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**Diagnosis-Specific Social Skills Training
with Peer-Nominated
Aggressive-Disruptive and Sensitive-Isolated
Preadolescents**

Helen Bienert

A thesis submitted to
the school of Graduate Studies of the University of Ottawa
as partial fulfillment of the requirements
for the degree of Doctor of Philosophy



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This thesis is dedicated to my parents, my siblings, and my partner; all of whom believed in my ability to complete this project, and all of whom provided support and encouragement during those times when I did not believe I could do it.

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Diagnosis-Specific Social Skills Training
with Peer-Nominated
Aggressive-Disruptive and Sensitive-Isolated Preadolescents

ABSTRACT

The differential response of peer-nominated aggressive-disruptive and sensitive-isolated preadolescents to social skills training was investigated. In addition, two forms of intervention were compared: diagnosis-specific treatment (training tailored to the needs identified as characteristic of the particular diagnosis, aggressive or withdrawn) and crossover treatment (training tailored to the needs of the opposite diagnosis). Ninety low social status preadolescents were identified by screening 455 grade six students with self- and peer-ratings. Teacher ratings were then used to determine areas of specific skill deficit in the two populations of peer-nominated socially rejected preadolescents (aggressive-disruptive versus sensitive-isolated), and intervention programs were developed to address those deficits.

A wait-list control paradigm was used. Identified youngsters were blocked by diagnosis, and randomly assigned to one of two treatment phases (immediate or wait-list) and to one of the two treatment specificity conditions, diagnosis-specific or crossover. Self- and peer-ratings used prior to treatment were again completed by all 455 participants following each of two ten-week training sessions. Follow-up data were collected from 705 junior high school students one year later.

A series of ANOVAs were conducted on the four pretreatment dependent measures (social self-perception, peer-rated likeability, peer-rated aggression, and peer-rated social withdrawal). There were no significant pre-treatment differences among groups of targets randomly assigned to the different treatment phase and treatment specificity conditions, except for those expected between aggressive-disruptive and sensitive-isolated youngsters. Subsequent analyses, which were conducted to assess patterns of change across time, used a repeated measures profile design on each dependent variable.

Following diagnosis-specific treatment the peer-rated likeability and the social self-perception of both the aggressive-disruptive and the sensitive-isolated targets showed significant improvement. These improvements were effectively maintained at follow-up by the aggressive-disruptive targets but not by the sensitive-isolates. Similarly, following diagnosis-specific treatment, the peer-rated aggression score of the aggressive-disruptive targets, and the peer-rated social withdrawal score of the sensitive-isolated targets improved (i.e., diminished) significantly. Both groups effectively maintained these changes at follow-up. Crossover treatment effects were significantly weaker. Neither the peer-rated aggression score of the aggressive-disruptive targets nor the peer-rated social withdrawal score of the sensitive-isolated targets changed significantly following crossover treatment. As well, while significant improvements were recorded immediately following crossover treatment in the peer-rated likeability of the aggressive-disruptive targets, and in the social self-perception of the sensitive-isolates, in neither case were the changes maintained to follow-up.

The findings indicated that the benefits derived in social skills training were largely maintained at one year follow-up, despite the change of setting and peer group. Further, the results provide support for the hypothesis that subgroups of socially rejected preadolescents benefit differentially from social skills training. Support for tailoring intervention to meet the needs of these subgroups remains somewhat more tentative but nonetheless is evident. As well, the findings suggest that social withdrawal may be more refractory to intervention than studies conducted with younger participants with this diagnosis would suggest.

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INTRODUCTION

The importance of childhood friendships and the consequences of peer relationship difficulties have long been discussed in developmental and educational literature (e.g., Asher, 1978; Asher & Parker, 1989; Dubow & Cappas, 1988; Furman & Robbins, 1985; Sullivan, 1953; Wright, 1978). Over the years, concern about children who lack friends has been translated into systematic programs of research which have produced a relatively extensive literature elaborating on the origins, maintenance, and remediation of low peer acceptance (e.g. Asher & Parker, 1989; Asher & Renshaw, 1981; Ladd & Mize, 1983; LaGreca & Santogrossi, 1980; Schneider & Byrne, 1985; Tiffen & Spence, 1986). This literature indicates that in a large number of cases certain children are disliked by the majority of their classmates (e.g., Bichard, Alden, Walker & McMahon, 1988; Coie & Dodge, 1983; Matter & Matter, 1985).

It has been repeatedly and thoroughly documented that peer rejection has important implications for children's short- and long-term social and emotional adjustment (e.g., Asher & Parker, 1989; Coie, Christopoulos, Terry, Dodge & Lochman, 1989; Cowen, Pederson, Babigian, Izzo & Trost, 1973; Dodge, Coie & Brakke, 1982; Panella & Henggeler, 1986; Parker & Asher, 1987; Roff, Sells & Golden, 1972). A child who lacks the skills necessary for effective social interaction is limited in his or her opportunities for learning about social relations and social rules (Oden & Asher, 1977). Perhaps for this reason, children with low social status are more likely to demonstrate a relatively high incidence of maladjustment and misconduct in school (Parker & Asher, 1987; Gresham & Nagle, 1980; Gronlund & Anderson, 1963; Ladd, 1988, 1989) and delinquency (Roff, Sells & Golden, 1972). They may also subsequently exhibit a variety of mental health difficulties in later life (Cowen et al., 1973). Parker and Gottman (1989) suggest that for

children to maximize the level of enjoyment that they experience in play, they must develop competence in coordinating their behavior with one another. This ability requires that children learn to inhibit some of their actions and to maintain organized behavior and attention despite varying degrees of emotional arousal. Parker and Gottman (1989) speculate that children acquire and develop such skills largely through interacting with their peers.

Inadequate social skills have also been found to be associated with delayed cognitive development and impaired academic performance (Cartledge & Milburn, 1978, 1986). Moreover, a number of disorders in the current psychiatric nomenclature (i.e., DSM-III-R) have disturbances in peer relations listed as an important diagnostic criteria (for example, schizophrenia, infantile autism, pervasive developmental disorder, avoidant disorder). Although low-accepted children are not necessarily completely friendless, and may often have at least one friend (Asher & Parker, 1989; Bukowski & Hoza, 1989), researchers have shown that these poorly accepted youngsters typically view such friendships as less supportive and less satisfying than do better-accepted children (Parker & Asher, 1987). Thus, while having a "best friend" may bolster a child somewhat against the overall impact of poor peer acceptance, the ultimate negative consequences of peer relationship difficulties may continue to appear.

All told, these findings underscore the importance of social competency in childhood on both a short-term and a long-term basis. Pellegrini and Urbain (1985) indicate that peer relationship problems are often the primary reason why children are referred for therapy. Research findings support the conclusion offered by Asher and Parker (1989) that further efforts both to discover the origins of peer rejection in childhood and to intervene effectively are warranted.

Friendship and Social Skill Development

In brief, friendships play an important role in social development (Bierman, 1986; Dodge, Coie & Brakke, 1982; Ladd, 1988, 1989; LaGaipa & Wood, 1985; Parker & Gottman, 1989). Research investigating the correlates of friendship suggests that friendship is associated with the development of specific social and social cognitive skills (e.g., Feltham, Doyle, Schwartzman, Serbin & Ledingham, 1985; Ladd, 1989, etc.). McGuire and Weisz (1982), for example, found that children with friends display high levels of altruism and affective perspective-taking ability. Similarly, Bukowski, Newcomb and Hoza (1987) reported that pre-adolescents view friendship networks as crucial sources of reciprocal support. The authors conclude that peers become powerful reinforcers and shapers of one another's behavior. In addition, Parker and Gottman (1989) suggest that friendships play an important role in the development of skills for managing emotions in interactions, as well as in interpreting internal emotional experiences. Asher and Parker (1989) summarize by identifying seven basic functions of friendship. These include: enhancing the growth of social competence, ego support and self-validation, emotional security, intimacy and affection, guidance and assistance, reliable alliance, and companionship.

