed for the University of Maine research
          project. I understand that my child will be taken out of the classroom for about half
          an hour and will be asked questions about how he/she would behave in different
          social situations and how much he/she likes to play with the other children in the
          class.

_____I **DO NOT AGREE** to let my child be interviewed for the University of Maine
          research project.

Parent/Guardian Signature: _____

Date: _____

Appendix B

Peer Ratings of Acceptance

Training Items:

The child will be shown the three faces and told that the happy face means you like

something a lot. The neutral face is not happy or sad and means that you sometimes like

it and sometimes don't like it. The sad face means you don't like it at all.

1. How much do you like to eat ice cream? Point to the face that goes with how

   much you like to eat ice cream.

Regardless of how the child answers training item 1, explain to the child:

Some kids might like to eat ice cream a lot, so they would pick the happy face.

And some kids might not like to ever eat ice cream, so they would pick the sad

face. And some kids might like to eat ice cream sometimes and sometimes they

don't like to eat ice cream, so they would pick the middle face.

2. How much do you like to eat spinach? Point to the face that goes with how much

   you like to eat spinach.

Regardless of how the child answers training item 2, ask the child:

So, if a kid really liked to eat spinach, which face would she pick? (Let the child

point, praise correct response and correct an incorrect response.) And if a kid

sometimes liked to eat spinach but sometimes didn't, which face would she pick?

(Let the child point, praise correct response and correct an incorrect response.)

And if a kid never liked to eat spinach, which face would she pick? (Let the child

point, praise correct response and correct an incorrect response.)

Administer the additional training item ONLY if the child gave an incorrect response to training item 2.

Additional item:

How much do you like to eat apples? Point to the face that goes with how much you like to eat apples. (Go through the remaining two choices with the child, e.g., "And if you didn't like to eat apples, which face would you point to?")

PEER RATINGS

Explain: "I'm going to show you pictures of the other kids at school. I want to know how much you like to play with each of these other kids. If you like to a lot, point to the happy face. If you sometimes like to play with the other kid, but sometimes you don't, point to the middle face. If you don't like to play with the other kid at all, point to the sad face. Okay?"

Present, in random order, the pictures of each of the child's classmates. Put one picture at a time beside the three faces. Ask the child:

"How much do you like to play with (child's name)?"

If the child does not spontaneously point to a face, prompt: "Point to the face that goes with how much you like to play with (child's name)?"
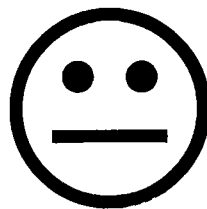
Appendix C

Social Skills Rating System-Teacher Form, Preschool Level
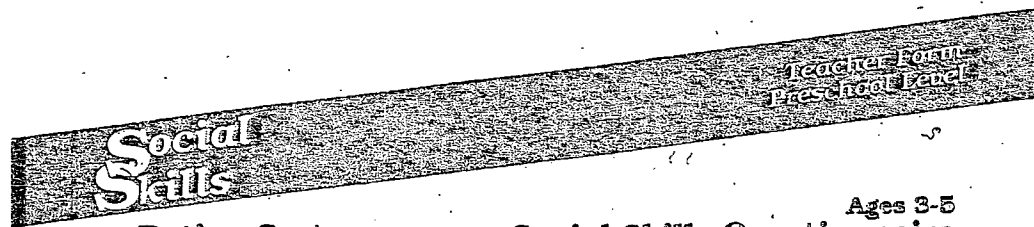
Social
Skills

Rating System

Social Skills Questionnaire

Ages 3-5

Frank M. Gresham and Stephen N. Elliott

Directions

This questionnaire is designed to measure **how often** a student exhibits certain social skills and **how important** those skills are for success in *your* classroom. Ratings of problem behaviors are also requested. First, complete the information about the student and yourself.

Student Information

Student's name_____ First _____ Middle _____ Last _____ Date____ Month Day Year

School_____ City_____ State____

Grade_____ Birth date_____ Month Day Year Sex: ☐ Female ☐ Male

Ethnic group (optional)

☐ Asian   ☐ Indian (Native American)

☐ Black   ☐ White

☐ Hispanic   ☐ Other_____

Is this student handicapped? ☐ Yes ☐ No

If handicapped, this student is classified as:

☐ Learning-disabled   ☐ Mentally handicapped

☐ Behavior-disordered   ■ Other handicap (specify)_____

Teacher Information

Teacher's name_____ First _____ Middle _____ Last _____ Sex: ☐ Female ☐ Male

What is your assignment?

☐ Regular   ☐ Resource   ☐ Self-contained   ☐ Other (specify)_____

Next, read each item on pages 2 and 3 (items 1 - 40) and think about this student's behavior during the past month or two. Decide **how often** the student does the behavior described.

  If the student **never** does this behavior, circle the **0**.
  If the student **sometimes** does this behavior, circle the **1**.
  If the student **very often** does this behavior, circle the **2**.

For items 1 - 30, you should also rate **how important** each of these behaviors is for success in *your* classroom.

  If the behavior is **not important** for success in your classroom, circle the **0**.
  If the behavior is **important** for success in your classroom, circle the **1**.
  If the behavior is **critical** for success in your classroom, circle the **2**.

Here are two examples:

	How Often?			How Important?		
	Never	Sometimes	Very Often	Not Important	Important	Critical
Shows empathy for peers.	0	1	②	0	①	2
Asks questions of you when unsure of what to do in schoolwork.	0	①	2	0	1	②

*This student **very often** shows empathy for classmates. Also, this student **sometimes** asks questions when unsure of schoolwork. This teacher thinks that showing empathy is **important** for success in his or her classroom and that asking questions is **critical** for success.*

Please do not skip any items. In some cases you may not have observed the student perform a particular behavior. Make an estimate of the degree to which you think the student would probably perform that behavior.

FOR OFFICE USE ONLY How Often?			Social Skills	How Often?			How Important?		
C	A	S		Never	Sometimes	Very Often	Not Important	Important	Critical
			1. Follows your directions.	0	1	2	0	1	2
			2. Makes friends easily.	0	1	2	0	1	2
			3. Appropriately tells you when he or she thinks you have treated him or her unfairly.	0	1	2	0	1	2
			4. Responds appropriately to teasing by peers.	0	1	2	0	1	2
			5. Appropriately questions rules that may be unfair.	0	1	2	0	1	2
			6. Attempts classroom tasks before asking for your help.	0	1	2	0	1	2
			7. Controls temper in conflict situations with adults.	0	1	2	0	1	2
			8. Gives compliments to peers.	0	1	2	0	1	2
			9. Participates in games or group activities.	0	1	2	0	1	2
			10. Produces correct schoolwork.	0	1	2	0	1	2
			11. Helps you without being asked.	0	1	2	0	1	2
			12. Introduces himself or herself to new people without being told.	0	1	2	0	1	2
			13. Accepts peers' ideas for group activities.	0	1	2	0	1	2
			14. Cooperates with peers without prompting.	0	1	2	0	1	2
			15. Waits turn in games or other activities.	0	1	2	0	1	2
			16. Uses time appropriately while waiting for your help.	0	1	2	0	1	2
C	A	S	SUMS OF HOW OFTEN COLUMNS						

FOR OFFICE USE ONLY How Often?			Social Skills (cont.)	How Often?			How Important?		
C	A	S		Never	Sometimes	Very Often	Not Important	Important	Critical
			17. Says nice things about himself or herself when appropriate.	0	1	2	0	1	2
			18. Uses free time in an acceptable way.	0	1	2	0	1	2
			19. Acknowledges compliments or praise from peers.	0	1	2	0	1	2
			20. Controls temper in conflict situations with peers.	0	1	2	0	1	2
			21. Follows rules when playing games with others.	0	1	2	0	1	2
			22. Finishes class assignments within time limits.	0	1	2	0	1	2
			23. Compromises in conflict situations by changing own ideas to reach agreement.	0	1	2	0	1	2
			24. Initiates conversations with peers.	0	1	2	0	1	2
			25. Invites others to join in activities.	0	1	2	0	1	2
			26. Receives criticism well.	0	1	2	0	1	2
			27. Puts work materials or school property away.	0	1	2	0	1	2
			28. Responds appropriately to peer pressure.	0	1	2	0	1	2
			29. Joins ongoing activity or group without being told to do so.	0	1	2	0	1	2
			30. Volunteers to help peers with classroom tasks.	0	1	2	0	1	2
C	A	S	SUMS OF HOW OFTEN COLUMNS						

FOR OFFICE USE ONLY How Often?		Problem Behaviors	How Often?			
E	I		Never	Sometimes	Very Often	
		31. Has temper tantrums.	0	1	2	Do not make importance ratings for items 31 - 40
		32. Fidgets or moves excessively.	0	1	2	
		33. Argues with others.	0	1	2	
		34. Disturbs ongoing activities.	0	1	2	
		35. Says nobody likes him or her.	0	1	2	
		36. Appears lonely.	0	1	2	
		37. Is aggressive toward people or objects.	0	1	2	
		38. Disobeys rules or requests.	0	1	2	
		39. Shows anxiety about being with a group of children.	0	1	2	
		40. Acts sad or depressed.	0	1	2	
E	I	SUMS OF HOW OFTEN COLUMNS				

Stop. Please check to be sure all items have been marked.

3

FOR OFFICE USE ONLY

SUMMARY

SOCIAL SKILLS	PROBLEM BEHAVIORS

SOCIAL SKILLS

HOW OFTEN? TOTAL
(sums from p. 2) (sums from p. 3)

BEHAVIOR LEVEL *(see Appendix A)*
Fewer Average More

C	+	=			
A	+	=			
S	+	=			
Total (C + A + S)					

(see Appendix B)

Standard Score [ ]   Percentile Rank [ ]

(see Appendix E)

SEM ± [ ]   Confidence Level 68% ☐ 95% ☐

Confidence Band (standard scores) [to]

PROBLEM BEHAVIORS

HOW OFTEN? TOTAL
(sums from page 3)

BEHAVIOR LEVEL *(see Appendix A)*
Fewer Average More

E			
I			
Total (E + I)			

(see Appendix B)

Standard Score [ ]   Percentile Rank [ ]

(see Appendix E)

SEM ± [ ]   Confidence Level 68% ☐ 95% ☐

Confidence Band (standard scores) [to]

Note: To obtain a detailed analysis of this student's Social Skills strengths and weaknesses, complete the Assessment-Intervention Record.

Appendix D

Aggressive Behavior Subscale of the Child Behavior Checklist Caregiver-Teacher Report

Form for Ages 2-5

Child's full name:_____ Circle Gender: Boy   Girl

Today's Date:_____   Child's Date of Birth:_____

Please fill out this form to reflect *your* view of the child's behavior even if other people might not agree. Below is a list of items that describe children. For each item that describes the child *now or within the past 2 months**, please circle the *2* if the item is *very true or often true* of the child. Circle the *1* if the item is *somewhat or sometimes true* of the child. If the item is *not true* of the child, circle the *0*. Please answer all items as well as you can, even if some do not seem to apply to the child.

0=Not True (as far as you know)   1=Somewhat or Sometimes True   2=Very True or Often True

0	1	2	1. Defiant	0	1	2	12. Angry moods
0	1	2	2. Demands must be met immediately	0	1	2	13. Physically attacks people
0	1	2	3. Destroys his/her own things	0	1	2	14. Lying or cheating
0	1	2	4. Destroys property belonging to others	0	1	2	15. Screams a lot
0	1	2	5. Disobedient	0	1	2	16. Selfish or won't share
0	1	2	6. Cruelty, bullying, or meanness to others	0	1	2	17. Not liked by other children
0	1	2	7. Doesn't seem to feel guilty after misbehaving	0	1	2	18. Stubborn, sullen, or irritable
				0	1	2	19. Sudden changes in mood or feelings
0	1	2	8. Gets in many fights	0	1	2	20. Teases a lot
0	1	2	9. Explosive and unpredictable behavior	0	1	2	21. Temper tantrums or hot temper
0	1	2	10. Hits	0	1	2	22. Uncooperative
0	1	2	11. Hurts animals or people without meaning to	0	1	2	23. Unusually loud

*Post-treatment forms read: *now or within the past 2 weeks*

Appendix E

Teacher Ratings of Relational Aggression

Please rate the child's behavior according to the following scale for each question:
1=never true or almost never true, 2=not true most of the time, 3=sometimes true,
4=true most of the time, 5=always true or almost always true

1. Tells a peer that he or she won't play with that peer or be that peer's friend unless he or she does what this child asks.

   | 1 | 2 | 3 | 4 | 5 |

   Never True   Always True

2. Tells others not to play with or be peer's friend.

   | 1 | 2 | 3 | 4 | 5 |

   Never True   Always True

3. When mad at a peer, this child keeps that peer from being in the play group.

   | 1 | 2 | 3 | 4 | 5 |

   Never True   Always True

4. Tells a peer that they won't be invited to their birthday party unless he or she does what the child wants.

   | 1 | 2 | 3 | 4 | 5 |

   Never True   Always True

5. Tries to get others to dislike a peer.

   | 1 | 2 | 3 | 4 | 5 |

   Never True   Always True

6. Verbally threatens to keep a peer out of the play group if the peer doesn't do what the child asks.

   | 1 | 2 | 3 | 4 | 5 |

   Never True   Always True

Appendix F

Enactive Social Knowledge Interview: Administration and Coding Manual

Administering and scoring the enactive interviews of social knowledge involve the following steps:

I.   Conducting the enactive interviews; children respond to six hypothetical dilemmas, or stories (interviews are audiorecorded)
II. Transcribing the audiotapes and identifying children's enactive strategy to each of the six stories.
III. Rating children's enactive strategies on five-point friendly (helpful to peer) vs. hostile (harmful to peer).
IV. Rating physical aggression.