Parker and Asher (1987) propose that because friendships serve a number of key socialization and supportive functions, and because low-accepted children both lack friendships and tend to feel unhappy about their existing peer relations, the concern that friendless children appear at risk for later adjustment difficulties seems warranted. To the extent that friendship is of functional importance in the development of social skills, and in social and emotional growth, poorly accepted children grow up in a distinctly disadvantaged and atypical social context (Asher & Parker, 1989; Parker & Asher, 1987). In the absence of supportive friends, these youngsters appear to miss out on the valuable

functions of friendship, and thus become highly vulnerable to both normative and non-normative stressors.

Peer Relations in Adolescence

Rook (1984) suggests that successful peer relations become the norm in the world of adults. He concludes that failure to integrate adequately into the peer group during adolescence may be of particular psychosocial relevance, as this developmental period (i.e., adolescence) marks the final transition from childhood dependency on adults to autonomous interaction with age-mates (Connolly, White, Stevens & Burstein, 1987). More specifically, it is during adolescence that social interactions and relationships become increasingly complicated and adult-like. Argyle (1985) makes the point that from 12 years and onward the need for two or three close friends, and the need to "belong to a group" become ever more important. Youngsters at this developmental phase are moving towards a crucial phase of friendship in which friends help each other to achieve independence from parents, and to acquire further social skills (Argyle, 1985; Hetherington & Parke, 1979). From this point forward, many of the developmental tasks of adolescence involve participation in new kinds of social interactions that do not include the family or other adults. Franco, Christoff, Crimmins and Kelly (1983) speculate that for adolescents who lack effective social interaction skills, these developmental tasks can prove exceedingly difficult.

In brief, as children approach adolescence, the peer group assumes a somewhat new dimension—it becomes larger and more complex, more time is spent with peers, and interactions with opposite-sex peers increase (Hansen, Watson-Perczel & Christopher, 1989). The many inherent stressors associated with adolescence (Hetherington & Parke, 1979) may themselves attest the importance of a supportive peer network during this time

of significant ongoing developmental change. Bukowski, Newcomb and Hoza (1987) report, for example, that adolescents often place significantly greater emphasis on the help/support dimension of friendship than on other features. The authors speculate that socially rejected youngsters, deprived of such support and reassurance, are thus also deprived of a basic and necessary social experience. Coie, Christopoulos, Terry, Dodge and Lochman (1989) add that socially rejected youngsters are deprived of the opportunity to observe and learn how peers deal with stress and other key life events. If effective lifestyle strategies are to be developed during adolescence, the implementation of positive interpersonal skills may be especially important.

Social Information Processing and Peer Social Status

Feldman and Dodge (1987) found that unpopular children display distinctly deviant patterns of social information processing. In comparison to their average and popular social status classmates, unpopular children viewed peers in teasing situations as being more hostile. They generated fewer competent (and conversely, more aggressive) responses, and they evaluated aggressive responses presented to them as possible problem solving strategies (by the experimenters) as more acceptable. Similarly, Dozier's (1988) investigation showed that socially rejected children appear to under-use available information, and that this under-use leads to inappropriate peer-directed behaviors. Dozier (1988) also found that rejected children's abilities to process social information as effectively as their better-accepted peers broke down most consistently and clearly when they were making judgments that were highly self-relevant and thus more physiologically arousing.

In a study examining the relationship between social problem solving and aggression in preschool-age boys, Gouze (1987) found that relative to their nonaggressive

peers, aggressive preschool boys generated fewer alternative solutions to hypothetical problems, and that their solutions had a significantly higher aggressive content. Keltikangas-Jarvinen and Kangas (1988) report similar findings. Results of their study also showed that the cognitions of aggressive children differ from those of nonaggressive children, with the most marked difference being the aggressive children's difficulty in generating constructive alternatives to aggressive behavior. As French and Waas (1985; 1987) suggest, the problem solving solutions generated by rejected children appear markedly less effective and more aggressive than those of other social status groups.

Reviewing research on the association between social problem solving skill and peer social status, Rubin, Daniels-Beirness and Bream (1984) identified a set of relatively complex social-cognitive skills that appear to have significant effects on the development of positive peer relationships. The set includes: the ability to efficiently process social information, the ability to accurately interpret the feelings and intentions of others, the ability to generate and consider alternative plans of action, the ability to anticipate the social consequences of intended actions, and the ability to evaluate outcomes. Rubin et al.'s (1984) findings also indicate that deficits in one or more components of this set of social-cognitive skills contributes to increased social isolation, diminished peer acceptance, and increased behavioral maladjustment.

Behavioral Correlates of Poor Peer Acceptance

Research on the behavioral concomitants of low social status (i.e., poor peer acceptance) has come to focus on two groups of children: those who engage in high levels of aggressive behavior, and those described as withdrawn or isolated (Feltham, Doyle, Schwartzman, Serbin & Ledingham, 1985). Examining the relationship between behavioral style (prosocial versus antisocial) and peer acceptance, Ladd, Price and Hart

(1988) found that the behaviors and social skills displayed on the playground in the early weeks of the school year were highly predictive of later peer status. Children who used prosocial behaviors and were able to engage in co-operative play, became better liked across the school year. Conversely, children who displayed negative behaviors (in particular, arguing and physical aggression) became disliked and rejected by their peers as time passed. In an earlier investigation, Ladd (1983) found that the behavioral profiles constructed from playground observations clearly and consistently distinguished between children of popular and average social status, and those not well-accepted by (or integrated into) their peer group.

In general, it would appear that compared to their high and average social status peers, children low in social acceptance spend a significantly greater proportion of their time engaged in solitary and/or inappropriate activities. Rizzo's findings (1988), and those of Ironsmith and Poteat (1990) concur. In both instances, the authors report differences in styles of interaction between well- and poorly-accepted children, with the latter group engaged in significantly more adjacent as opposed to interactive play than their more popular counterparts. Foster (1989) concludes that the results of numerous studies show convergence in terms of the behaviors associated with poor peer acceptance.

Moreover, Coie and Kupersmidt (1983) found that the low social status of unpopular children is quickly reestablished when they are placed in new groups of unfamiliar peers. Supportive evidence is provided by Cillessen and Ferguson (1989), who report research findings showing that children who are rejected by an established peer group demonstrate maladaptive social behaviors, and poor social competence in new peer groups as well. Coie and Kupersmidt (1983) conclude that there is something about poorly accepted children that produces a similar impact across very different social settings. They, along with other researchers (e.g., Foster, 1989; Foster, DeLawyer & Guevremont, 1986; Foster & Ritchey, 1985), suggest that findings such as these underscore the importance of

conceptualizing social status not merely in terms of the persistent characteristics of individuals or social status types but in terms of the behaviors of individuals in particular social contexts.

Research (e.g., Dodge, 1983; Ladd et al., 1988) has shown that the behavior patterns of children during their initial encounter with peers is highly predictive of the social status that they eventually come to acquire. More specifically, Dodge (1983) found that boys who came to be unpopular with their peers often engaged in inappropriate play behaviors, such as disrupting an ongoing activity. They engaged in a great deal of solitary play but their relative isolation was not due to a lack of social initiative on their part. Dodge (1983) found that especially in the early stages of the peer group formation, the disruptive youngsters actually approached their peers more frequently than did the boys who eventually came to be well liked. Their social approaches, however, led to relatively short interactions and were often rebuffed by peers. Both Dodge (1983) and Ladd et al. (1988) conclude that negative peer reactions occur as a function of basic behavioral differences in the interactive style of youngsters who come to be liked and those who come to be disliked. A relatively high proportion of the disliked boys' behaviors (Dodge, 1983) involved physical aggression and other inappropriate, disruptive acts (insults, threats, contentious statements, etc), and a low proportion of co-operative play or social conversation. Overall, peers viewed these disliked boys as highly aggressive, as poor leaders, and as unwilling to share.