OVERVIEW

The purpose of this interview is to assess preschooler's responses to hypothetical social situations. During the enactive interview, using puppets, the interviewer and the subject enact six stories, each of which represents distinct social dilemmas that preschoolers may actually face. The spontaneous response through children generate in response to the enacted dilemma constitutes the child's strategy for each of the six stories.

PART I: ENACTIVE PROCEDURE

Conducting the interviews:
All stories require: A puppet the child has selected "to pretend to be you (i.e., the child) today," or two puppets for the interviewer, and small toys. The toys will be specified for each of the following stories and include: A small doll (about 1-2"), small farm animals, e.g., a horse and a cow, set of small blocks (Playskool blocks work well), a small vehicle (e.g., a small lego truck), and a small sandbox (e.g., a large matchbox) with sand.

First take the child to a table on which there is an array of puppets representing both sexes and different races, hair coloring, etc. Ask the child to select a puppet that he/she would like to use and "pretend to be you today." Select two puppets of the same sex for yourself. Then take the child to a different table (well out of sight of the array of puppets) on which you can display some of the toys at one time while keeping the others out of view. A tape recorder should also be present but out of view. Mize arranged this by building a foldable plywood screen that could be placed on a nursery-school sized table and behind which it was easy to hide the toys that were not in use and the switch for the tape recorder.

The Interviewer first presents the training story and then Stories 1 through 6. Stories 1 through 6 should be presented in counterbalanced or random order. The stories are introduced by saying that "I want to find out what you would do in school. So you can show me with your puppet what you would really do." The Interviewer may repeat or

clarify the Training story until it is clear that the child understands the object of the task (most children require only one presentation of the Training story). Most children catch on right away that they are to make their puppet do as the Interviewer instructs (e.g., "walk up to the other kids," "build a tall tower," "play with the other kids," "watch"). Also, most children respond spontaneously at the proper place in the story, especially after they have gone through the Training story. If the child does not respond spontaneously, the Interviewer says, "What would you do then? Tell me and show me with your puppet what you would do." The Interviewer should repeat all the child's words and describe the child's actions so they are clear on the audiotape, but not make any inferences as to motive, etc. For instance, if the child's response to a story is, "Bam, you're a bad boy," spoken as the child hits the Interviewer's puppet with a block, the Interviewer would say, "So you say, 'Bam, you're a bad boy' and you hit the kid who's crying on the back with a block. Is that right, is that what you do?" The Interviewer does not, however, say, "you're really mad" (unless, of course, the child has told you this). The child may then endorse the restatement or correct the Interviewer, for instance, by saying, "No, not him, the one who said Na-na-na-na." The Interviewer would then repeat the corrected version, "Oh, so you hit the kid who was teasing? Is that right?"

After each story, toys that are not needed for the next story are put out of sight and any additional toys needed for the next story are taken out. While doing this, the Interviewer should express appreciation to the child for showing what really happens in school. For example, I'm glad you're showing me what you would do in school. Now let's say that one day..."

Training Story

Props Needed: The puppet the child has selected, two puppets for the Interviewer, small blocks.

If the child has not already done so, ask him/her to put on the puppet that he/she is "pretending to be you today." Then say to the child, "Let's say one day you and these other kids are playing with blocks. Show me with your puppet how you would do that." Engage the child in enacting with his/her puppet and your puppets a scene of playing with blocks. For instance, "Here, subject's name, you put this block on top; our building is so tall," etc. Continue play acting with the puppets, demonstrating playing with blocks. Preschoolers usually become involved in this play right away and begin talking through their puppet. Then say, "then you hear the teacher say, 'O.K. girls (boys), it's time to clean up now.' Now, I'm gonna show you what this kid does (hold up one puppet for emphasis), then I'm gonna show you what this other kid does (hold up other puppet for emphasis), and then after that it'll be your time to show me what you would do in school when the teacher says it's time to clean up. This kid says I'm gonna clean" (demonstrate first puppet engaged in picking up and stacking blocks to one side, i.e., cleaning up). As yourself (i.e., the adult experimenter) say, "Let's see what this other boy/girl would do when it's time to clean up." Have the second puppet move quickly off to the side of the scene while saying, "I'm not going to clean up, I'm leaving." Speaking as yourself, say to the child, "Now, it's your turn to show me what you would do when the teacher says it's time to clean up. You can show me with your puppet and tell me." Repeat child's strategy verbatim and describe actions. After the story ask the child, "Is that something

that might really happen in school," to emphasize your desire for a response that represents a typical action, rather than a fantasy.

Story 1: "Other kid wants to play"

Props: Two puppets for the Interviewer, the child's puppet, small blocks, small vehicle, two small farm animals; one for the Interviewer's puppet who is "playing" with the subject, one for the child's puppet; the blocks, vehicle and other puppet are lying to the side.

Say to the child "One day you and this other kid (indicate one of your puppets; the other puppet is off to the side or in your lap) are having fun playing with the farm animals." (If the child does not begin playing right away, say, "Show me with your puppet how you play with the farm animals with this other kid," and engage your puppet and subject's puppet in play with the farm animals for a few seconds.) Have your puppet say, "We only have two farm animals to play with." Then have your other puppet (the one who has been off to the side up till now) approach your playing puppet (the one who is playing with the child's puppet) and both shove your puppet (gently!!) and at the same time say to the child's puppet, "Hey, child's name, I want to play with you now!"

Story 2: "Sandbox"

Props: One puppet for Interviewer, one puppet for child, small sandbox, two farm animals in sandbox, blocks a couple of feet away from the sandbox.

Say, "One day you and this other kid are having fun playing in the sand table" (or sandbox). As in story one, engage child briefly in role playing with puppet playing with farm animals in sandbox.) Then have your puppet say, "Child's name, I'm tired of playing in the sand, I'm going to play with the blocks now." Have your puppet move to blocks and start building with them.

Story 3: "Knocks over blocks"

Props: Puppet for child, puppet for Interviewer, the small blocks.

Say, "Now on this day in school, you're building a tall tower with blocks. Show me how you do that." Allow the child to construct a tower say about 4-5 blocks tall using his/her puppet. Then have your puppet approach tower and push it over, saying at the same time, "Hey, child's name, I was playing with those before and you can't play with them now."

Story 4: "Teasing"

Props: Puppet for child, two puppets for Interviewer, the blocks for the child's puppet to play with.

Say, "Let's say that one day you are building with blocks, can you show me h ow you would build with the blocks." Allow the child to become engaged with the blocks,

then a couple feet away from the child enact the following scene with your two puppets. One of your puppets says to the other, "Na-na-na-na-na" and the recipient of the teasing cries and says, "Oh, it makes me feel sad when you tease me like that." The first puppet then teases again, "Na-na-na-na."

Story 5: "You can't play"

Props: Puppet for child, two puppets for Interviewer, two farm animals for Interviewer's puppets, blocks, the vehicle, and the small doll lie nearby but unused.

Say, "One day you don't have anything to do, so you're just walking around the room. Show me with your puppet how you would just walk around." (You may have to indicate to the child an area of the table away from the toys.) Have your two puppets begin to play with the farm animals, making animal noises, etc. "Then you see these two kids playing with the two farm animals, and it looks like they're having fun. So you walk up close beside them because you'd like to play, too" (if child does not do this with puppet, you may have to say, "show me with your puppet how you would walk up close to these other kids"). When child's puppet approaches your puppets, have one of your puppets say to him/her, "You can't play, cause we only have two farm animals."

Story 6: "Nothing to do"

Props: Two puppets for Interviewer, blocks for the Interviewer's puppets, the doll, vehicle, and farm animals are lying nearby, unused.

Say, "Let's say one day you don't have anything to do and you are just walking around the room. Show me with your puppet how you would do that." (You may have to direct the child to an area of the table with out toys.) Have your puppets begin to play with the blocks, saying, "Hey, we're building a tall tower." (Because this story has a less clear-cut provocation or stimulus for the child to respond to, it is more likely that you will have to say at this point, "What would you do if you saw these kids having fun playing with the blocks?")

PART II: PUPPET INTERVIEW TRANSCRIPTION

Transcribing the audiotapes

Play the audiotapes and type verbatim the child's responses to each of the dilemmas. Remember to include the interviewer's descriptions of the child's actions and the child's responses to the "why" question. Glean whatever information you can from the tape, even if the interviewer did not repeat it. Each child's response to each separate story is typed separately, and each transcription should include the child's first name (in the top right-hand corner, because it will be torn off once ID numbers are assigned), a spot for the child's id number, the interviewer's name, and the story number.

The interviewer's questions, etc, may be abbreviated. You do not have to use quotation marks for quotes (to save typing time) and should enclose descriptions of the child's actions in parentheses (to distinguish them from quotes).

You also need to include a separate section documenting all instances of physical aggression that occurred at any time during that story. If the physical aggression is part of the response, include it in **BOTH** sections.

Here are some examples of how it should be done:

Child ID#_____, Story #2   Sally
Interviewer:_____

C: Well, I'm not tired of the sand. (Child continues to play with farm animals in the sand.)
E: Why?
C: Cause I like the sand better than blocks.

Physical Aggression

  1. C throws blocks.
  2. C hits puppet's head against table.

Child ID#_____, Story #5   Sally
Interviewer:_____

C: (Picks up doll and moves it closer to the other children.) I can be the farmer.
E: Why?
C: Cause I want to play, too.

Physical Aggression

  1. C hits puppet with fist.

Guidelines for Helping You Compose and Read the Transcripts

- Exact words, or paraphrases, of the experimenter and child are simply written, they are not enclosed in quotation marks.

- Actions are enclosed in parentheses, for instance- -
C: No. (knocks down blocks) - - This means that the child said "No" and knocked down the blocks at the same time or at about the same time.

- Clarifications of what the child means may also be in parentheses.
C: I'd hit him (the crying child) - - This means the child said "I'd hit him" and the person who transcribed this tape somehow knows, probably by something the interviewer said, that the child means s/he would hit the puppet who is crying, no the teaser.

- If a child does not respond during the entirety of the story, paraphrase the experimenter's interpretation of the response in parentheses. Then type "NR" outside of the parentheses to indicate that the child basically had "no response." For example:
C: (sit looking at the other kids) NR

- Usually, the whole question of the experimenter is not written out; instead it is abbreviated, for instance: why? = Why would you do that?

- When the child has misunderstood the story and the experimenter retells it, that is simply written as "clarifies" or "repeats."

- When the experimenter is trying to get more information from the child, it is often abbreviated as "probes." For example:
C: I'd hit him
E: probes
C: That kid (child touches the teaser).
The probes line means the interviewer did not understand whom the child was referring to and probably asked the child, "Who would you hit?" It could also mean that the interviewer asked "Is that right?" or "Is that something that would really happen in school?"

- Just make sure that the abbreviations are clear within the context of the story.

Identifying Strategy Idea Units While Typing the Transcripts

Introduction:

As you type the transcripts, you will be looking for portions of the children's responses which represent children's strategies- - how they would deal with the situation. These statements are called "idea units".

In general, you'll find it easy to identify these strategy idea units just by using your common sense notions about what is going on within each child's response. For instance, in this story: (E = Experimenter; C = Child)

E: What would you do?
C: Hit him (strategy)
E: Why would you do that?
C: Cause he pushed me (Goal)

Sometimes it will be more difficult to decide what, if anything, is a goal or strategy. Sometimes your decision will have to be based on more arbitrary rules for identifying strategies. For the purposes of this study, we are only interested in strategies. However, noting the goals may cast light onto the nature of the response. (Note: you do NOT need to put "strategy" and "goal" in the transcript.)

<u>Specific Rules for Identifying Strategy Idea Units</u>

You will be looking for the child's <u>strategy</u>. You are to underline the strategy during tape transcription. This will help orient the coder to the strategy during the coding process. A strategy is the child's suggestion for what he or she would do in response to the situation presented by the experimenter. Following are some more specific rules for identifying strategies.

(a) Strategy idea units are statements by the child about what he or she would do, prescriptions of a role for the self by the subject, or may be descriptions of what the child does or the child's role in response to the situation described/acted out by the experimenter. Ideas focusing on the actions taken by others, on others' roles, are not to be considered strategies <u>unless</u> the idea implies a passive role for the subject and is a way of dealing with the situation. For instance, if the subject suggests that the teacher would come over and "give me a toy to play with," a passive role is implied for the subject and this should be considered a strategy and be underlined (unless the subject has already suggested a clear strategy for him/her).

(b) Underline only the **first** strategy that the child suggests. For instance, if he child says he would "hit," or actually hits the other puppet and then later says he would "ask the kid to play," only "hit" should be considered the strategy. Remember that you can underline **actions** as the strategy, not just verbal responses.

Exceptions to this rule:

> (1) If the experimenter clarifies the story and it is apparent that the child had misunderstood the story during the first presentation and subsequently offers a different strategy when he/she understands the story accurately, underline the strategy the child offered to the "understood" story. For instance, if, in response to the "Other Kid Wants to Play" story, the child says, "If he pushed me, I'd push him back," the interviewer would clarify for the child by saying that the other child pushed the playmate, not the subject, and elicit a response to this corrected version. Underline the child's response to the "understood" version (The clarification of the interviewer would just be transcribed as "clarifies.")

> (2) If the child says s/he would do two things and it is apparent that the two things occur simultaneously, or really constitute one strategy, underline both parts. For instance, "I would grab the horsie and say "stop it" would be one strategy. Of course, when the child actually takes some action, for instance hits, and at the

same time says something, this is considered one strategy. For instance, " I would tell him stop." (grabs horse) is one strategy and both parts should be underlined.

However, if the child says, "I'd tell him to stop" and in a separate sentence, or in a phrase separated by "and then," says "I'm going to beat him up," this is <u>not</u> obviously one strategy occurring simultaneously, and so only the first, "I'd tell him to stop," would be underlined.