In a related study investigating the relationship between play and social competence, Pellegrini (1988) found that for popular children rough-and-tumble play led to games with rules, whereas it led to aggression for disliked children. These and related findings continue to receive considerable research support (e.g. Coie & Kupersmidt, 1983; Dodge, Coie & Brakke, 1982; Feltham, et al., 1985; Foster, 1989; Foster, DeLawyer, & Guevremont, 1985, 1986; Foster & Ritchey, 1985; French & Waas, 1987). Keltikangas-

Jarvinen and Kangas (1988) have found that the greatest differences between aggressive and non-aggressive children are in the aggressive children's seeming inability to detect constructive alternatives to aggressive behavior. Similarly, studies on socially rejected children by French and Waas (1985, 1987) and by Gouze (1987) show that poorly accepted children generate less effective and more aggressive solutions to hypothetical social problems than do matched groups of popular youngsters. Following this line of reasoning, Stefanek, Ollendick, Baldock, Francis and Yaeger (1987) examined the use of inhibiting and facilitating self-statements (that is, self-statements that make it more or less difficult to deliver effective social responses). The authors studied the use of such self-statements across two types of interpersonal situations (those resolving conflict, and those initiating social interactions). Results showed that popular children made significantly more facilitating than inhibiting responses than did poorly accepted youngsters. Panella and Henggeler (1986) found that youngsters with peer adjustment difficulties tended to have difficulty exchanging the sensitive, responsive, and positive behaviors that characterize friendship relations. They demonstrated deficiency in the responsive and reciprocal interplay that reflects the use of good social skills.

Aggression, in particular fighting and disruptiveness, has been cited as the most common reason given by children for disliking someone (Coie & Dodge, 1983; Newcomb & Bukowski, 1984). Other researchers, however (for example, Bierman, 1986a; French, 1988), note that aggression and disruptiveness in fact characterize only a subset of all socially rejected children. From their investigation of 98 peer rejected six-year old boys, for example, Cillessen, van IJzendoorn, van Lieshout & Hartup (1990) found that while aggressive behavior certainly formed a basis for being disliked, 13 percent of the subjects in their study were disliked for reasons associated with shyness and social withdrawal. Thus, although researchers have tended to concentrate on the more visible correlates of poor peer acceptance in childhood (for example, aggression), the relation of social isolation

and withdrawal to the development of social cognitive skills and peer status has also begun to receive its share of attention in recent literature (Cillessen et al., 1990; Coie, Dodge & Kupersmidt, 1990; Feltham et al., 1985; Foster & Ritchey, 1985; Franco, Christoff, Crimmins & Kelly, 1983; Hymel, Rubin, Rowden & LeMare, 1990; Kratochwill & French, 1984; Ladd & Keeney, 1983; Matter & Matter, 1985; Rubin, 1985; Rubin, Hymel, LeMare, & Rowden, 1989; Strauss, 1988; Strauss, Lahey, Frick, & Frame, 1988). As early as 1972, Roff, Sells and Golden suggested that withdrawn children were "at risk" for peer rejection. They posited that the combination of rejection and consequent isolation was predictive of pathological and dysfunctional behavior in adolescence and adulthood. Until more recent years, however, research concern has focused more heavily on the rejected aggressive youngster.

Younger and Boyko (1987) propose that as children approach adolescence and begin to develop larger peer groups, withdrawn behavior becomes more dysfunctional and thus more highly visible. Results of their investigation suggest that at older ages (fifth to seventh graders), a schema for socially withdrawn behavior plays a more important role (in terms of peer assessments of social maladjustment) than does a schema for aggressive behavior. Hodgens and McCoy (1989) reached a similar conclusion in their investigation. The determinants of peer status among adolescents appeared more differentiated and less overt than those found among younger subjects. The descriptor "acts shy" did not emerge as a significant predictor of peer status until early adolescence.

Peretti and McNair (1987) found that socially isolated, shy preadolescents had higher than normal fears of social rejection, and feelings of depression, social anxiety, and social withdrawal, and that they tended to perceive social interactions suspiciously as superficial and insincere. In a similar vein, Strauss et al. (1988) found that anxiety-disordered children were liked significantly less than normal (non-anxious) subjects. As recipients of the lowest social-impact scores (total like-most and like-least nominations) of

any group, the anxiety-disordered children were most likely to fall in the socially neglected/isolated group. Similarly, Dygdon, Conger and Keane (1987) found that children who were liked most were described by their peers as able to participate in play and to accept others' invitations to play, able to engage in altruistic behaviors, and able to choose interesting and appropriate topics of conversation. Disliked children were said to refuse invitations, to perform inefficiently across tasks, to exhibit non-normative behaviors, and to speak in a displeasing manner about inappropriate and non-interesting topics. Moreover, these disliked children were described as reticent, shy and withdrawn.

Feltham et al. (1985), Strauss (1988) and Strauss et al. (1988) cite research which depicts socially withdrawn children as low in peer acceptance, and high in terms of shy, anxious, fearful behaviors. As a rule, these isolated children elicited fewer communicative overtures from their peers, and were less successful in their social requests. Data from the Cillessen et al. (1990) study provide similar results. Poorly accepted withdrawn subjects were described as being involved in extremely limited mutual relationships, and as behaving in a painfully shy, socially inhibited manner that rendered them virtually friendless. Feltham et al. (1985) conclude that lacking the skills necessary for successful peer interaction, shy/withdrawn children, like their more aggressive counterparts, are at risk for on-going and perhaps more serious social problems. Thus, current classification procedures appear to identify two types of poorly accepted preadolescent youngsters — those who engage in high levels of aggressive behavior, and those who exhibit high levels of social withdrawal and inhibition. However, despite withdrawn behavior often being viewed by parents, practitioners and clinicians as an index of peer difficulty, at least in young children (Mills & Rubin, 1990), evidence attesting its validity as a predictive correlate of later maladjustment has been less conclusive (e.g., Parker & Asher, 1987).

Rejected and Neglected Peer Social Status

Using peer nomination procedures, sociometric research has identified five social status types: popular, average, controversial, rejected, and neglected. Nomination techniques typically require children to identify a given number of peers according to a specified positive and/or negative criteria (for example "Name the three children in your class with whom you like to play/work with the most/least"). Popular children are those who receive many positive nominations and few negatives. Average children are those who receive moderate numbers of positive and negative nominations. The controversial group is composed of children who receive many negative as well as positive nominations. Rejected children receive few positive and many negative nominations from peers, and neglected children receive few nominations of either type (Coie, Dodge & Coppotelli, 1982; Dubow & Cappas, 1988; Newcomb & Bukowski, 1984; Tiffen & Spence, 1986).

Numerous researchers (e.g. Bichard, Alden, Walker & McMahon, 1988; Bierman, 1987; Coie, 1985; Coie et al., 1982; Dodge, 1983; Dodge, Coie & Brakke, 1982; Dygdon, Conger & Keane, 1987; Krehbiel & Milich, 1986; LaGaipa & Wood, 1985; Mize & Ladd, 1990; Monfries & Kafer, 1987; Rubin, Hymel, Lemare & Rowden, 1989) have examined the degree of relationship between the neglected and rejected classifications described in the previous paragraph, and the aggressive and withdrawn behavioral profiles outlined earlier. Rejected children have been characterized as aggressive, disruptive, and hostile, while neglected children have been described as shy and withdrawn (e.g. Bierman, 1986a). There is general consensus in the literature that peers tend to describe members of the neglected and rejected groups in clearly distinct behavioral terms. Furthermore, most researchers would seem to agree with the conclusion that the most compelling reason for peer dislike and lack of popularity is unprovoked aggressive behavior (e.g. Asher & Parker, 1989; Coie, Christopoulos, Terry, Dodge & Lochman, 1989; Rubin et al., 1989;

Willis & Foster, 1990). However, controversy does exist regarding the conceptual link that has been drawn between sociometric neglect and the shy/withdrawn behavioral profile (see Rubin et al., 1989 for recent review).