(3)   If something the child says or does later is necessary for understanding strategy that was first suggested, you should underline that, also. For instance, in the You Can't Play story, if the child moves the small doll closer to the other children, and the interviewer asks, "Why?" and the child responds, "I'm pretending the doll is a farmer," that clarifies what the child's strategy was. In this case you would underline both (moves doll over to the other puppets) and the statement, "I'm pretending the doll is a farmer" as the strategy. Another case like this is when the child says s/he would "play" and the experimenter probes, or asks the child to show what s/he would do and the child takes the blocks and moves them to where the other children are playing. The description of this action, for instance, (moves blocks to area with other kids) should be underlined in addition to the "I would play" statement.

(c) Underline "no response" if no other clear strategy is demonstrated. Some children might require some time to process each story and this should NOT be interpreted as "no response" unless no other strategy is ever forthcoming. For example:

C: (sit looking at other kids) NR
E: probes
C: And I would <u>tell the teacher</u>.

The NR is interpreted as processing time and the "tell the teacher" is considered the strategy.

PART III: RATING CHILDREN'S STRATEGIES ON FRIENDLINESS

You will be going through sets of transcripts of children's responses to social dilemmas on which children's strategies for dealing with the situation have been underlined by the transcriber. IT IS PERFECTLY FINE FOR YOU TO DISAGREE WITH THE UNDERLINED STRATEGY. If you disagree with the underlined strategy, call or e-mail Erika for the final decision.

Each strategy category will be given a rating of from 1 to 5 for the Friendliness dimension. The procedure for each rating will be as follows:

(1) Read the story on which you are working. Become familiar with the exact wording and with all of the materials available in the story (e.g., in some stories children are

playing with farm animals- a cow and a horse- and in other stories children are playing with blocks).

(2) Read through the set of **Strategy Categories** for the story on which you are working. (Each story has its own set of Strategy Categories that were developed by examining strategies suggested by children during prior testing.) Become familiar with the entire range of strategies for the story you are working on and with the range of exemplars within each strategy. Pay special attention to strategies which are very similar to each other. See if you can generate additional examples for each category from your imagination. Also read over the following definition of the Friendliness dimension noting the qualities of friendliness and each point on the five-point scale:

Codes for Friendly (prosocial or beneficial to peer) vs Hostile/Aggressive (harmful to peer):

In general, a friendly response (point 5 on the scale) is one characterized by a tone that is positive, nice, positively responsive, amicable, cheerful, comforting, showing kindly goodwill or cordiality. Remember that friendly implies a good outcome for a peer and does not necessarily mean that the subject becomes socially involved with the peer; a child can be involved without being friendly and some friendly responses are not highly involved (for instance, "I'd go away so that he could play with the toys he wants to play with now"). Friendliness relates to the immediate tone of the strategy and does not have implications for the child's future relationship with the peer necessarily. The opposite of friendly is hostile. Hostile strategies (point 1 on the scale) are marked by antagonism, physical or verbal aggression, etc. Point 3 represents strategies which are neither friendly nor hostile (e.g., no response), point 4 is somewhat friendly, and point 2 is somewhat hostile or aggressive.

1   Responses that include direct physical or verbal aggression toward the other child. For example "I'd kick him," "I'd call him a jerk," "I'd knock over her paint," "I'd say 'I'm not your friend anymore.'"

2   This category is for threats and responses where the child suggests seeking out an adult who would punish the other child. Examples of threats:
"you better let me play," "you better not do that again." Examples of adult punish: "I'd tell my mom to spank him," "I'd tell the teacher not to give him a snack." If the child simply says "I'd tell the teacher" it is not scorable as a 2. The interviewer needs to prompt "what would you want the teacher to do?" to discover if the child wants the adult to punish the child in some way. If the child does not suggest that the adult punish the provocateur, the response is scored as a 3.

Responses that request or demand that the other child do something specific are scored as a 2. For example, "stop that," "don't do that again," "listen to me."

3   Included are suggestions that the child would ask an adult to intervene on his/her behalf, not punish the other child (see category 4). EX. "I'd ask my mom to get them to let me play." Also included are responses in which the child would not do or say anything to the provocateur. For example, "I wouldn't do anything," "I'd clean off my shirt," "I'd play somewhere else." Any response the child gives that is not directed toward the other child in the story is scored a 3.

4   Reflects a response in which the child suggests making a comment to the other child or asking a question, but does not ask the other child to do something specific. For example, "I'd ask him why he did it," "I'd ask them again," "I'd say 'I didn't like that'."

5   Represents responses that are friendly or helpful to the peer. Score responses that are friendly or prosocial here ("I would share," "I would try to be friends," "I'd be nice to her") as well as responses that are helpful to the peer ("I'd help her clean it up," "I'd tell her that it's O.K., don't feel bad").

(3) Begin going through your portion of children's transcribed responses. Read each child's response and look for it in the set of Strategy Categories in the manual. You should be able to code each response based on the strategies listed in the manual. Determine which strategy the child used and assign the appropriate friendliness rating. If you are stuck between two or more strategy categories, check the assigned ratings for those categories. Sometimes you will be stuck between two strategy categories that both have the same friendliness rating. If so, simply use this common rating as the friendliness rating for that child's response.

(4) A note on the categories: Occasionally you will find a response that could be placed in two categories e.g., (child hits and plays with truck). Place it in the category of the most dominant response - - in this case "Physical Aggression Toward Peer" is more salient than play with the truck.

(5) If you get stuck, for example if you are torn between one strategy that is rated a 2 and one that is rated a 3, call or e-mail Erika or Betsy for help.

STRATEGY CATEGORIES

Following are the **Strategy Categories** for each of the six stories. For each story the story number and strategy number and name are given. The category is defined and then a couple of examples are given for each strategy category. Following the examples is the Friendliness rating that has been pre-determined for this response.

The following code is used. F = the friendliness rating on a 1-5 scale

STORY 1- OTHER KID WANTS TO PLAY

Story 1/Strategy 1: Get an authority/generic
        The strategy is to simply "get" or tell an authority who will presumably take care of the situation, or tell an authority about the situation. This does not include threats to tell an authority.
        Tell the teacher.
        Get the teacher. Teacher, this kid says my other friend can't play.
        F = 3

Story 1/Strategy 2: No action/nothing
        The strategy is to not respond, or do nothing. This does not include cases in which the child makes no response.
        I wouldn't do nothin'.
        (Child just holds puppet still.)
        F = 3

Story 1/Strategy 3: Feel unhappy

Subject says he/she would feel sad, bad, unhappy, etc. but takes no overt action.
I'd be sort of sad, I think.
That would make me feel bad.
F = 3

Story 1/Strategy 4: <u>Clean up/remove toys</u>
The strategy is to clean-up, put away or remove toys, materials or activity. May imply ending activity.
Clean up.
I would just take that stuff away from here.
F = 3

Story 1/ Strategy 5: <u>Retreat</u>
The strategy is to leave the activity or situation.
Go to another place, sit down.
Take that toy to the other place and play by myself.
F = 3

Story 1/Strategy 6: <u>Remove intruder</u>
Strategy is to physically remove intruder from area. This includes cases in which the child SAYS he/she would push, drag, etc. the other <u>away</u> (if no overt aggression is expressed) but not cases of just plain pushing, dragging, etc.
I'd push him away.
Drag that bad guy to another room.
F = 2

Story 1/Strategy 7: <u>Remove intruder plus replace playmate</u>
Strategy is to physically remove intruder and bring original playmate back to the play area and/or resume play with him/her.
I'd push that pusher away and put him (OP) back to play.
Drag him outa here (gives toy to original playmate).
F = 3

Story 1/Strategy 8: <u>Deny intruder right to play</u>
The strategy is to not allow intruder to play but in a <u>nonspecific</u> way - - for instance, there is no verbalization to intruder nor any account of how self would prevent intruder from playing.
Not let him play with me.
I wouldn't let him play.
F = 2

Story 1/Strategy 9: <u>Physical aggression toward intruder</u>
The strategy is to direct physical aggression against intruder.
(squeezes other puppet, then "sits" on it)
Push him.

F = 1

Story 1/Strategy 10: <u>Aggression with verbal acknowledgement of friendship with, or priority of, playmate</u>
The strategy is to physically attack intruder and also to tell the intruder that playmate is a friend, was playing first, etc.
(pushes other puppet hard) She's a friend of mine, now.
I'd knock his teeth and say the other kid was playing.
F= 1

Story 1/Strategy 11: <u>Aggression with verbal assertion</u>
The strategy is to physically attack intruder and also tell him/her that he/she can't play, to go away, not intrude, or some similar directive or that self wants to play with the playmate, etc. (See verbal assertion.)
Bang him. Go away.
Stop. (hits other puppet)
F= 1

Story 1/Strategy 12: <u>Aggression toward intruder plus consoling/friendly gesture toward playmate</u>
The strategy is to physically attack intruder and also direct some friendly, prosocial or consoling act toward original playmate.
Bang that guy. (gives playmate cow)
(Hits intruder) Come on back!
F= 2

Story 1/Strategy 13: <u>Verbal assertion against intruder</u>
The strategy is to tell intruder to go away, that he/she can't play, not to intrude, or to give some similar directive.
I don't want to play with you.
Tell her no (takes toy from intruder).
F= 2

Story 1/Strategy 14: <u>Verbal assertion with threatened aggression (coercion)</u>
The strategy is to tell intruder to go away, etc. (see Verbal assertion) and also to threaten intruder with aggression or authority intervention, etc.
Get out of here or I'll knock you.
Hey, we don't want you. I'm gettin' the teacher.
F= 2

Story 1/Strategy 15: <u>Verbal assertion with reference to friendship and/or own desire to play with original playmate</u>
The strategy is to tell intruder to go away etc., (see Verbal assertion) or to threaten intruder and to refer to playmate as friend and/or own desire to play with playmate.
Hey, don't do that to my friend.

I'd tell him I want to play with her and to go sit down.
F= 3

Story 1/Strategy 16: <u>Verbal assertion with reference to social norm</u>
The strategy is to tell intruder to go away, etc. (see Verbal assertion) or to threaten intruder, and to refer to a social norm or rule (such as priority of playmate).
Not supposed to push! You're mean.
That other kid was here playing already!
F= 3

Story 1/Strategy 17: <u>Verbal assertion to peer plus consoling/friendly gesture to playmate</u>
The strategy is to tell intruder to stop, etc. (see Verbal assertion) or to threaten and also direct some friendly, pre-social, or consoling gesture to playmate.
No (to intruder) (picks up original playmate).
You stop that or I'll tell. Now you come back with me.
F= 5

Story 1/Strategy 18: <u>Verbal threat of aggression</u>
The strategy is to tell intruder that self will direct aggression toward intruder.
I'll knock you back.
Hey, I'm gonna push you.
F= 2

Story 1/Strategy 19: <u>Verbal assertion with generic rationale</u>
The strategy is to tell intruder to stop, etc. (see Verbal assertion) and to provide a general rationale, such as a restatement of intruder's action. (Do not use this category if another, more specific verbal category is appropriate)
You knocked him down, so you can't play.
I tell him to go away cause he did that to him.
F= 2

Story 1/Strategy 20: <u>Continue to play with peer/no mention of intruder</u>
The strategy is to continue to play with peer (peer is clearly signaled or mentioned) with no acknowledgement of intruder.
We'd keep playing.
Play (going to original playmate).
F= 4

Story 1/Strategy 21: <u>Continue to play ignore intruder</u>
The strategy is to play with no mention of either intruder or playmate.
Build with blocks
(play with toys)
F= 3

Story 1/Strategy 22: <u>All play together</u>

The strategy is to play with both intruder and playmate or to suggest that all three play together.

> Stop now. We can all do it
> (takes hands of both puppets) Both of you guys play with me
> F= 5

Story 1/Strategy 23: <u>Acquiesce</u>

The strategy is to simply allow intruder to play or go with intruder to another activity.

> All right.
> I'll use the motorcycle (talking to intruder).
> F= 4

Story 1/Strategy 24: <u>Give toy to intruder</u>

The strategy is to offer material to intruder or encourage intruder to pick-up/play with toy. (May include verbal acquiescence).

> Do you like to use the motorcycle?
> Sure, ok, (hands cow to intruder).
> F= 4

Story 1/Strategy 25: <u>Unspecified affiliative behavior toward playmate or intruder</u>

The strategy is to somehow affiliate or be near playmate/intruder in a vague way or in a way, which can't be coded, using another category.

> Be near her.
> (comes and stands really close to playmate/intruder)
> F= 4

Story 1/Strategy 26: <u>Give toy to original playmate</u>

The strategy is to offer materials to original playmate or to encourage to pick-up or play with toy. (May include verbal statement to playmate.)

> (Hands toy to playmate)
> Here, you take that horse back (to playmate).
> F= 5

Story 1/Strategy 27: <u>Placing the intruder in time out</u>

The child indicates that the intruder should be placed in time out or that the teacher should place the intruder in time out.

> Put him in time out.
> Tell the teacher he needs time out.
> F= 2

Story 1/Strategy 28: <u>Commentary with reference to a social norm</u>

There is no active strategy identified by the child, but the child says to the intruder (or to the interviewer) some kind of value judgment about the intruder's behavior.

> That was mean of him (to interviewer).

You're not very nice (to intruder).
F= 3

Story 1/Strategy 29: No response

Child does not respond to the question, "what would you do?" No response will be underlined or written on transcript. Does not include cases where child says he/she would do nothing.
No response.
F= 3

Story 1/Strategy 30: No strategy

This can happen when child makes a response but the response can't be coded as a strategy using a set of rules identifying strategies (e.g., child may have suggested a strategy for another character, not self).
NS
F= 3

Story 1/Strategy 31: I don't know

Child says, "I don't know" or provides a similar response which has little meaning.
Child shrugs.
Don't know.
F= 3

Story 1/Strategy 32: Idiosyncratic

Child provides a response, which can't be coded using any other strategy category, and usually makes little or no sense in context. Reserve this category for responses, which are inappropriate and/or seem to reflect a lack of awareness of what's happening in the story.
Jumping over the toys. I jump, I jump.
Push that tower. Chop.
F= 3

STORY 2 - - SANDBOX

Story 2/Strategy 1: Get an authority/generic

The strategy is to "get" or tell an authority that will presumably take care of the situation, or to tell and authority about the situation. This does not include threats to tell.
Hey, where's the teacher. Get the teacher.
Teacher, that kid went away and left me alone.
F= 2

Story 2/Strategy 2: No action/nothing

The strategy is to not respond, or to do nothing. This does not include cases in which the child makes no responses.