Supporting the conceptual link between sociometric rejection and aggression, Dubow and Cappas (1988) report that sociometrically rejected children are generally viewed by peers as exhibiting significantly more classroom and peer-related behavior problems (such as aggression and disruption) than any other group. Popular and average children, on the other hand, are described by peers as well adjusted. The adjustment problems described as characteristic of the neglected group tend to include lack of group participation and lack of leadership skills. A related study by Dubow (1988) revealed that aggressive children typified both the rejected and average social status groups, but not the popular or neglected groups. In addition, children rated by teachers and peers as both rejected and aggressive showed marked academic and social-skill deficits, whereas children rated as average in social status, but aggressive, exhibited adequate adjustment similar to that of nonaggressive/average social status children.

Peers describe rejected children as excessively disruptive and aggressive, as inattentive, as lacking in socially facilitative behavior, as more unhappy, and as more easily aroused to anger than most other children (Bierman, 1987; Cantrell & Prinz, 1985; Coie, 1985; Coie & Dodge, 1988; Pellegrini, 1985, 1988; Rizzo, 1988). Not surprisingly, then, French and Waas (1987) found that while there were no differences between social status groups in the overall rate of attempted interaction, rejected children ultimately exhibited significantly more onlooker behavior and solitary play than their popular and average social status peers; their initiations were rebuffed by peers. Similarly, Krehbiel and Milich (1986) found that rejected children attempted more social approaches in the classroom, often at inappropriate times, and made fewer social approaches on the playground than any other social status group. Rejected children also engaged in the highest frequency of child-

teacher interactions, in more hostile verbalizations, and overall, exhibited the most aversive behaviors.

There is little consistency in the data characterizing sociometrically neglected children. Although investigators agree that as a group these children engage in the least amount of aggressive behavior, even in response to aggressive overtures from classmates (Coie & Dodge, 1988; Rubin et al, 1989), other data are equivocal. Some researchers have found that neglected children tend toward social passivity, withdrawal, timidity, and shyness (Bichard et al., 1988; Coie & Dodge, 1988; Deluty, 1981). Coie and Dodge (1988) suggest that perhaps neglected children themselves initiate significantly fewer social interactions with peers, and respond less frequently to peer-initiated interactions. As a result, they eventually receive fewer social initiations from their peers who gradually either come to "overlook" the neglected children or to assume that they are not interested in social interactions.

Independent studies by French and Wass (1985) and Coie et al. (1982) determined that rejected children are generally more disruptive to group functioning, and typically engage in more aversive, antisocial behavior than do their neglected counterparts. A related study by Dodge et al. (1982) yielded similar results. They reported that, in contrast to popular children, rejected children displayed fewer task-appropriate behaviors and more task-inappropriate and aggressive behaviors. Dodge et al. (1982) also found that rejected children prosocially approached peers as frequently as popular youngsters, but that peer responses to those approaches were likely to be negative. In contrast, neglected children displayed relatively few task-inappropriate or aggressive behaviors, and socially approached peers very infrequently. Their approaches, however, were also frequently met with rebuff by the peer group. Thus, although individuals from both the neglected and rejected sociometric status groups are isolated from their peers, that isolation appears to be associated with different behavioral styles.

Rejected and neglected children have also been shown to differ in terms of their communication skills (Burlison, Applegate, Burke & Clark, 1986). More specifically, Burlison et al. found that rejected children showed significantly poorer referential, persuasive, and comforting communication skills than all other social status groups. The communication skills of neglected children, on the other hand, did not differ significantly from those of average social status children. Neglected children were, however, less willing to initiate friendship-making conversational overtures with peers than were average- or rejected-status youngsters.

Rubin et al. (1989) have found that, as a group, rejected children are significantly more disliked than any other sociometric group. Interestingly, peers in the Rubin et al. study viewed rejected children as both more aggressive-disruptive and as more sensitive-isolated on the Revised Class Play (Masten, Morison & Pellegrini, 1985), than other social status children. However, they did not rate the neglected group as significantly different from the average social status group in terms of aggressive-disruptive nominations. Furthermore, Rubin and his colleagues found that while the rejected group was least likely to be nominated for leadership-type roles, on the Class Play instrument, the neglected group could once again not be distinguished from the average children in this regard. The lack of a distinct behavioral profile able to unequivocally differentiate neglected children from their average social status peers makes it difficult to identify precise skills that might be targeted for interventions with this group.

Later Adjustment of Rejected and Neglected Children

While the behavioral features that distinguish between sociometrically rejected and neglected children (as discussed above) have long been alluded to, it is only in the relatively recent past that research has begun to investigate and articulate these differences more

explicitly (e.g. Asher, 1985; Asher & Parker, 1989; Coie & Dodge, 1983; Coie, Dodge, & Coppotelli, 1982; Parker & Asher, 1987; Putallaz, 1983; Rubin, Hymel, Lemare & Rowden, 1989). The more focused research attention given the investigation of existing associations between sociometric status and behavioral profiles has been sparked by an interest in determining how "at risk" these sociometrically categorized children are for later maladjustment. On the basis of previous work (e.g., Parker & Asher, 1987; Rubin, LeMare & Lollis, 1990; Rubin et al., 1989; Strauss, 1988) showing a conceptual link between peer rejection and aggressive behavior in early childhood, Hymel, Rubin, Rowden and LeMare (1990) hypothesized that sociometrically rejected children are at increased risk for externalizing disorders (hostile, acting out behavior). Concomitantly, they hypothesized that if sociometric neglect is associated with heightened anxiety, shyness and withdrawal, then neglected children could well be at increased risk for internalizing disorders including negative self-esteem, loneliness, and depression. In short, poor peer acceptance was hypothesized to be predictive of both internalizing and externalizing disorders (Hymel et al., 1990; Rubin et al., 1989).

Moreover, research has found that the social characteristics of rejected children typically transcend social contexts and remain stable across time (Asher, 1985; Bierman, 1987; Coie & Kupersmidt, 1983). However, while rejected children appear to remain rejected, neglected children (who, despite having few "best" friends, are not actively disliked) appear to sometimes gain popularity over time, and are thus often described by adult observers as being more outgoing when in unfamiliar as opposed to familiar peer groups (Bierman, 1987; Coie, 1985; Rubin, 1985). Sociometrically rejected and sociometrically neglected children appear to differ from each other in the extent to which they are at risk for later life adjustment difficulties. Differences such as these have led some researchers (e.g., Asher, 1985; Asher & Coie, 1990; Hymel & Rubin, 1985; Parker & Asher, 1987) to conclude that sociometrically rejected children are at significantly greater

risk than other sociometric status groups for later negative outcomes including dropping out of school, juvenile delinquency, and various mental health problems. Indeed, the results reported by Rubin et al. (1989) indicated that rejected (but not neglected) children were perceived as exhibiting high degrees of both aggressive *and* withdrawn behavior. By contrast, the neglected children described by Rubin and his colleagues (1989) were generally perceived as undifferentiated from their average social status counterparts in terms of peer acceptance, peer perceptions of either aggression or withdrawal, or self-perceptions of loneliness and social competence. In this regard, the clinical and predictive significance of the peer problems of the neglected group is yet to be determined empirically.

Predictability of later negative psychological outcomes appears to vary as a function of both sociometric status and behavior profile. Parker and Asher (1987) found low acceptance and aggressiveness to be better predictors of later life difficulties than was shyness/withdrawal. They concluded that little empirical follow-up evidence has emerged linking shyness and withdrawal to later negative outcomes. Parker and Asher (1987) do not report, however, whether the shy/withdrawn children they considered in their analysis were also low in peer acceptance, or whether they were perhaps shy and withdrawn but of average social status. By the same token, while they report that the sociometric rejected children in their study were perceived by peers as both aggressive and withdrawn, Rubin et al. (1989) do not indicate whether it was the entire sample population of rejected children that was perceived as both aggressive and withdrawn, or whether some rejected children were perceived as high in aggression while others were perceived as high in withdrawal. If the latter was the case, research is needed to further explore whether one type of rejected child — the aggressive or the withdrawn — is more likely to experience negative outcomes in later life than the other.