Not anything.
I'd do...I wouldn't do not'in'.
F= 3

Story 2/Strategy 3: <u>Clean-up/put away sand toys</u>
The strategy is to remove, clean-up, or put away sand toys.
Clean it up.
Put those things away (starts removing toys from sandbox).
F= 3

Story 2/Strategy 4: <u>Clean-up/put away blocks</u>
The strategy is to remove, clean up, or put away blocks.
(begins stacking blocks against wall)
Take 'em away.
F= 2

Story 2/Strategy 5: <u>Retreat</u>
The strategy is to leave the activity or situation.
Go to another room and play.
Go outside.
F= 3

Story 2/Strategy 6: <u>Remove playmate</u>
The strategy is to physically remove playmate from blocks. This includes cases in which the child SAYS he/she would push or drag <u>away</u> the peer, but not simple pushing or dragging. Code this only if overt aggression is expressed.
Drag him away from the blocks.
Take him away.
F= 2

Story 2/Strategy 7: <u>Physical aggression toward peer</u>
The strategy is to direct physical aggression against peer.
(hits other kid, throws cow at him)
Roll over him till the blood come.
F= 1

Story 2/Strategy 8: <u>Physical aggression against peer with verbal assertion</u>
The strategy is to physically attack peer and also tell him/her not to go, to come back, or some similar directive.
(hits other) Hey, come back here.
I punch him out and say to stop.
F= 1

Story 2/Strategy 9: <u>Aggression against peer's objects or toys</u>

The strategy is to direct physical aggression against peer's toys or objects (e.g., blocks) but not against peer.

(knocks over peer's tower of blocks)
Knock it over.
F= 1

Story 2/Strategy 10: <u>Verbal assertion against peer plus aggression against peer's objects</u>

The strategy is to direct aggression against peer's objects (see Aggression against objects). And also to tell peer to stop, come back, or offer some similar directive.

Hey stop (knocks down tower)
I tell him he better not and hit his tower down, all down.
F= 1

Story 2/Strategy 11: <u>Verbal assertion against peer</u>

The strategy is to tell peer to stop, go away, come back, or offer some similar directive to peer.

You better not do that.
Tell him to stop saying that.
F= 2

Story 2/Strategy 12: <u>Claim possession of blocks (verbal)</u>

The strategy is to tell peer that self has rights to/priority in blocks.

Those are my blocks.
I was building there before you!
F= 2

Story 2/Strategy 13: <u>Verbal assertion with threatened aggression</u>

The strategy is to tell peer to stop etc. (see Verbal assertion) and to also threaten physical aggression or telling authority.

You stop or I'll tell.
Bang your head if you don't come back.
F= 2

Story 2/Strategy 14: <u>Verbal assertion with reference to friendship</u>

The strategy is to tell peer to stop etc. (see Verbal assertion) and make some reference to being friends with or liking peer. May include threats not to be friends with peer.

I don't like you no more if you don't come back here.
Hey, friends are supposed to play together, so stop.
F= 2

Story 2/Strategy 15: <u>Tell peer self does not wish to play with blocks or wishes to remain in sand</u>

The strategy is to directly address peer and say self prefers not to play in blocks or prefers to play in sand, or likes sand better than blocks. May consist simply of a response to peer's statement, "I wanna play in the blocks now."

Not me.

What for? I like sand better.

F= 4

Story 2/Strategy 16: <u>Tell peer that self will find another playmate for sand</u>

The strategy is to inform peer that self will find another child or friend to play in the sandbox with self.

O.K., then, I'll just get somebody else to come here.

You don't play then and I get another friend who likes sand.

F= 4

Story 2/Strategy 17: <u>Verbal permission for peer to leave but say self will stay in sand</u>

The strategy is to address peer directly and say that it is O.K. or permissible for peer to go to blocks but that self will stay in sand, or no go to blocks, or may make mention of self going to blocks.

O.K. You go ahead.

You can play there; I'll just play here with the horsie.

F= 5

Story 2/Strategy 18: <u>Join peer in blocks</u>

The strategy is to go to play in blocks, or say that self will go play in blocks, or say that self will play with peer.

I'd play too, with that kid.

(Goes to blocks)

F= 5

Story 2/Strategy 19: <u>Continue to play in sand</u>

The strategy is to remain in the sand, and/or play in the sand or say that self will play/stay in sand.

(plays with farm animal)

Just stay here.

F= 3

Story 2/Strategy 20: <u>Assist peer</u>

The strategy is to help peer by giving him/her a toy, help get the blocks out for the peer, etc. (Does <u>not</u> include playing with the blocks, for instance helping to build a tower.)

F= 5

Story 2/Strategy 21: <u>Reinitiates play with peer</u>

The strategy is to try to re-engage the peer in generic play, with no reference to either the sandbox or the blocks.

Hey. Do you want to play with me?
F= 5

Story 2/Strategy 22: <u>No response</u>

Child does not respond to the question, "what would you do?" No response will be underlined or written on transcript. Does not include cases where child says he/she would do nothing.

No response
F= 3

Story 2/Strategy 23: <u>No strategy</u>

This can happen when a child makes a response but that response cannot be coded as a strategy, for instance, the child may suggest a strategy for another character, rather than for self.

NS
F= 3

Story 2/Strategy 24: <u>I don't know</u>

Child says, "I don't know" or offers some similar response which has little meaning.

Can't think about it.
Don't know.
F= 3

Story 2/Strategy 25: <u>Idiosyncratic</u>

Child provides a response, which can't be coded using any other strategy category, and usually makes little or no sense in context. Reserve this category for responses, which are inappropriate and/or seem to reflect a lack of awareness of what's happening in the story.

Jump horsie, jump.
Animals, animals, pour sand around, cow, cow, cow.
F= 3

STORY 3 - - KNOCKS OVER BLOCKS

Story 3/Strategy 1: <u>Get an authority/generic</u>

The strategy is to simply "get" or tell an authority who will presumably take care of the situation, or to tell an authority about the situation. This does <u>not</u> include <u>threats</u> to tell an authority.

Teacher, she knocked my blocks down.
I'd tell the teacher that this friend hit my blocks.
F= 3

Story 3/Strategy 2: <u>No action/nothing</u>

The strategy is to not respond, or to do nothing. This does not include cases in which the child makes no response.

Nothing.

I wouldn't do anything.

F= 3

Story 3/Strategy 4: <u>Clean-up/remove toys</u>

The strategy is to clean-up, put away, remove toys, materials or activity. May imply ending activity.

Put stuff up.

Clean-up blocks.

F= 3

Story 3/Strategy 5: <u>Retreat</u>

The strategy is to leave the activity or situation.

I'd go outside.

(shrugs- moving puppet farther from other puppet)

F= 3

Story 3/Strategy 6: <u>Remove peer</u>

The strategy is to physically remove peer from area. This includes cases in which the child SAYS he/she would push, drag, etc. the other <u>away</u> (if no over aggression is expressed) but not case of just plain pushing, dragging, etc.

Push him outa the way.

(slowly pushes other puppet away from block area)

F= 2

Story 3/Strategy 7: <u>Physical aggression toward peer</u>

The strategy is to direct physical aggression against peer who knocked over tower.

I squeeze his head in. Ho-ha, hang (tumbles with other)

(slaps at other)

F= 1

Story 3/Strategy 8: <u>Aggression toward objects</u>

The strategy is to direct physical aggression against some inanimate object. This includes hitting, throwing toys or other objects but does <u>not</u> include cases in which a child uses an object to attack a person.

Knock his blocks down.

(kicks block at wall)

F= 2

Story 3/Strategy 9: <u>Physical aggression with verbal assertion</u>

The strategy is to physically attack peer and also tell him/her to stop, go away, etc. or offer some similar directive to peer.

(swings at peer) Tell her they're not hers.

I hit her with the blocks; hey, I want to play, mine!
F= 1

Story 3/Strategy 10: <u>Verbal assertion against peer</u>
The strategy is to tell peer to go away, to stop, etc. or give peer a similar directive.
Yes, I can play too.
Hey, give 'em back.
F= 3

Story 3/Strategy 11: <u>Verbal assertion with threatened aggression</u>
The strategy is to tell intruder to go away, etc. (see Verbal assertion) and also to threaten intruder with aggression or authority intervention, etc.
I'll bang you, you don't quit.
My tower! I'm getting the teacher!
F= 2

Story 3/Strategy 12: <u>Verbal assertion with reference to social norm</u>
The strategy is to tell peer to stop, go away, etc. (see Verbal assertion) or to threaten peer, and refer to a social norm or rule (such as priority of self) which the peer has violated and/or to apply a negatively valanced evaluative term to peer's action.
That's mean and not nice- those are my blocks.
Tell her that I was here first, so she should go away.
F=3

Story 3/Strategy 13: <u>Justify own play with blocks</u>
The strategy is to suggest to peer a legitimate social norm or rationale, which provides a reason for self-playing with the blocks.
You went away though; I didn't see you here.
Hey, it's not fair to say that if you were gone and I didn't know you were here before me.
F= 3

Story 3/Strategy 14: <u>Rebuild tower/continue to play</u>
The strategy is to continue to play in the blocks, or to say that self will continue to play in the blocks, or rebuild tower, with no specific acknowledgement of, nor statement to, peer.
E. asks: You're building again? child nods yes.
Build it back.
F= 3

Story 3/Strategy 15: <u>Compromise/share/play together</u>
The strategy is to play with peer who knocks down tower, or to suggest a way that self and peer could play together, share, or take turns, etc.
We could both play blocks.
You have some, and I'll have some.

F= 5

Story 3/Strategy 16: <u>Acquiesce</u>

The strategy is to specifically allow peer to play, or to acknowledge peer's priority.

OK, you can play.

I'll find others; you can have these if you were first.

F= 4

Story 3/Strategy 17: <u>Placing the peer in time out</u>

The child indicates that the peer should be placed in time out or that the teacher should place the peer in time out.

Put him in time out.

Tell the teacher he needs time out.

F= 2

Story 3/Stategy 18: <u>No response</u>

Child does not respond to question, "what would you do?" No response will be underlined or written on transcript. Does not include cases where child says he/she would do nothing.

No response

F= 3

Story 3/Strategy 19: <u>No strategy</u>

Child says I don't know or provides a similar response, which has little meaning.

NS

F= 3

Story 3/Strategy 20: <u>I don't know</u>

Child says I don't know or provides a similar response, which has little meaning.

Don't know.

Can't know.

F= 3

Story 3/Strategy 21: <u>Idiosyncratic</u>

Child provides a response, which cannot be coded using any strategy category, and usually makes little or no sense in context. Reserve this category for responses, which are inappropriate and/or seem to reflect a lack of awareness or what's happening in the story.

(puts block inside other puppet)

Rainbows are butterflies fly around and upside down.

F= 3

STORY 4: TEASING

Story 4/Strategy 1: <u>Get an authority/generic</u>

        The strategy is to simply "get" or tell an authority who will presumably take care of the situation, or to tell an authority about the situation. This does <u>not</u> include <u>threats</u> to tell.

        Tell my mom what she did, that girl was cheating.

        Teacher, my friend was getting said na na na to.

        F= 4

Story 4/Strategy 2: <u>No action/nothing</u>

        The strategy is to not respond, or to do nothing. This does not include cases in which the child makes no response.

        I'll just do nothing.

        Stand around, only.

        F= 3

Story 4/Strategy 3: <u>Feel unhappy</u>

        Subject takes no overt action, but says he/she would feel sad, bad, unhappy, miserable, etc.

        That sort of stuff makes me sad.

        Cry and feel sad.

        F= 3

Story 4/Strategy 4: <u>Clean-up/remove toys</u>

        The strategy is to clean-up, put away or remove toys, materials or activity. May imply ending activity.

        Put their toys away.

        Take those blocks away from there.

        F= 3

Story 4/Strategy 5: <u>Retreat</u>

        The strategy is to leave activity or situation.

        Just walk away.

        Go to story, sit down.

        F= 3

Story 4/Strategy 6: <u>Remove teaser</u>

        The strategy is to physically remove teaser from area. This includes cases in which the child SAYS he/she would push, drag, etc. the other <u>away</u> (if no overt aggression is expressed) but not cases of just plain pushing, dragging, etc.

        Take him away give him to the teacher.

        Just push her away from you.

        F= 3

Story 4/Strategy 7: <u>Physical aggression toward teaser</u>

        The strategy is to direct physical aggression against teaser.