Nonetheless, given the somewhat equivocal findings regarding sociometric neglect and behaviorally withdrawn children, it is perhaps understandable that researchers have

questioned whether this population represents a true "at risk" population (e.g., Asher & Coie, 1990; Asher, Markell & Hymel, 1981; Parker & Asher, 1987; Rubin et al., 1989), and that some have suggested that intervention efforts be focused primarily on rejected and aggressive rather than neglected youngsters (e.g., Asher & Wheeler, 1985). Parker and Asher (1987) indicate, however, that the majority of studies involving shy/withdrawn children have used clinical rather than normal samples, and follow-back or retrospective methodologies. They suggest that a prospective study with a judiciously selected sample of sociometrically neglected and shy/withdrawn youngsters, which would permit more firm conclusions to be drawn, has perhaps not yet been accomplished.

Younger, Schwartzman and Ledingham (1985; 1986) and Younger and Boyko (1987) have argued that withdrawn and socially anxious children become a salient reference group to their peers only by mid- to late-childhood. Similarly, Hymel and Rubin (1985) and Rubin (1985) have suggested that extreme isolation in middle (as opposed to early) childhood may indeed be a warning sign of potential later-life problems. Whereas children rated by peers as neglected when in kindergarten often no longer deviated from age group norms in terms of their social problem-solving skills or their sociometric status by the time they reached grade two (Rubin, 1985), children poorly accepted by their peer group in the fifth grade had significantly more problems over the next seven years than did other social status groups (Coie, 1985). On the basis of these findings, Rubin (1985) proposed a model in which the longterm costs of social withdrawal are associated with negative developments to self-image. In the model, Rubin speculates that these burgeoning negative self-perceptions eventually generalize to the peer system. Subsequent and on-going experiences with lack of social success and with peer domination lead to a downward spiraling in self-esteem which gradually sets the withdrawn child still further apart from the world of his peers. Rubin (1985) concludes that heightened deviance from "normality" then becomes associated with peer rejection. The combination of peer rejection, social

withdrawal, and poor self-perception result in the development of more serious childhood disorders such as depression.

Results reported by Hodgens and McCoy (1989), whose research identified subgroups within the rejected sociometric classification, found rejected-*aggressive* subjects to be the most likely targets of social rebuff/dislike from peers. This subgroup also reported the highest levels of depression. Rejected-*nonaggressive* subjects, on the other hand, engaged in the lowest rates of social initiation attempts, received the fewest initiation attempts from peers, and engaged in the shortest periods of sustained interaction. In addition, Hodgens and McCoy found that rejected-nonaggressive children appeared to display a social behavior pattern similar to, but more pronounced than, that displayed by neglected children (e.g. low rates of social approach behavior, unresponsiveness, high anxiety). While the two groups (i.e., the rejected-nonaggressive youngsters and the sociometrically neglected children) shared a relative lack of involvement in ongoing group activity, the rejected-nonaggressive subjects exhibited a more serious deficit in relating to peers than did the neglected children. The rejected-nonaggressive youngsters described by Hodgens and McCoy (1989) may be from the population of older (i.e., middle childhood) withdrawn, socially anxious youngsters that Hymel and Rubin (1985) suggested might be a socially "at risk" group.

Self-perception and Peer Social Status

Until recently, relatively little has been known about the self-perceptions associated with problematic peer relations. Contemporary investigators (Boivin & Begin, 1989; Connolly, White, Stevens & Burstein, 1987; Hymel & Franke, 1985; Peretti & McNair, 1987), however, present research which suggests that children who engage in high rates of solitary activity because of peer relationship difficulties tend to display an overall negative

pattern of self-perceptions, including low perceived social competence, low self-efficacy, and low expectations for social outcomes and peer evaluations.

Peretti and McNair (1987) found that sociometric isolates perceived their peer interactions to be superficial, and expressed self-deprecation, low self-assertiveness, fears of social rejection, and feelings of emotional blandness, depression, suspiciousness and social withdrawal. Conversely, children rated as socially active and competent by their peers, reported a generally high degree of social self-efficacy and self-esteem (Boivin & Begin, 1989; Connolly, et al., 1987; Rogosch & Newcomb, 1989). Rogosch and Newcomb (1989) concluded that, in general, children rated low in terms of peer acceptance tend to perceive themselves as more vulnerable in social relationships than do more popular children.

Poorly accepted children, however, do not necessarily constitute a homogeneous group in terms of self-perception. Boivin and Begin (1989), for example, found that not all unpopular children display negative self-perceptions. About one half of the poorly accepted children in their study reported a diminished self-concept in each of Harter's (1982, 1983) competence domains (i.e., social acceptance, academic competence, athletic competence, physical appearance), and indicated low self-esteem. The other half of the unpopular population studied by Boivin and Begin (1989) viewed themselves in a highly positive light; their self-perceptions paralleled those of both the average and popular status children. Boivin and Begin (1989) suggest that withdrawn children tend to underestimate their own social competence, whereas aggressive children display distorted social perceptions in which they describe themselves as much more highly liked and socially competent than their peers indicate. The authors speculate that perhaps anxious/withdrawn children, who receive low peer acceptance scores, internalize their lack of popularity and thereby develop, exacerbate, and/or maintain negative self-perceptions, whereas aggressive disliked children report rather positive but distorted views of themselves and attribute their

peer relationship difficulties to external sources. Whether this externalization is a willful refusal to admit lower social competence in order to bolster against loss of self-esteem or is an unconscious distortion is yet unclear.

The importance of considering children's self-perceptions of social competence is further demonstrated in studies by Ledingham and Younger (1985) and Schneider, Ledingham, Poirier, Oliver and Byrne (1984). In line with the findings of Boivin and Begin (1989) and Rubin, Hymel, Lemare and Rowden, (1989) results of these two investigations indicate that a child may not necessarily perceive his/her relationship with classmates in the same way as do outside observers (peers, parents, teachers, etc.). These findings are further corroborated by Lochman (1987) who found that, in comparison to nonaggressive boys, boys rated as aggressive and disliked by their peers routinely understated their own aggressiveness and perceived their peer partners as more aggressive than they themselves were. Hymel and Franke (1985) lend additional support to this proposition with their research findings. They suggest that all sociometrically isolated children do not necessarily perceive their social relations similarly. The isolation experienced by an unpopular but peer-oriented youngster, for example, may bear much greater impact on that child than would that isolation when experienced by an unpopular but non-peer-oriented child.

Reviewing the research in in this area, Rubin et al. (1989) and Strauss (1988) conclude that some socially rejected children are at risk for externalizing-type problems, while others are at risk for internalizing-type problems. Additional research is required, however, to better articulate the relationship that seems to exist between behavioral style, sociometric status, and self perception.

Social Skills Intervention Strategies

The ever stronger evidence that poor peer relations are predictive of significant adjustment problems in later life has led many investigators to seek to improve the peer relations of unpopular children through direct instruction in social skills (e.g., Asher & Renshaw, 1981; Cartledge & Milburn, 1986; Foster, DeLawyer & Guevremont, 1985; Gresham & Nagle, 1980; Guevremont, MacMillan, Shawchuck & Hansen, 1989; Ladd, 1985; Ladd & Asher, 1985; Ladd & Mize, 1983; LaGreca & Santogrossi, 1980; Mize & Ladd, 1990; Rao, Moely & Lockman, 1987; Schneider & Byrne, 1987; Tisdelle & St.Lawrence, 1988). This has prompted the development of numerous intervention strategies, or social skills training curricula, designed with the ultimate goal of promoting positive peer interactions and of facilitating peer acceptance among disliked children (e.g., Camp & Bash, 1981; Hazel, Schumaker, Sherman, Sheldon-Wildgen, 1984; McGinnis & Goldstein, 1984; Michelson, Sugai, Wood & Kazdin, 1983; Schneider & Byrne, 1987; Walker, McConnell, Holmes, Todis, Walker & Golden, 1983).