I walk over there (pulls hair to teaser).
Punch him.
F= 1

Story 4/Strategy 8: <u>Aggression toward teaser with reference to friendship</u>
The strategy is to physically attack teaser and make reference to self's liking for, or friendship with teasee.
(hits teaser) Now I'm your good buddy.
Beat that guy up and like the kid who's crying.
F= 1

Story 4/Strategy 9: <u>Aggression with verbal assertion</u>
The strategy is to physically attack teaser and also tell him/her to stop teasing, go away, or some similar directive.
Tell him a thing or two! (hits teaser)
Stop that. I bang him.
F= 1

Story 4/Strategy 10: <u>Aggression with teasing of teaser</u>
The strategy is to physically attack teaser and also to tease teaser by saying na-na or something similar.
Hit your head in. Na-na-na-na
Na-na-na-na-na (pulls teaser's hair)
F= 1

Story 4/Strategy 11: <u>Aggression toward teaser and/or teasee</u>
The strategy is to physically attack teaser and/or teasee.
(kicks at teasee; hits teaser)
I'll smash you and you, too.
F= 1

Story 4/Strategy 12: <u>Verbal assertion against teaser</u>
The strategy is to tell teaser to stop, to go away or to give some similar directives to teaser.
Go away from her.
She (self) says to stop.
F= 3

Story 4/Strategy 13: <u>Join in teasing</u>
The strategy is to join teaser in teasing teasee, or to simply start teasing (e.g., saying na-na) with no indication of to whom teasing is directed.
Boo-boo-boo-boo
I say that to him too.
F= 2

Story 4/Strategy 14: <u>Tease teaser</u>
   The strategy is to tease teaser.
   Go na-boo-boo back at her.
   Ba-baby-na-aa (gives raspberry)
   F= 2

Story 4/Strategy 15: <u>Verbal assertion with reference to social norm</u>
   The strategy is to tell teaser to stop, go away, etc. (see Verbal assertion) or to
threaten teaser, and to refer to a social norm or rule, or to fact that teaser's action is not
nice, makes teasee sad, etc.
   That's mean, so I'll tell the teacher on you.
   Stop saying bad words that make her cry.
   F= 3

Story 4/Strategy 16: <u>Verbal assertion with reference to friendship</u>
   The strategy is to go away, etc. or to threaten teaser and to refer to teasee as friend
or to fact that self likes teasee or wants to play with teasee.
   Don't say that to somebody I like.
   I'll tell teacher when you do that to my friend.
   F= 3

Story 4/Strategy 17: <u>Verbal assertion against teasee</u>
   The strategy is to tell teasee to stop crying, to go away, etc., or to deny that teasee
has anything to complain about.
   Stop crying.
   You're crazy; she's not bothering you.
   F= 2

Story 4/Strategy 18: <u>Continue to play alone/no mention of teasing</u>
   The strategy is to continue to play (e.g., with blocks) with no mention of other
children or of the teasing episode.
   (Builds with blocks) I wouldn't do anything.
   Just build.
   F= 3

Story 4/Strategy 19: <u>Cheer-up teasee/generic</u>
   The strategy is to say something, or do something, which will cheer-up or console
teasee, but that something remains unspecified.
   Make her feel all better.
   Make her so she's not sad.
   F= 5

Story 4/Strategy 20: <u>Cheer-up behavior/specific</u>
   The strategy is to say something specific, or do something, which is specified to
cheer-up or console teasee.

Ask her, are you feeling sad cause he's being mean?
Hug her and she'd feel better.
F= 5

Story 4/Strategy 21: <u>Remove/play with teasee</u>
The strategy is to take teasee to another area, involve teasee in another activity, move with teasee to another area, or play with teasee.
Get her into another room and we'd play.
Let her play with me with the blocks.
F= 5

Story 4/Strategy 22: <u>Placing the teaser in time out</u>
The child indicates that the teaser should be placed in time out or that the teacher should place the teaser in time out.
Put him in time out.
Tell the teacher he needs time out.
F= 2

Story 4/Stategy 23: <u>Entertained by teasing</u>
The child smiles, laughs, or otherwise indicates that he/she is amused/entertained by witnessing the teasing episode.
You're funny!
(laughing)
Look what he just did (smiling)
F= 2

Story 4/Strategy 24: <u>No response</u>
The child does not respond to the question, "what would you do?" No response will be written or underlined on transcript. Does not include cases in which child say he/she would do nothing.
No response
F= 3

Story 4/Strategy 25: <u>No strategy</u>
This can happen when a child responds to the question, but the response can't be coded as a strategy (e.g., the child may have given a strategy for another character, not self.)
NS
F= 3

Story 4/Strategy 26: <u>I don't know</u>
Child says I don't know or provides a similar response, which has little meaning.
Can't know.
(shrugs)
F= 3

Story 4/Strategy 27: <u>Idiosyncratic</u>

Child provides a response, which cannot be coded using any of the other strategy categories, and usually makes little or no sense in context. Reserve this category for responses, which are inappropriate and/or seem to reflect a lack of awareness of what's happening in the story.

Knock my block down.

(puts block inside puppet)

F= 3

STORY 5 - - YOU CAN'T PLAY

Story 5/Strategy 1: <u>Get an authority/generic</u>

The strategy is to simply "get" or tell an authority who will presumably take care of the situation. This does <u>not</u> include <u>threats</u> to tell an authority.

I ask the teacher...they said I can't play.

Go away and find the teacher.

F= 3

Story 5/Strategy 2: <u>Get an authority/get additional play materials</u>

The strategy is to get an authority figure, or ask an authority, to find additional play materials, such as more farm animals.

Find a teacher...teacher, can you get me another horsie.

Just get more farm animals. The teacher would get some.

F= 3

Story 5/Strategy 3: <u>Feel unhappy</u>

Subject says he/she would feel sad, bad, unhappy, etc., but takes no overt action.

Cry and be sad.

That makes me feel sad.

F= 3

Story 5/Strategy 4: <u>No action/nothing</u>

The strategy is to not respond, or to do nothing. This does <u>not</u> include cases in which the child makes no response.

Nothing

Just walk only, stand there.

F= 3

Story 5/Strategy 5: <u>Clean-up/remove toys</u>

The strategy is to clean-up, put away, or remove toys, materials or activity. May imply ending activity.

Put away all the toys.

(begins to stack toys neatly against wall)

F= 2

Story 5/Strategy 6: <u>Retreat</u>
>The strategy is to leave the activity or situation.
>Walk out the door.
>Walk all over the school.
>F= 3

Story 5/Strategy 7: <u>Remove peer</u>
>The strategy is to physically remove intruder from area. This includes cases in which the child SAYS he/she would push, drag, etc. the other <u>away</u> (if no overt aggression is expressed) but <u>not</u> cases of just plain pushing, dragging, etc.
>>Push that one kid out of the room.
>>Take her away and sit her down.
>>F= 2

Story 5/Strategy 8: <u>Physical aggression toward peer(s)</u>
>The strategy is to direct physical aggression against peer(s).
>(shoves or pushes other and grabs horsie)
>Make blood come outa his eyes.
>F= 1

Story 5/Strategy 9: <u>Aggression with verbal assertion</u>
>The strategy is to physically attack one or both peers and also to tell peer(s) that self can play, to stop it, etc. (see Verbal assertion).
>>Let me play. I smash him.
>>(hits other) I wanna play horsie.
>>F= 1

Story 5/Strategy 10: <u>Grab/take toy</u>
>The strategy is to grab, or otherwise forcibly take possession of a farm animal.
>(snatches one)
>Hey, I grab it from you.
>F= 1

Story 5/Strategy 11: <u>Grab toy with verbal assertion</u>
>The strategy is to forcibly take possession of farm animal and to also say stop it, I can play, or provide some other verbal directive to peer. (see Verbal assertion)
>>(snatches horse) You let me!
>>(grabs cow) I tell you, you gotta share.
>>F= 1

Story 5/Strategy 12: <u>Aggress against objects</u>
>The strategy is to physically attack toys other materials (for instance, peers' farm animals) by hitting, throwing or smashing them etc. Does <u>not</u> include using objects to attack a person.

(throws farm animal across room)
Smash his horse.
F= 1

Story 5/Strategy 13: <u>Verbal assertion against peer(s)</u>
The strategy is to tell peer(s) to go away, stop, to allow self to play or to give peer(s) some similar directive.
You let me.
Stop saying that.
No.
F= 2

Story 5/Strategy 14: <u>Verbal assertion with threatened aggression (coercion)</u>
The strategy is to tell other to stop, go away, etc. or offer some similar directive to one or both peer(s) (see Verbal assertion) and also to <u>threaten</u> other with aggression our authority intervention, etc.
Let me play or I'll tell teacher.
Stop it, else I'll whop on you.
F= 2

Story 5/Strategy 15: <u>Prevent other puppets from playing</u>
Child expresses a desire to prevent the other puppets from playing at all, or actually engages in a behavior that prevents the others from playing. This strategy embodies that of the attitude "if I can't play then noone can." This does <u>not</u> include throwing the objects away from play area (see "aggress against objects") or generic verbal threats/assertions. The words or actions must convey the strategy of preventing play.
Then you don't play either!
(lays down over toys)
(blocks toys with own puppet's body)
F= 2

Story 5/Strategy 16: <u>Verbal suggestion to peer(s) of alternative activity for self</u>
The strategy is to suggest to peer(s) that self could be involved in a play activity, which would not violate priority of peer(s) to play with farm animals.
Well, that's ok, there's this truck I can use.
What if I just build a barn?
F=5

Story 5/Strategy 17: <u>Verbal bargaining/bribing</u>
The strategy is to offer or suggest to peer(s) a trade or other bargain, which would allow self to join peer(s) or play with farm animals.
Let's trade, you have the truck and I'll use the cow.
We could share.
F= 4

Story 5/Strategy 18: <u>Polite conversation</u>

The strategy is to ask peer(s) a question, or say something polite which might generally be construed as a conversation starter, for instance, child may ask after peer's health, ask his/her name, or ask a polite question about peer's activity.

What are you guys doing?

Is that fun?

F= 5

Story 5/Strategy 19: <u>Ask to play</u>

The strategy is to ask peer(s) directly if self can play.

Would you let me play?

I'd say, can I play with you guys?

F= 4

Story 5/Strategy 20: <u>Ask to play/polite form</u>

The strategy is to ask peer(s) if self can pay and include a work or form which conveys politeness, such as please.

Please can I play?

Can I play, please?

F= 5

Story 5/Strategy 21: <u>Ask for farm animal</u>

The strategy is to ask peer(s) to let self-play with farm animal.

Can I use the cow?

Let me have one, please?

F= 4

Story 5/Strategy 22: <u>Ask to play at other time or place</u>

The strategy is to ask if self can join play later on or in another setting.

Can I play with you when you go outside?

After you finish farm animals, then can I play?

F= 5

Story 5/Strategy 23: <u>Ask peer to be friends</u>

The strategy is to ask peer(s) to be friends, buddies, etc. with self. Does not include threats to <u>not</u> be friends if peer(s) don't cooperate.

Let's be friends, ok?

Why don't we be buddies?

F= 4

Story 5/Strategy 24: <u>Ask peers' rationale</u>

The strategy is to ask peer(s) why they have just denied him/her the right to play.

How come?

Why won't you let me?

F= 4

Story 5/Strategy 25: <u>Play/other materials</u>

The strategy is to play with other materials (not farm animals) but with no suggestion of integrative play activity with peer(s) and with no obvious verbalization to peer(s).

(starts to drive truck around)

Well, I'll play with the blocks, then.

F= 2

Story 5/Strategy 26: <u>Play with farm animals</u>

The strategy is to play with farm animals, or suggest that self would play with farm animals, but does not verbalize to peer(s) and uses no obvious force to obtain farm animals.

That kid would be tired of the cow and then I'd play it.

Just play with the horsie.

F= 4

Story 5/Strategy 27: <u>Integrate play with peer(s)</u>

The strategy is to use other, or additional, materials in a way that contributes to the ongoing play of peers in a positive way and is integrative with peers play and allows self to join activity in a non-disruptive manner. Or child may suggest that self take such integrative action.

I'll get Miss Piggy- then we all be animals.

My doll could be the pig keeper.

F= 5

Story 5/Strategy 28: <u>Placing the peer in time out</u>

The child indicates that the peer denying play should be placed in time out or that the teacher should place the peer denying play in time out.

Put him in time out.

Tell the teacher he needs time out.

F= 2

Story 5/Strategy 29: <u>No response</u>

Child does not respond to the question "what would you do?" No response will be underlined or written on transcript. Does not include cases where child says he/she would do nothing.

No response

F= 3

Story 5/Strategy 30: <u>No strategy</u>

This can happen when child makes a response but the response cannot be coded as a strategy using a set of rules for identifying strategies (e.g., child may have suggested a strategy for another character, not self)

NS

F= 3

Story 5/Strategy 31: <u>I don't know</u>

Child says, "I don't know" or provides a similar response which has little meaning.

Can't know.

Who knows?

F= 3

Story 5/Strategy 32: <u>Idiosyncratic</u>

Child provides a response, which cannot be coded using any other strategy category, and usually makes little or no sense in context. Reserve this category for responses, which are inappropriate and/or seem to reflect a lack of awareness of what's happening in the story.

(off task)

I go to hospital.

F= 3

STORY 6 - - NOTHING TO DO

Story 6/Strategy 1: <u>Get an authority/generic</u>

The strategy is to simply "get" or tell an authority who will presumably take care of the situation, or to tell an authority about the situation. This does <u>not</u> include <u>threats</u> to tell an authority.

Get the teacher.

Teacher, teacher, where's the teacher?

F= 2

Story 6/Strategy 2: <u>No reaction/nothing</u>

The strategy is to not respond, or to do nothing. This does not include cases in which the child makes no response.

I wouldn't do nothing.

Just stand.

F= 3

Story 6/Strategy 3: <u>Clean-up/remove toys</u>

The strategy is to clean-up, put away, or remove toys, materials or activity. May imply ending activity.

Put stuff away.

Put the blocks on the shelf.

F= 2

Story 6/Strategy 4: <u>Retreat</u>

The strategy is to leave the activity or situation.

Just walk around the room.

Go to another room, anyway.
F= 3

Story 6/Strategy 5: <u>Physical aggression toward peer(s)</u>
The strategy is to direct physical aggression against one or both peers in the story.
Push her down.
Holds tightly to other puppet and give it a shake.
F= 1

Story 6/Strategy 6: <u>Aggression toward objects</u>
The strategy is to direct physical aggression against peer's play materials, or other objects. May include throwing, hitting, stomping, etc. toys, but <u>not</u> throwing a toy at a peer, hitting a peer with a toy, or other uses of objects to attack a person.
Drive my truck through their tower and knock it.
(Throws a block)
F= 1

Story 6/Strategy 7: <u>Aggression with verbal assertion</u>
The strategy is to physically attack a peer and also tell him/her to stop, go away, that self can play, etc. (see Verbal assertion).
I get to play too (swings at peers)
Hit 'em. You guys get outta here.
F= 1

Story 6/Strategy 8: <u>Grab/take toy</u>
The strategy is to grab or otherwise take forcible possession of peers' toys (blocks) or other materials of peers.
I would just grab it.
(grabs a block)
F= 2

Story 6/Strategy 9: <u>Verbal assertion against peer(s)</u>
The strategy is to command peer(s) to allow self to play, to go away, stop it, or to give some similar directive.
Let me play.
You guys better let me play.
Can I have them?
F= 2

Story 6/Strategy 10: <u>Verbal assertion with threat (coercion)</u>
The strategy is to command peer(s) to allow self to play, to go away, stop it, etc., and to also threaten peer with physical aggression, telling an authority, etc.
I'll tell, if you don't let me play with you
Get outa here; I can beat you up any day.
F= 2

Story 6/Strategy 11: <u>Verbal assertion with reference to social norm</u>
   The strategy is to command peer(s) to allow self to play, to go away, stop it, etc., and to make reference to a social norm or rule (such as being nice, or sharing) as rationale for command.
    You better share your toys.
    You have enough turns and should let me have a turn.
    F= 3

Story 6/Strategy 12: <u>Ask to play</u>
   The strategy is to ask peer(s) directly if self can play.
    Ask 'em if I could play.
    Would you let me play?
    F= 4

Story 6/Strategy 13: <u>Ask to play/polite form</u>
   The strategy is to ask peer(s) if self can play and include a work or form which conveys politeness, such as please.
    Would you guys please let me play?
    Say please……can I play, too?
    F= 5

Story 6/Strategy 14: <u>Offer assistance</u>
   The strategy is to offer to "help" peers with block building or other play, or to phrase request to play in form of offer of assistance.
    Ask if I can help them?
    I'll help you guys make a tall tower.
    F= 5

Story 6/Strategy 15: <u>Ask to play with reference to friendship</u>
   The strategy is to ask a peer(s) if self can play because self is peers' friend, or so that self and peer(s) can establish a positive relationship.
    Say, I'll be your friend if you let me play.
    I'd like to play with you cause you're my buddy.
    F= 4

Story 6/Strategy 16: <u>Polite conversation</u>
   The strategy is to ask peer(s) a question, or say something polite which might generally be constructed as a conversation starter, for instance, child may ask after peer's health, ask his/her name or ask a polite question about peer's activity.
    What's goin' on fellas?
    What's your name?
    F= 5

Story 6/Strategy 17: <u>Play with other toys (not blocks)/no mention of peers</u>

The strategy is to play with other toys (i.e. not peers' blocks) and to say nothing to, nor make any reference to, peer.

(plays with truck)

Just play with the doll.

F= 3

Story 6/Strategy 18: <u>Play with blocks</u>

The strategy is to play with the blocks (peers were playing with blocks) without anything to peers or in any way explicitly integrating self into ongoing play with peers.

Just build with blocks.

Play with the horse and cow and blocks.

F= 2

Story 6/Strategy 19: <u>Play with peers</u>

The strategy is to begin to play with peers, or to suggest that self play with peers. This requires some indication that self intends to play with the other children, not just blocks.

Help 'em with the tower.

O.K., I'll put this on top.

F= 5

Story 6/Strategy 20: <u>Find another peer to play with</u>

The strategy is to find another child to play with, one who is not presented in the story.

Ask my other friend to play.

Go outside and find Dora.

F= 4

Story 6/Strategy 21: <u>No response</u>

The child does not respond to the question, "what would you do?" No response will be underlined or written on transcripts. Does not include cases where child says he/she would do nothing.

No response

F= 3

Story 6/Strategy 22: <u>No strategy</u>

This can happen when child makes a response but the response cannot be coded as a strategy using a set of rules for identifying strategies (e.g., child may have suggested a strategy for another character, not self).

NS

F= 3

Story 6/Strategy 23: <u>I don't know</u>

Child says "I don't know" or some other, similar thing which has little meaning.

Beats me.

Who knows.
F= 3

Story 6/Strategy 24: <u>Idiosyncratic</u>
  Child provides a response, which cannot be coded using any other strategy category, and usually makes little or no sense in context. Reserve this category for responses, which are inappropriate and/or seem to reflect a lack of awareness of what's happening in the story.
    Open up the door.
    I go to the hospital when it come night.
    F= 3

PART IV: RATING PHYSICAL AGGRESSION

Step One: Read this entire manual before beginning to code.
Step Two: Read over Stories 1-6 of the Enactive Social Knowledge Interview to be aware of the context of the behavior. Have short synopses of each story and the props used in the story nearby for consultation.
Step Three: Compare the actual transcription and the physical aggression section for each story. Be sure to consider every potentially aggressive behavior for coding.
Step Four: Consider each act by comparing the behavior to the aggression code and considering the context of the story.
Step Five: Tally the number of physically aggressive behaviors and assign a Physical Aggression code (PA code) for that story (Range=0-3).

<u>Definition of Aggression.</u> *This section is taken from Coie & Dodge (1997).* Aggression was defined by Parke and Slaby as "behavior that is aimed at harming or injuring another person or persons" (1983, p. 50). According to Coie and Dodge, aggression is sometimes defined broadly enough to include property loss or damage, as in the case of instrumental aggression, although these authors view the feature of instrumental aggression that makes it aggressive as the use or threat of force to obtain possession. The important point is that *intent* is involved in the commission of an aggressive act. The judgment of an act as aggressive is subjective and highly dependent on its context, antecedents, consequences, and the values of the judge. A definition based on antecedents takes primarily into consideration the intent to harm discussed earlier. Unfortunately, intentionality is not a directly observable feature of a behavior; it must be inferred. Moreover, a focus on antecedents of aggression ignores that subclass of aggression that is outcome focused (e.g., acquisition of a peer's toy). A definition based on outcomes would be "behavior that results in injury of another individual" (Parke & Slaby, 1983, p. 549). But, injury can result unintentionally, some aggressive acts do not lead to injury, and quantifying degrees of aggressiveness based on degrees of injury could be misleading. Most importantly, a focus on outcomes leads to a theory of aggression that is more instrumental than emotional, thus deemphasizing a major part of the phenomenon.
  Walters and Parke (1964) have suggested that aggression is a culturally determined label applied to a behavior following the social judgment of an observer.

Intention and other antecedent conditions including situational context, as well as injury and other outcomes, may be part of a cultural definition. From this viewpoint, definitions of aggression vary across cultures, and the basis of a culture's definition becomes a scientifically observable phenomenon worthy of inquiry in itself (Averill, 1982). To this end, Parke and Slaby (1983) conclude that "aggression is defined in a minimal way as behavior that is aimed at harming or injuring another person or persons" (p. 550).

Brain (1994) suggests that four conditions define aggression as a heterogeneous category rather than an entity. First of all, **aggressive acts must have the potential for harm or damage**, even though not all acts that have the potential for harm could be considered aggressive. Second, **aggression must be intentional**, even though this judgment may not always be reliable and will vary from aggressor to victim to impartial judge. Third, **aggression involves arousal**, although here, too, the judgment may be difficult. Finally, **the act must be aversive to the victim**. Rather than provide precise boundaries to the concept of aggression, Brain's criteria provide a multifactor framework for recognizing the broad category of events to be covered.

Definition of Aggression with Respect to a Preschool Population. For the purposes of this coding scheme, the above discussion provides a concise background for the difficulties involved in defining aggression. It is important for the coders to be aware of the range of factors that can be taken into consideration when coding behavior as "physically aggressive." Obviously, certain aspects of aggression are more "observable" than others and will receive priority in the coding of behavior. For example, the first two conditions provided by Brain (1994) will receive priority in this code.

1. Aggressive acts must have the potential for harm or damage (to others).
2. Aggression must be intentional.

These two conditions are the easiest to observe and are applicable to the observation of preschoolers. The third condition, that aggression involves arousal, is not readily observable in most cases. However, if angry arousal is noted by a transcriber, this would provide additional information for the coder in coding the behavior. For example, if a child puts a block into another puppet's mouth, it would be unclear as to whether or not the child was doing so aggressively. The act would be intentional, but it might be unclear as to the potential for harm or damage. If the child was obviously aroused, though, then that additional information would clarify that the behavior should be coded as aggressive.

The fourth condition, that the act must be aversive to the victim, is not developmentally appropriate for preschoolers. One of the developmental tasks of preschoolers is learning the rules that govern social behavior. Part of this includes learning that aggression is not an acceptable behavior and that one *should find* aggression aversive. It is possible that some preschoolers may not be as averse to aggression as others. For some preschoolers, aggression is an acceptable form of communication and is only bothersome when it conflicts with the child's own personal goals in that situation. For example, one child may aggressively grab a toy from a classmate and this classmate may not resist or be bothered because she was done playing with it anyway. The behavior

of the first child should still be coded as aggressive, despite the lack of a reaction from the second child. Moreover, some preschoolers may simply not be skilled enough in aggression to provoke a reaction from another child. For example, verbal insults may be poorly articulated due to speech impediments or improper word usage, or a thrown object may miss its target due to poor eye-hand coordination. In addition, aggression is somewhat normative at the preschool age. Therefore, higher levels of aggression might be tolerated by preschoolers than would be tolerated at older ages. Also, given that the victim is a puppet in this procedure, it is difficult to assess whether or not an inanimate object finds the behavior aversive.

Specific Definition of Physical Aggression:
Behavior will be categorized as Physically Aggressive if:
(a) **a child physically aggresses (e.g., hits, pushes, kicks, bites, presses against, knocks over, runs into on purpose)**—this should be the most obvious instance and would also include pulling on or biting the clothing of the other puppet. Basically, when another puppet is touched by the child or the child's puppet, this behavior needs to be examined.

Example: Story 5—C: (Bites the puppet's hand) E: probes C: Only at home. Yup, I'd bite 'em hand. E: probes C: It's in my mouth right now. I'm biting his hat.

The PA code for this story is 2. Biting the puppet's hand is one act of physical aggression (saying "Yup, I'd bit 'em hand." is merely verification and is not coded) and saying, "I'm biting his hat." is the second act of PA.

(b) **pulls a toy literally out of the hands of another puppet**—this should be used very conservatively; it must be absolutely clear that the puppet was holding the toy in his/her hands at the time the child's puppet grabbed the toy away.

Example: Story 2—C: I'm going to play with the blocks. (Takes all of the blocks away from the other puppet)

In this example, it is not clear that the blocks being taken away were in the hand of the other puppet. Therefore, this is not coded as physical aggression and the PA code for this story is 0.

(c) **restricts the movement of another child (puppet)**—this includes pressing up against or lying on top of the other puppet or blocking a path of movement; this would only include blocking access to toys if the other puppet was obviously trying to gain this access (e.g., lying in front of the blocks is only aggressive if the other puppet was actively attempting to get the blocks at that time).

Example: Story 5—C: (lays puppet down in between other puppets and farm animals so they can't use them)

Due to the context of Story 5, it is clear that the other puppets are actively playing with these toys and this restraint of movement is considered physically aggressive. The PA code for this story is 1.

(d) **throws an object at another person (puppet)**—this would not include randomly throwing objects around the room; it must be clear that the intent was to hit the other puppet or the interviewer.

Example: Story 2—C: (Throws sand and yells. Hits other kid. Follows kid over to blocks. Hits them around.) I want to play with them! (Continues throwing blocks.)

Because the transcription does not indicate that the sand or the blocks are thrown AT anyone, this is NOT coded as physical aggression. The PA code for this story is 1 (for "Hits other kid.").

Example: Story 3—C: (Throws block in other kid's face.)

Here the intent is clear in the transcription and the PA code is 1.

NOTE: In Stories 5 and 6, taking toys is NOT PA, but sitting on/restricting access to them IS PA.

Examples of Behavior that is NOT Physical Aggression

NOT Coded as Physical Aggression:
1. Hoarding toys (e.g., taking all the blocks for himself).
2. Pushing the toys away from the other puppet.
3. Invasion of personal space (e.g., saying something close to the face of another puppet).
4. Aggressive play (e.g., pig knocks over horse, knocks over a block structure).
5. Putting toys in OWN puppet's mouth or biting on the blocks, etc.
6. Taking toys from the other puppet's play area (but not directly from the other puppet's hand). Ex: C: (Walks over and takes the pig) She wants to play! (Not PA)
7. Verbal aggression—shouting, screaming, teasing, name-calling, etc.
8. Indicating putting another puppet in time out or calling for the teacher.
9. Pointing or shaking a finger at another puppet.
10. Laughing at another's distress.
11. Kissing another puppet.
12. Rough play with the toys (e.g., "smashes down on sandbox.")
13. Any harm done to the child's own puppet (e.g, hitting own puppet on head, throwing own puppet on the floor).
14. Indirect statements of physical aggression (not the "I would.." statements, these are always code-able and considered direct statements). For example, saying "I'm dead!" or "My mom says I should hit back if someone hits me."
15. Falling down onto toys.

Coding Methodology

⇒ Read both the transcription and the physical aggression section for coding. It is very likely that you will disagree with the behaviors written under physical aggression. It is also very likely that you will find examples of physical aggression in the transcription that is not highlighted in the physical aggression section. It is also the case that some transcriptioners noted some instances of physical aggression in the physical aggression section that cannot be found in the matching transcription. Most likely, these behaviors were culled from the tapes but not included in the actual transcription for the sake of

brevity. These behaviors are still code-able, however, unless it is believed that a true mistake was made (e.g, the actual transcription includes two instances of hitting and one verbal verification of hitting and the physical aggression section has three acts of hitting—likely the verification was included by accident).