The majority of these intervention strategies are based on a deficit theory (e.g., Gresham, 1986; Ladd, 1985) and take the form of teaching children specific social skills (e.g. Ladd & Asher, 1985; Ladd & Mize, 1983). This follows from documentation that poorly accepted children are typically deficient in some critical aspect of adaptive behavior and/or social skill (e.g. Asher, 1983; Asher & Parker, 1989; Bierman & Furman, 1984; Coie & Kupersmidt, 1983; Dodge, 1983; Dodge, Coie & Brakke, 1982; Ladd, 1985; Parker & Asher, 1987; Peery, 1979; Roff, 1986; Rubin, Hymel, Lemare & Rowden, 1989; Schneider, 1989; Singleton & Asher, 1977). Research supports this deficit hypothesis. As reviewed above, poorly accepted youngsters display distinctive and maladaptive patterns of behavior. Because these behaviors appear to predict poor social status outcome, and because they are displayed in place of behaviors used by more socially

successful children, socially unskilled youngsters are considered deficient. They appear to lack either the requisite knowledge of how to interact successfully with their peers, or the necessary internal control mechanism to counter the negative effects of competing emotional or cognitive states (such as anxiety, impulsivity) that impede successful social performance.

The remedial programs developed by investigators to teach social skills have taken many different forms (e.g., Coie, 1985; Hansen, Watson-Perczel, Christopher, 1989; Schneider, 1988; Schneider, 1989; Schneider & Byrne, 1985), and have met with varying degrees of success (Asher, 1985; Bierman, 1986; Coie, 1985; Ladd & Asher, 1985; Schneider, 1988; Schneider & Byrne, 1985). Pellegrini and Urbain (1985) identify the four social skill training approaches most frequently adopted with children. These include: contingency management strategies which teach children new ways of behaving by reinforcing desirable behaviors and ignoring undesirable ones; modeling strategies which teach skills by demonstrating competent performance in particular social situations; coaching strategies which assume that cognitions mediate social behavior and thus focuses on cognitive content; and interpersonal cognitive problem solving (ICPS) approaches which place explicit theoretical emphasis on training covert thinking processes (such as, identifying problems, generating alternative solutions, etc.). VanHasselt, Griest, Kazdin, Esveldt-Dawson, and Unis (1984) speculate that while a variety of specific strategies have been used in efforts to improve the social skills of unpopular children, the most common approach seems to be a combination of techniques. More specifically, they cite a procedure which combines modeling, behavior rehearsal, and performance feedback.

Despite the recent surge of interest in the application of social skills training (SST) techniques to children who lack peer acceptance, inspection of the research literature reveals conflicting evidence concerning the benefits of SST with such children. Positive gains in sociometric status following SST have been reported in some studies (e.g., Bierman, 1986;

Knapczyk, 1988; Ladd, 1981; Oden & Asher, 1977), but others have failed to find such positive results (e.g., LaGreca & Santogrossi, 1980). Furthermore, improvements in sociometric status have not always been matched with improvements in the behavioral skills trained (Oden & Asher, 1977). In their review of the social skills training literature, Pellegrini and Urbain (1985) found that newly acquired behaviors were not consistently correlated with greater peer acceptance. These authors concluded that while modeling and coaching approaches appear promising, the frequent failure of training effects to generalize across behaviors, settings, and time presents a recurrent problem.

Tiffen and Spence (1986) comment that the methodological adequacy of much of the SST research has often been weak (for example, small sample sizes, inadequate follow-up, absence of attention-placebo conditions, etc.). Such inadequacies limit the conclusions that can be drawn from the research. Gresham and Nagle (1980) are among those who would suggest that the variability in training outcome is largely a consequence of treatment method (for example, coaching versus modeling). However, while technique is undoubtedly an important factor, Pellegrini and Urbain (1985) have found that regardless of the approach implemented, results of social skills intervention programs have often been disappointing in that newly acquired behaviors were not effectively generalized to elicit greater peer acceptance.

The variability in demonstrated degrees of success is perhaps better accounted for by the contention that friendless children constitute a heterogeneous rather than a homogeneous population (e.g., Hymel & Rubin, 1985; Schneider & Byrne, 1987; Tiffen & Spence, 1986). Labels such as "low peer acceptance", "unpopular", "friendless" describe social status within the peer group; these categories of children are typically identified using roster and rating methods. As Tiffen and Spence (1986) argue, however, these selection techniques result in the amalgamation of different types of socially unpopular children (for example, rejected and neglected youngsters, aggressive-disruptive

and sensitive-isolated types, etc.). If the case can be made that different types of socially rejected children differ from one another in terms of their social skill abilities and their social skill disabilities, then those studies which have selected children for social skills training only on the basis of low peer acceptance, without differentiating between types or categories of social rejection, have included a confounding factor. Tiffen and Spence (1986) speculate that if two groups of socially rejected children respond differentially to SST, this may account for the failure to find consistently beneficial results in previous studies. In short, the degree of success or failure of existing skill training programs may best be expressed as a function of the suitability of the match between the skill package content and the trainee deficit.

A second major but related limitation of existing social skills training programs might well be the rather arbitrary selection of target skills. That professionals need to establish paradigms for the selection of optimal target skills (Schneider & Byrne, 1987) is a cogent observation. Just as there appear to be multiple pathways for the development of social difficulties (Hymel & Franke, 1985), it also seems reasonable to conclude that multiple pathways must be found to alleviate these difficulties. To achieve greater SST success, the heterogeneity of the population of low social status children must be taken into account in both the development and implementation of intervention procedures.

Finally, in their review of social skills training research, Mize and Ladd (1990) suggest that the majority of studies that have failed to demonstrate increases in identified behavioral skills following social skills training are those in which the investigators used only sociometric criteria to select subjects. Mize and Ladd propose that in order to evaluate effectively the impact of SST on a targeted behavior, the selection criteria for SST subjects must include a behavioral component in conjunction with sociometric status.

Existing Social Skills Training Research

The use of skill training procedures as a means of influencing the course of children's social interactions and peer relationships is a relatively recent undertaking. While it has not been unequivocally established that these interventions are successful in improving the social outcomes for the children, the number and variety of social skills training programs that have emerged, and the amount of research attention paid to measuring the effectiveness of social skills intervention techniques, attest to the appeal of this approach. In addition, despite conflicting results and methodological problems in existing SST research, there is empirical evidence that demonstrates the positive impact of at least some social skills training programs.

The purpose of this section is to provide a quantitative summary of the results of existing research investigating the effectiveness of social skills training as it applies to aggressive and to withdrawn children. The 24 studies reviewed in the following pages are drawn from a larger pool of 74 studies each investigating the effects of planned intervention procedures specifically designed to enhance children's social behavior. The set of studies from which this sample was chosen had been selected via a standard literature search, and previously used in a meta-analysis (Schneider, 1988). The original data base, however, included studies incorporating children from a number of different social status categories (for example, normal, aggressive, withdrawn, neglected, rejected, learning disabled, etc.). The current analysis includes only studies that involved children specifically described as either aggressive or withdrawn. These are the populations most relevant to the present research. Table 1 summarizes the 24 studies.