⟹ You will give each story a code from 0-3

0=no instances of physically aggressive behavior

1=1 physically aggressive behavior

2=2 physically aggressive behaviors

3=3 OR MORE physically aggressive behaviors

We are not coding more than 3 aggressive behaviors. 3 is the highest score.

⟹ If a transcriptioner notes that a child "hit the other puppet repeatedly," a code of 3 should be given. If a transcriptioner says, "kicks several times," a code of 3 should be given.

⟹ Sometimes a transcriptioner will include two acts of aggression in the same listing. For example "Bumps other puppet in the nose and hits her." This is really two acts—1. Bumps in nose. 2. Hits her. Another example, "C hits the two puppets that are playing together." Here, the child hit two separate puppets. Therefore, these are two separate acts of aggression.

⟹ Do not double code verifications.

Example (Story 6):

C: (bites puppet)

E: you bit him.

C: (pulls puppet's hair)

E: And you are pulling his hair.

C: probes

E: (pulls puppet's hair)

In this example, the aggression score is 2. The child bit the puppet and then pulled the puppet's hair—two separate acts of physical aggression. The second hair pulling behavior is presumably in response to the probing by the interviewer and should not be scored. It is assumed that if a child repeats the behavior or says he/she would do the behavior after interviewer probing that he/she would not have repeated the behavior if the interviewer had not probed. Therefore, the response after probing is not coded.

EXCEPTION: if the child adds a new aggressive behavior, then this IS code-able. If in the above example the child had pulled the puppet's hair upon probing and then also bit the puppet, the new biting behavior would be coded.

⟹   Be sure to code statements of physical aggression as actual physical aggression. These are direct statements and are code-able.

Example (Story 1):
E: What would you do?
C: I would hit him that pushed.

Here, the child is indicating that he/she would hit the pusher puppet. This is coded as if he actually performed this behavior and the PA score is 1.

Example (Story 2):
C: I'm gonna smash your face in!

Although this statement is not in response to the verification question, the intent of physically aggressive behavior is clear. The PA code for this story is 1.

⟹   Code ALL responses, even if the child says, "No, I wouldn't really do that." in the verification. Similarly, code any behavior that is noted either in the transcription or in the physical aggression section, regardless of whether this is the dominant response coded for friendliness ratings. Every behavior is fair game for the PA code.

⟹   Sometimes the transcription will be vague and it will be difficult to determine what is happening. Whenever the transcription does not makes sense, first go back to the original story in order to understand the context. This will often clarify things. Then, read the transcription again for clues as to how the events unfolded. For example:

Story 2
C: Oh, he ate that (smashed puppet into sandbox)
C: (Moves over to blocks to join peer)

The behavior "smashed puppet into sandbox" needs to be examined for physical aggression. At first, it is unclear *which* puppet was smashed into the sandbox. The child could have smashed another puppet or his own puppet into the sandbox. After re-reading the story, however, it becomes clear that the other puppet is not even at the sandbox during this part of the story, but has moved over to play with the blocks. And, upon re-inspection of the transcription, it is clear that the child "moves over to blocks to join peer" AFTER he "smashed puppet into sandbox." Therefore, he must have smashed his OWN puppet into the sandbox. The PA code for this story is 0. As can be seen, it is very important not to just blindly code these behaviors! Read the transcriptions carefully and consider the context of the story. Another example:

Story 1
C: (bounces puppet head on farm animals)
E: Probes

In this case, the child could have bounced his own head or one of the other puppet's heads on the farm animals. However, it would be strange for the transcriptioner to describe it this way if the child was bouncing another puppet's head on the farm animals. Also, because the child does not respond to the probe, it seems like the child was being passive. Perhaps the child was rhythmically bouncing his own puppet down on the farm animals in a passive way during the pushing scene of Story 1. And, because this code is conservative, a PA code of 0 is appropriate in this case. When in doubt, leave it out!

If any questions arise, call Erika at (207) 942-5499 or e-mail: erika.carpenter@umit.maine.edu

Appendix G

Treatment Integrity Questionnaire

Part I: Expectancy Questionnaire

Teacher:_____

Head Start Center:_____

Date:_____

Please circle your response:

1. How logical does it seem to you that this social-cognitive skills training curriculum
   will increase positive behavior and decrease negative behavior of the children?

   | 1 | 2 | 3 | 4 | 5 |

   Not Logical   Very Logical

2. How confident are you that this curriculum will work?

   | 1 | 2 | 3 | 4 | 5 |

   Not Confident   Very Confident

3. How strongly would you recommend other Head Start centers use this curriculum?

   | 1 | 2 | 3 | 4 | 5 |

   Not Strongly   Very Strongly

4. Would you want your own children to be involved in a curriculum like this?

   | 1 | 2 | 3 | 4 | 5 |

   Not At All   Very Much

5. How successful do you think the social-cognitive skills training curriculum will be in
   improving positive behavior and reducing negative behavior?

   | 1 | 2 | 3 | 4 | 5 |

   Not Successful   Very Successful

Part II: Training Knowledge

1. What are the three main skill areas being trained?

2. What are the four steps for training a skill?

3. Which step(s) happen during circle time?

4. Which step(s) happen during free play?

5. a. Is the teacher allowed to correct the children while they practice the skills (yes or no)?

   b. Should the teacher praise the children for using the skills outside of the official practice period (yes or no)?

6. Name four individual skills being trained during the sessions.

7. Why does the teacher ask questions at the end of the free play activity?

8. What should the teacher do if the kids don't spontaneously use the skills during practice time?

Appendix H

Treatment Manual for Social-Cognitive Skills Training

OVERVIEW

The goal of social-cognitive skills training is to promote positive behavior and reduce negative behavior in children. The training will take place twice a week for six weeks. Three main skill areas will be trained:

1. Cooperation
2. Validation/Support
3. Communication

Each main skill area includes a number of individual skills that will be trained in each session. The schedule of individual skill training is as follows:

1. Cooperation: Taking Turns
2. Cooperation: Sharing
3. Validation/Support: Verbal Support
4. Validation/Support: Helping
5. Communication: Leading
6. Communication: Questioning
7. Communication: Commenting
8. Communication: Listening
9.-12. Skill Integration

Four steps are necessary to complete the training:

1. Instructional Phase
2. Modeling (negative and positive)
3. Rehearsal
4. Evaluation/Feedback

The instructions will be given during circle time with all the children present. The teachers will also do the negative and positive modeling with puppets during circle time. The dog puppet, Fluffy, generally acts as a narrator of the scene being played out by two human puppets, Sandy and Mandy. Next, the children will be rehearsing the skills during a free play station. All the children will rotate through the rehearsal activity during free play. At the free play station, after the rehearsal activity is completed, the children will be asked questions to determine how well they understand the skill. Teachers will provide evaluation and feedback. The following transcripts will provide the details necessary to conduct each session.

If the children demonstrate any of the newly trained skills at any time, they immediately should be praised by a teacher! A child should especially be praised if he or she uses a new skill outside of the social skills training session.

TRAINING SESSIONS

At the start of each circle time session, the dog puppet, Fluffy, will greet the children and comment that he feels really happy when he sees the children playing together nicely and having fun and that when he sees the children playing alone or fighting he feels sad (Mize & Ladd, 1990). Fluffy will then explain that the Sandy and

Mandy puppets might needs some help in how they should play together in order to have fun (Mize & Ladd, 1990).

Week one—cooperation. During the instructional phase, cooperation will be described as "finding ways to play nicely together and to not fight." This skill will be modeled by the puppets, first providing a negative exemplar, and then a positive exemplar.

Session 1: Taking Turns Activity—Friendship Map. Sandy and Mandy are going to make a friendship map (p. 71, Rice, 1995). Explain to the children that this activity involves each child drawing a friend's house on a large sheet of paper. After each child draws a house, the children take turns drawing roads connecting the houses and then using toy cars to drive to each house. Sandy was given the marker by the teacher to draw his friend's house. Mandy says, "I really want to draw my friend's house now!" and she grabs the marker out of Sandy's hand. Sandy says, "Hey, I was using that!" and he sounds mad. Fluffy then asks, "Do you think Sandy and Mandy are playing and having fun together?"

Fluffy emphasizes, "Grabbing a toy from another child is not a good way to have fun playing together." Fluffy then says to Mandy, "Maybe you could wait until Sandy is done with the marker and then take your turn with it." Mandy says, "That's a good idea," and gives the marker back to Sandy. When Sandy is finished, he hands the marker to Mandy who says, "Thanks, Sandy! You can have another turn with the marker when I'm done."

Fluffy ends with, "Taking turns with toys is a good way to have fun playing together."

At a free play station, the children will be asked to reenact the scene between Sandy and Mandy with the puppets. Next, the children will rehearse with peers by engaging in the friendship map activity. The teacher will continuously coach the children to take turns and will monitor skill usage.

After the map activity, the teacher will ask the children, "What did you do to make drawing the map together more fun?" If the children do not respond with "taking turns," the teacher will ask, "What else did you do to make drawing the map together more fun?" If the children never offer the explanation of taking turns, the teacher should follow-up with, "Do you think that taking turns helped to make drawing the map together more fun?"

Next, the teacher will ask, "How did you take turns?," looking for the response of one person using the marker first and the other person using it next, etc. The teacher will correct any misconceptions about the skill and will validate correct responses.

Session 2: Sharing Activity—Puzzles. Fluffy explains to the children that it is free play and both Sandy and Mandy want to put a puzzle together. They both reach for the box at the same time and end up in a tug-of-war with the puzzle box. Mandy says, "I want to play with it!" Sandy says, "No! I want to play with it!" Fluffy then asks, "Do you think Sandy and Mandy are playing and having fun together?"

Fluffy emphasizes, "Fighting over a toy is not a good way to have fun playing together." Fluffy suggests to Sandy and Mandy, "Maybe you two could both do the puzzle. Maybe you could share it." Sandy and Mandy happily nod their heads and begin playing with the puzzle together.

Fluffy ends with, "Sharing toys is a good way to have fun playing together."

At a free play station, the children will be asked to reenact the scene between Sandy and Mandy with the puppets. Next, the children will rehearse with peers by doing puzzles together and sharing the pieces. The teacher will continuously coach the children to share and will monitor skill usage.

After the puzzle activity, the teacher will ask the children, "What did you do to make putting the puzzle together more fun?" If the children do not respond with "sharing," the teacher will ask, "What else did you do to make putting the puzzle together more fun?" If the children never offer the explanation of sharing, the teacher should follow-up with, "Do you think that sharing helped to make putting the puzzle together more fun?"

Next, the teacher will ask, "How did you share?," looking for the response of both children doing the puzzle together. The teacher will correct any misconceptions about the skill and will validate correct responses.

Week two—validation/support. During the instructional phase, supporting will be described as "'doing something really nice' that makes the other kid happy" (p. 349, Mize & Ladd, 1990). This skill will be modeled by the puppets, first providing a negative exemplar, and then a positive exemplar.

Session 3: Verbal Support Activity—Pompom Relays. Fluffy explains that Sandy and Mandy are going to do relay races together. This activity involves one person taking part in the relay at a time, while the other person uses pompoms to cheer him/her on (p. 21, Rice, 1995). The relays include taking turns filling the water table with buckets of water, blowing a balloon across the room, and carrying a ping-pong ball in a large spoon across the room. Mandy begins with the ping-pong ball activity and immediately drops the ball. Sandy starts laughing and says, "Boy, you sure are bad at that!" Mandy starts to cry. Fluffy then asks, "Do you think Sandy and Mandy are playing and having fun together?"

Fluffy emphasizes, "Telling someone they are bad at something and laughing at them is not a good way to have fun playing together." Fluffy will then suggest, "Maybe it would be better if Sandy said something nice to Mandy." In the next reenactment, when Mandy drops the ball Sandy says, "That's okay, you're doing a great job!" and shakes his pompoms.

Fluffy ends with, "Saying something nice, like 'good job' is a good way to have fun playing together."

At a free play station, the children will be asked to reenact the scene between Sandy and Mandy with the puppets. Next, the children will rehearse with peers by engaging in the pompom relays. The teacher will continuously coach the children to make supportive comments and will monitor skill usage.

After the relay activity, the teacher will ask the children, "What did you do to make the pompom relays more fun?" If the children do not respond with "saying nice things," the teacher will ask, "What else did you do to make the pompom relays more fun?" If the children never offer the explanation of making supportive comments, the teacher should follow-up with, "Do you think that saying nice things to each other helped to make the pompom relays more fun?"

Next, the teacher will ask, "How did you decide to say nice things?," looking for the response of seeing that someone was trying hard or doing a good job and remembering to tell them so. The teacher will correct any misconceptions about the skill and will validate correct responses.

Session 4: Helping Activity—Sorting Objects by Color. Sandy is trying to sort some objects by their colors and is having a hard time. Mandy sees that Sandy is doing it wrong, so she pushes Sandy out of the way and says, "You're messing it up. Let me do it." Sandy rubs the spot where Mandy pushed him and starts to cry. Fluffy asks, "Do you think Sandy and Mandy are playing and having fun together?"

Fluffy emphasizes, "Telling someone they're messing up and then pushing them are not ways to have fun playing together. Saying and doing mean things makes the other person feel bad." Fluffy then suggests, "Maybe Mandy could ask Sandy if he would like some help." The scene is reenacted with Mandy asking Sandy if he would like help and then the two working together on the project.

Fluffy ends with, "Offering help to another child is a good way to have fun playing together."

At a free play station, the children will be asked to reenact the scene between Sandy and Mandy with the puppets. Next, the children will rehearse with peers by completing the sorting task. The teacher will continuously coach the children to help each other and will monitor skill usage.