Meta-analyses yield various summary statistics which describe the collective results of a series of studies. Despite the growing awareness of the importance of estimating effect

Table 1

Social Skills Training Studies with Aggressive and Withdrawn Children

Author and Year	N	Mean Age	Outcome Measure	# of Sessions	r	BESD
STUDIES WITH AGGRESSIVE CHILDREN:						
Bierman et al., 1987	32	7.7 yrs	Aggression/Self-control	10	.32	.34 to .66
Kazdin et al., 1987	56	10.9 yrs	Aggression/Self-control	20	.28	.36 to .64
Schneider et al., 1987	35	10 yrs	Aggression/Self-control	18	.28	.36 to .64
Koenigs et al., 1985	43	4.11 yrs	Empathy/Role-taking	20	.48	.26 to .74
Coie & Krehbiel, 1984	40	4 th grade	Social interaction	12	.24	.38 to .62
Tellado, 1984	66	11 to 16 yrs	Problem-solving	30	.24	.38 to .62
Vaughn et al., 1984	24	5.4 yrs	Problem-solving	50	.61	.19 to .80
Spence et al., 1980	44	10 to 16 yrs	Aggression/Self-control	12	.11	.44 to .56
Ollendick et al., 1979	27	14.3 yrs	Aggression/Self-control	10	.53	.23 to .76
Camp et al., 1977	22	6 to 8 yrs	Aggression/Self-control	30	.38	.31 to .69
Turkewitz et al., 1975	16	10 yrs	Aggression/Self-control	72	.22	.39 to .61
Chandler et al., 1974	48	11 yrs	Empathy/Role-taking	10	.38	.31 to .69
Pitkanen, 1974	36	8.4 yrs	Aggression/Self-control	8	.30	.35 to .65
STUDIES WITH WITHDRAWN CHILDREN:						
Rao et al., 1987	16	4.8 yrs	Social interaction	2	.46	.27 to .73
Csapo, 1983	30	3rd grade	Social interaction	10	.60	.20 to .80
Edelson et al., 1982	39	10.4 yrs	Social interaction	6	.14	.43 to .57
Edelson et al., 1982	42	10.2 yrs	Social interaction	8	.14	.43 to .57
Evers-Pasquale, 1978	36	4.5 yrs	Social interaction	1	.92	.04 to .96
Gottman, 1977	32	preschool	Social interaction	1	.52	.24 to .76
Jakibchuk et al., 1976	22	3.10 yrs	Social interaction	4	.42	.29 to .71
Evers-Pasquale et al., 1975	16	4.4 yrs	Social interaction	1	.87	.06 to .93
Keller et al., 1974	19	3 to 5 yrs	Social interaction	20	.40	.30 to .70
O'Connor, 1972	31	preschool	Social interaction	10	.46	.27 to .73
O'Connor, 1969	13	preschool	Social interaction	1	.58	.21 to .79

NOTE: BESD = Binomial Effect Size Display. Complete references are provided in Appendix A.

sizes, the "real world" meaning of even the most common effect size estimators (e.g. r^2 , ω^2 , etc.) is often obscure. To more practically address the question "what is the effect of a given intervention on the success rate demonstrated in a study?", Rosenthal and Rubin (1979, 1982) introduced a general purpose technique which provides a more intuitive interpretation of calculated effect sizes. Their procedure, the binomial effect size display (BESD), shows the change in success rate attributable to the intervention in question. It has been shown to work well for both dichotomous and continuous outcomes. Rosenthal (1987) shows that the difference in success rates displayed by the BESD is identical to r . The experimental group success rate in the BESD, then, is simply computed as $.50 + r/2$; the control group success rate is computed as $.50 - r/2$. As an example, the BESD corresponding to an r of .25 shows that this effect size is equivalent to increasing the success rate from 38 percent to 63 percent. Rosenthal (1987) makes the point that even a very small r such as .25 which accounts for only 6 percent of variance, may have "real world" significance as it may be associated with an increase in success rate that might be highly significant or relevant in an applied sense.

The BESDs corresponding to the r values calculated for each of the 24 studies used in this analysis demonstrate hypothetical success rate increases, on a number of variables, that support the use of social skills training to enhance the social outcome for aggressive and withdrawn youngsters. Inspection of the studies identified four variables on which a quantitative analysis, that seemed useful for both researchers and practitioners, could be made. These included: diagnostic category, age of subjects, outcome measure (e.g., decrease in aggression, increase in social interaction, increased problem solving skill, etc.), and duration of treatment (number of sessions). Group means are presented in Table 2.

Diagnostic Category (Aggressive versus Withdrawn)

Overall, the results of past research suggest that social skills training has a higher success rate with withdrawn than with aggressive children. In the 24-study sample

Table 2

Mean Effect Sizes and Success Rate Increases (BESDs) by Variable

Variable	N	r	BESD
Diagnostic Category			
Aggressive	13	.34	.33 to .67
Withdrawn	11	.50	.25 to .75
Age of Subjects			
< 5 years	9	.57	.22 to .79
5-9 years	6	.41	.30 to .71
10+ years	9	.26	.37 to .63
Outcome Measure			
Aggression/self-control	8	.30	.35 to .65
Social interaction	12	.48	.26 to .74
Empathy/role-taking	2	.43	.29 to .72
Problem-solving	2	.43	.29 to .72
Number of Sessions			
1 to 8	9	.48	.26 to .74
9 to 16	7	.38	.31 to .69
17 to 24	4	.36	.32 to .68
25+	4	.36	.32 to .68
Diagnostic Category Considered by Age of Subjects			
Aggressive <5 years	1	.48	.26 to .74
Aggressive 5-9 years	5	.37	.32 to .69
Aggressive 10+ years	7	.29	.36 to .65
Withdrawn <5 years	8	.58	.21 to .79
Withdrawn 5-9 years	1	.60	.20 to .30
Withdrawn 10+ years	2	.14	.43 to .57
Diagnostic Category Considered with Outcome Measure			
Aggressive — Aggression/self-control	8	.30	.35 to .65
Aggressive — Social interaction	1	.24	.38 to .62
Aggressive — Problem-solving	2	.43	.29 to .72
Aggressive — Empathy/role-taking	2	.43	.29 to .72
Withdrawn — Social interaction	11	.50	.25 to .75
Diagnostic Category Considered with Number of Sessions			
Aggressive — 1 to 8 sessions	1	.30	.35 to .65
Aggressive — 9 to 16 sessions	5	.32	.34 to .66
Aggressive — 17 to 24 sessions	3	.35	.33 to .68
Aggressive — 25+ sessions	4	.36	.32 to .68
Withdrawn — 1 to 8 sessions	8	.51	.25 to .76
Withdrawn — 9 to 16 sessions	2	.53	.24 to .77
Withdrawn — 17 to 24 sessions	1	.40	.30 to .70

NOTE: BESD = Binomial Effect Size Display.

reviewed here, the estimated mean effect size, r , for withdrawn children was found to be .50 ($n = 11$). For the aggressive children it was found to be .34 ($n = 13$). The corresponding mean BESDs ranged from .25 to .75, and from .33 to .67, respectively. Thus, while social skills training appears to be an effective treatment for both groups, the success rate increase has been notably higher with withdrawn youngsters than with aggressive children.

Age of Subjects

The population of children used in social skills intervention research can be categorized in terms of age blocks (<5 years, 5-9 years, 10-14+ years). An overview of SST research shows that studies involving withdrawn children have tended to use youngsters from the <5 years age block, whereas studies investigating the effects of social skills training with aggressive children have tended to use older youngsters. These age differences may account, at least partially, for the pattern of results noted between the effectiveness of SST with withdrawn versus aggressive children.

More specifically, examination of the effect of SST with different age groups shows that the under-five group ($n=9$) has the largest mean ES ($r=.57$), with a corresponding mean BESD (success rate increase) from .22 to .79. The middle ($n=6$) and oldest ($n=9$) age blocks reported mean ESs of $r=.41$ and $r=.26$, respectively, with corresponding mean BESDs of .30 to .71, and .37 to .63. These age group differences in success rate increase become more meaningful when examined in context of diagnostic criteria. Of the nine studies using the under-five age group, eight used withdrawn subjects. The mean ES for the this group was $r=.58$ (with a mean success rate increase from .21 to .79). The single study with under-five-year-old aggressive children reported a mean ES of $r=.48$ with a mean BESD of .26 to .74. Conversely, the two studies with older withdrawn children (10-14+ years), reported the lowest mean ES ($r=.14$), with a corresponding mean success rate increase of only .43 to .57. Aggressive children from the middle and oldest

age blocks tended to benefit more from SST than did the older withdrawn children, but less well than the younger children from either group. Aggressive children in the 5-9 years age group ($n=5$) demonstrated a mean ES of $r=.37$ (with a corresponding mean BESD of .32 to .69). Aggressive children in the 10-14+ years age group ($n=7$) demonstrated a mean ES of $r=.29$ (with a corresponding mean success rate increase of .36 to .65). Thus, while the overall results of past SST research suggest that withdrawn children have benefited more from treatment than have aggressive children, the difference in benefit may be as much a reflection of the age of participants as it is of diagnosis, since most of the studies which document the marked impact of SST with withdrawn subjects have been conducted with young children, especially preschoolers (Schneider, 1988).