After the sorting activity, the teacher will ask the children, "What did you do to make sorting things together more fun?" If the children do not respond with "helping each other," the teacher will ask, "What else did you do to make sorting things together more fun?" If the children never offer the explanation of helping each other, the teacher should follow-up with, "Do you think that helping each other made sorting things together more fun?"

Next, the teacher will ask, "How did you help each other?," looking for the response of one person seeing the other person having a hard time and then offering to help. The teacher will correct any misconceptions about the skill and will validate correct responses.

Weeks three and four—communication (leading, questioning, commenting, and listening). During the instructional phase, leading will be described as "having a fun idea about something that both kids could do so that both can have fun playing together" (p. 349, Mize & Ladd, 1990). Questioning will be described as "'asking the other kid a question' so they can tell you something" (p. 349, Mize & Ladd, 1990). Commenting will be described as "talking about what is happening in the game." Listening will be described as "trying to really hear what your friend is saying to you so that you can answer back". These skills will be modeled by the puppets, first providing a negative exemplar, and then a positive exemplar.

Session 5: Leading Activity—Legos. Mandy is playing with legos and Sandy really wants to play with Mandy. Sandy hovers over Mandy and Mandy keeps turning her back to Sandy. Fluffy asks, "Do you think Sandy and Mandy are playing and having fun together?"

Fluffy emphasizes, "Hovering over another child is not a good way to have fun together because the other kid doesn't like it." Fluffy then says to Sandy, "Maybe you

could have a 'fun idea'; that means that you come up with a way to play with the legos together. You could suggest to Mandy that you build something fun together." Sandy then says to Mandy, "Hey, Mandy, I have a fun idea. Let's build a house with the legos!" Mandy says, "That sounds like a fun idea!" and the two begin building together.

Fluffy ends with, "Suggesting a fun idea is a good way to have fun playing together."

At a free play station, the children will be asked to reenact the scene between Sandy and Mandy with the puppets. Next, the children will rehearse with peers by coming up with fun ideas with the legos. The teacher will continuously coach the children to make suggestions and will monitor skill usage.

After the lego activity, the teacher will ask the children, "What did you do to make playing with legos together more fun?" If the children do not respond with "having fun ideas," the teacher will ask, "What else did you do to make playing with legos together more fun?" If the children never offer the explanation of having fun ideas, the teacher should follow-up with, "Do you think that having fun ideas helped to make playing with legos together more fun?"

Next, the teacher will ask, "How did you have fun ideas?," looking for the response thinking of something fun to do and then saying it to another child. The teacher will correct any misconceptions about the skill and will validate correct responses.

Session 6: Questioning Activity—Housekeeping. Sandy and Mandy are both playing in housekeeping. Mandy wants Sandy to play a game with her. Mandy says, "Sandy, you're the dad and I'm the mom, so you pretend to go to work now." Sandy says, "No, I don't want to." Mandy throws one of the toys at Sandy and says, "You be the dad!" Fluffy asks, "Do you think Sandy and Mandy are playing and having fun together?"

Fluffy emphasizes, "Mandy was being bossy and that's not a way to have fun together. Mandy also threw a toy and that's not a way to have fun together either, because it makes Sandy sad and mad." Fluffy then suggests to Mandy, "Maybe you could ask Sandy if he wants to play the game with you?" The scene is reenacted with Mandy asking, "Sandy, do you want to play house?" Sandy says, "Sure." Mandy says, "Do you want to be the mom or the dad?" The two begin playing.

At a free play station, the children will be asked to reenact the scene between Sandy and Mandy with the puppets. Next, the children will rehearse with peers by asking questions during housekeeping. The teacher will continuously coach the children to ask questions and will monitor skill usage.

After the housekeeping activity, the teacher will ask the children, "What did you do to make playing in housekeeping together more fun?" If the children do not respond with "asking questions," the teacher will ask, "What else did you do to make playing in housekeeping together more fun?" If the children never offer the explanation of asking questions, the teacher should follow-up with, "Do you think that asking questions helped to make playing in housekeeping together more fun?"

Next, the teacher will ask, "How did you ask questions?," looking for the response of one person thinking of something to do and then asking another child about it. The teacher will correct any misconceptions about the skill and will validate correct responses.

Session 7: Commenting Activity—Choo Choo Game. This game involves each child being a different car on the train and obeying different traffic signs (p.61, Rice, 1995). Sandy and Mandy latch onto each other and begin moving together, remaining silent. Eventually, they peter out and flop onto the ground listlessly. Fluffy asks, "Do you think Sandy and Mandy are playing and having fun together?"

Fluffy emphasizes, "Sandy and Mandy are having a hard time keeping the game going because they're not talking to each other. Talking during the game makes kids have more fun playing together." Fluffy then suggests, "Maybe you could talk about what you're doing during the choo choo game." The scene is reenacted with comments. Mandy says, "Hey, now we're stopping." Sandy says, "And now we have to go around the bend in the track!"

Fluffy ends with, "Sandy and Mandy are having fun playing together by talking to each other about the game. This helps them play together."

At a free play station, the children will be asked to reenact the scene between Sandy and Mandy with the puppets. Next, the children will rehearse with peers by engaging in the choo choo game first using the predetermined rules and then making up their own. The teacher will continuously coach the children to make comments and will monitor skill usage.

After the choo choo activity, the teacher will ask the children, "What did you do to make playing the choo choo game together more fun?" If the children do not respond with "saying things about the game," the teacher will ask, "What else did you do to make playing the choo choo game together more fun?" If the children never offer the explanation of saying things about the game, the teacher should follow-up with, "Do you think that saying things about the game helped to make playing it together more fun?"

Next, the teacher will ask, "How did you say things about the game?," looking for the response of seeing what they were doing and saying it out loud. The teacher will correct any misconceptions about the skill and will validate correct responses.

Session 8: Listening Activity—The Talking Wand. This game involves discussing a topic, such as "my favorite things," with the only the person holding the talking wand being allowed to talk. Mandy begins with the wand and starts saying, "My favorite things are candy, legos..." Sandy grabs the wand from Mandy and interrupts with, "My favorite things are..." Fluffy asks, "Do you think Sandy and Mandy are playing and having fun together?"

Fluffy emphasizes, "Interrupting someone while they are talking and grabbing toys from them are not ways to have fun playing together." Fluffy suggests, "Maybe Sandy could listen to Mandy first and wait his turn for the talking wand." The scene is reenacted with Sandy waiting his turn.

Fluffy ends with, "Listening to each other and waiting for your turn to talk are good ways to have fun playing together."

At a free play station, the children will be asked to reenact the scene between Sandy and Mandy with the puppets. Next, the children will rehearse with peers by practicing using the talking wand. The teacher will continuously coach the children to listen to each other and take turns talking and will monitor skill usage.

After the listening activity, the teacher will ask the children, "What did you do to make using the talking wand together more fun?" If the children do not respond with

"listening and taking turns," the teacher will ask, "What else did you do to make using the talking wand together more fun?" If the children never offer the explanation of listening and taking turns, the teacher should follow-up with, "Do you think that listening and taking turns helped to make using the talking wand together more fun?"

Next, the teacher will ask, "How did you listen and take turns talking?," looking for the response of listening while one person talked first and then the other person being able to talk. The teacher will correct any misconceptions about the skill and will validate correct responses.

Weeks five and six—integrating the skills. During the instructional phase, each individual skill will be reviewed for the children by Fluffy (i.e., taking turns, sharing, verbal support, helping, leading, questioning, commenting, and listening). Each activity in this section will take place during circle time and will involve the children recalling the skills, verbally rehearsing the skills, and applying them to novel contexts. During the response generation phase of each of the following four activities, it is critical that each of the eight individual skills are represented either in the questions asked the children or the responses generated by the children. If the children do not generate all eight with prompting, the teacher should suggest the missing skills.

Session 9: Integration Activity—The Great Predictor. This activity involves each child taking a turn being "The Great Predictor," which means wearing a turban and answering questions directed at them by Fluffy (p. 57, Rice, 1995).

Fluffy will ask:

1. Oh, Great Predictor, what will happen if we get angry and hit someone? (Answer to all odd numbered questions: Be hurt, sad, mad, cry, etc. After each response, Fluffy says: That wouldn't be fun, would it?)
2. Oh, Great Predictor, what will happen if we share? (Answer to all even numbered questions: Have more fun playing together.)
3. Oh, Great Predictor, what will happen if we say mean things to each other?
4. Oh, Great Predictor, what will happen if we help each other?
5. Oh, Great Predictor, what will happen if we grab toys from each other?
6. Oh, Great Predictor, what will happen if we listen to each other?
7. Oh, Great Predictor, what will happen if we scream at each other?
8. Oh, Great Predictor, what will happen if we say nice things to each other?
9. Oh, Great Predictor, what will happen if we tease each other?
10. Oh, Great Predictor, what will happen if we have fun ideas when we play?
11. Oh, Great Predictor, what will happen if we throw toys and break them?
12. Oh, Great Predictor, what will happen if we ask each other questions?
13. Oh, Great Predictor, what will happen if we are bossy?
14. Oh, Great Predictor, what will happen if we talk to each other about games we play?
15. Oh, Great Predictor, what will happen if we make mean faces at each other?
16. Oh, Great Predictor, what will happen if we take turns?

Each child will get a turn to answer one question, with the emphasis being on the previously learned social skills. The children should give appropriate answers. If more questions are needed, Fluffy should repeat the list.

Session 10: Integration Activity—The Professor Smarty Show. This activity involves dramatizing a television game show in which the children are contestants and Fluffy is the interviewer (p. 17, Rice, 1995). One at a time, each child comes on stage and Fluffy says, "Welcome to the Professor Smarty Show. What is your name?" <child states name> Fluffy will then ask one of the following questions:

1. If someone grabbed a toy from you, how would you feel? (sad, mad)
2. If you wanted to play a game with another child, what could you do? (ask question, have a fun idea)
3. If someone painted a beautiful picture, what would you do? (say something nice)
4. If you were putting a puzzle together and someone else wanted to help, what would you do? (share)
5. If you were playing with someone and wanted to play a different game, what could you do?(have a fun idea)
6. If you saw someone having a hard time fitting the legos together, what would you do? (help them)
7. If you didn't like the game you were playing with a friend, what could you do? (have a fun idea, find another game, ask a question)
8. If you were playing with a toy and someone else also wanted to play with it, what could you do? (share, wait for your turn)
9. What is something you could do to have fun playing together with your friends? (talk to each other, listen)
10. If someone was feeling bad, what could you do? (help, give a hug)

If the child is unable to answer, the audience is invited to answer the question. Children applaud when a contestant leaves the stage. Fluffy may need to go through the list of questions a second time for all the kids to have a turn (time permitting).

Session 11: Integration Activity—Mad Hatter. Fluffy asks the children what things they can do to have fun playing together (p. 79, Rice, 1995). Fluffy will explain different situations to the whole class:

1. If there is one truck and both Sandy and Mandy want to play with it, what can they do to have fun playing together? (sharing or taking turns)
2. If Mandy really wants to say something, but Sandy was called on by the teacher, what should Mandy do? (listen and wait her turn to talk)
3. If Sandy and Mandy are playing together but Sandy wants to play a different game, what can Sandy do? (have a fun idea, ask to play a different game)
4. If Mandy was coloring with markers and Sandy wanted to color, too, what can they do to have fun playing together? (share or take turns)
5. If Sandy and Mandy are playing together, what can they do to make their playing more fun? (have fun ideas, ask questions, talk about what's happening in the game, etc.)
6. Instead of Mandy bossing Sandy around and telling him how to play the game, what could Mandy do? (ask Sandy if she wants to do something, have a fun idea)
7. If Sandy and Mandy are building with legos and Mandy sees that Sandy has made a really neat house, what could Mandy do to make Sandy feel good? (say something nice)

8. If Sandy and Mandy are putting together a puzzle and Sandy sees that Mandy is having a hard time fitting a piece in its spot, what could Sandy do? (help)

The teacher should guide the children to come up with the eight individual social skills (this might be hard!). The appropriate responses to the questions are in parentheses after each question. It may be necessary to follow-up with, "What else could you do to…?" Each response is written on a card and placed in a hat. Then, each child comes up and draws a card, acts out the skill. If the child is shy, Sandy and Mandy act out the skill for the child.

Session 12: Integration Activity—Problem Solving Table (p. 77, Rice, 1995). A table is created out of a cardboard box. Fluffy will explain, "This will be a table where kids can come to work out their problems. But, we need rules for how we should try to work out our problems. Who can think of a good rule for solving problems?" If the children are unable to suggest the previously learned skills, Fluffy will suggest, "How about being a good listener?" Next, Fluffy will ask, "Why don't we write down good ways to make sure we are playing nicely together and having fun? Who can think of a way to have fun?" If the children are unable to suggest the appropriate skills, Fluffy will suggest, "How about sharing?" All eight individual skills should be represented in the rules and ways to have fun playing together.

BIOGRAPHY OF THE AUTHOR

Erika Carpenter was born in Sumner, South Carolina on September 27, 1972 and graduated as a valedictorian of James W. Robinson Secondary School in 1990. She attended The College of William and Mary in Williamsburg, Virginia and graduated Magna Cum Laude in 1994 with a Bachelor's degree in Psychology with High Honors awarded to her Honors Thesis. She taught preschool for one year in Northern Virginia before attending Wake Forest University in North Carolina, earning a Master's degree in Experimental Psychology in 1997. Erika then matriculated to The University of Maine's Developmental Track of the Clinical Psychology doctoral program. She was accepted as a pre-doctoral intern in child clinical psychology at UCLA's Neuropsychiatric Institute for the 2001-2002 academic year. At this time, Erika has several publications and many conference presentations in the areas of aggression, peer relations, juvenile sex offending, attachment, social comparison, and developmental pediatrics.

After receiving her degree, Erika is hoping to find a job that will propel her out of poverty. She is a candidate for the Doctor of Philosophy degree in Psychology from The University of Maine in August, 2002.