Outcome Measure

The effects of social skills training also appear to vary as a function of the outcome variable measured. In the sample being reviewed here, four outcome variables can be distinguished: level of aggression/self-control ($n=8$), degree of social interaction ($n=12$), empathy/role-taking ability ($n=2$), and social problem solving skill ($n=2$). Between the two outcome variables most commonly used in the current sample (that is, degree of social interaction, and level of aggression/self-control), SST was more successful when the goal of treatment was to increase social interaction (mean $r=.48$, mean BESD from .26 to .74) than when it was to decrease the level of aggression (mean $r=.30$, mean BESD from .35 to .65). Degree of social interaction was the outcome variable used in all eleven studies involving a withdrawn population.

The desired outcome for the majority of studies involving aggressive children was, not surprisingly, decreased aggression and increased self-control ($n=8$). The remaining five studies involving aggressive subjects had as their treatment goals, increased social interaction ($n=1$), increased problem-solving ability ($n=2$), and increased empathy/role-taking skill ($n=2$). An interesting result, though based on the results of a single study, was

that the outcome measure with the smallest mean success rate increase (mean $r=.24$, mean BESD from .38 to .62) was social interaction with aggressive children. This lends support to the argument posited by Schneider and Byrne (1987) that certain skill targets may be irrelevant to certain types of subjects. For example, teaching aggressive children to increase their degree of social interaction, may not be highly productive unless they first learn behavioral alternatives for the behaviors that alienate peers.

Number of Sessions

In general, analyses for duration of training show shorter interventions having larger ESs. The current 24-study-sample can be analyzed in terms of four major duration blocks (1-8 sessions, $n=9$; 9-16 sessions, $n=7$; 17-24 sessions, $n=4$; and 25+ sessions, $n=4$). The mean effect size, r , for the nine studies using the shortest time block of one to eight sessions was .48 with a corresponding mean BESD of .26 to .74. The mean effect size for the seven studies using the nine to 16 session block was $r=.38$ with a corresponding mean BESD of .31 to .69. Finally, the mean effect size for the four studies using the 17-24 session block, and for the four studies using the 25+ session block was, for each group, $r=.36$ with a mean BESD of .32 to .68.

When diagnostic criteria are considered along with duration of treatment, the results shed new light. The mean ESs and equivalent mean success rate increases calculated for the aggressive subjects were highly consistent across the four major treatment duration blocks. One study with aggressive children was included in the one to eight session block, five studies fell within the nine to 16 session block, three were within the 17-24 session block, and four used 25 or more sessions. From shortest duration (1-8 sessions) to longest (25+ sessions), the reported mean ESs and mean BESDs are quite similar: $r=.30$ (.35-.65), $r=.32$ (.34-.66), $r=.35$ (.33-.68), and $r=.36$ (.32-.68). A somewhat different pattern arises when analyzing the withdrawn sample. The majority of studies (8 of 11) fell within the shortest duration block (1-8 sessions), two used nine to 16 sessions, and one

was included in the 17-24 session block. From shortest to longest duration block, the reported mean ESs and mean BESDs are as follows: $r=.51$ (.25-.76), $r=.53$ (.24-.77), and $r=.40$ (.30-.70).

Thus, while duration of intervention does not appear to impact on the overall effectiveness of SST with aggressive children, withdrawn children seem to benefit most from intervention focused on a minimal number of sessions. By way of explanation, Schneider and Byrne (1985) have speculated that participants' overall interest may decline during extended interventions. They also suggest that complexity of intervention technique could be a mediating factor, in that unlike interventions of short duration, longer interventions often incorporate multiple training procedures, some of which may be more beneficial or effective than others.

Summary of Results of Previous Studies

Taken as a whole, the results just presented emphasize that the success of SST can vary as a function of numerous factors. Foremost on the list of mediating factors are the subjects' diagnosis and age, the duration of intervention, and the outcome measure or goal of treatment. The conclusions presented above, however, remain tentative and must be interpreted with some degree of caution in that they are based on a small number of, albeit well designed, studies. Nevertheless, the importance of evaluating and revising interventions on a needs-basis seems clear. A most reasonable starting point would seem to be at the subject level. As Schneider and Byrne (1987) propose, there is no single social skill that characterizes the population of low social status children consistently or adequately enough to constitute the core of a generic type of intervention. Furthermore, research evidence indicates that the etiological determinants of inadequate social behavior amongst individuals and groups of socially rejected children appears different, perhaps indicating the need for different approaches to intervention (Asher & Parker, 1989; Rubin, Hymel, Lemare & Rowden, 1989). More consistently effective SST must, then, begin

with an assessment of the specific needs of specific SST targets, and the subsequent development of intervention programs specifically geared to address those needs.

Existing Needs-Tailored Social Skills Training Research

To date, there is little research available attesting to either the potential advantages or the disadvantages of needs-tailored social skills training programs. The heterogeneity of the subject population selected for existing research studies has often been obscured because the selection techniques typically adopted (roster and rating methods) result in the amalgamation of low social status children who are unpopular for different reasons. The failure of previous studies (e.g. LaGreca & Santogrossi, 1980) to find beneficial results from SST intervention may be a consequence of selecting subjects purely on the basis of low peer acceptance and ignoring the likelihood of a difference in skill ability. Tiffen and Spence (1986) make the very valid point that the application of SST procedures to different types of poorly accepted children may not be equally appropriate.

Cognizant of the methodological flaws in past research, Tiffen and Spence (1986) and Schneider and Byrne (1987) have developed research designs which attempt to determine the differential efficacy of SST with different populations of socially rejected youngsters. The study conducted by Tiffen and Spence (1986) involved 50 school-age children rated as low in peer acceptance. Using the conceptual model developed by Peery (1979), these children were then differentiated as being either isolated or rejected. Pretraining comparisons showed that the children in the rejected class were judged as less socially competent than the isolate group, by self-reports and teacher ratings. In addition, the rejected children received significantly more negative sociometric nominations from peers than did the isolated group. Following assessment, the 50 subjects were randomly assigned, after blocking by type of deficit, to one of three conditions (SST, attention-

placebo control, no-treatment control). Despite carefully differentiating between these two types of unpopular children on a number of criteria, all 17 subjects assigned to the SST condition were ultimately presented with the same intervention package. That is, both the rejected and neglected children were instructed in identical skills.

Upon completion, the Tiffen and Spence study failed to demonstrate any beneficial changes in social competence that could be attributed to SST. It also failed to find a differential effect for isolated versus rejected children in response to SST. Tiffen and Spence themselves speculate that the "package" approach to SST may be inadequate. The authors suggest that an individually tailored programme that is developed according to the findings of a behavioral assessment of the potential participants may prove to be of greater value.

A subsequent study by Schneider and Byrne (1987) attempted to accomplish just that, and entails the initial development of an empirically-based, individualized social skills training program. Thirty-five behavior-disordered children, ranging in age from 7 years to 13 years, were randomly assigned (after blocking by aggression and withdrawal) to one of three groups: individualized training (IT), non-individualized training (NIT), and wait list control (WLC). The individualized SST paradigm consisted of target skills grouped into four sequence clusters that would facilitate assignment of subjects. A screening procedure was developed to determine which of the four skill clusters was needed by each child. Children were trained only in those skills for which they did not meet a predetermined criterion.

Although limited by a relatively small sample size, results of the Schneider and Byrne study provide at least limited support for the individualization of social skills training. On post-training role play tests (individually administered to assess the attainment of training objectives), the IT subjects demonstrated mastery to criterion on an average of 87.5% of their behavioral training objectives. The corresponding statistic for the NIT

group was 76.8%. The WLC subjects mastered 42.3% of the objectives in the program, even though they had not received any training. The reported differences between the two treatment groups, in overall attainment of training objectives, do not indicate significantly superior skill acquisition for the IT group. The trend, however, is in that direction and subsequent observational data indicated findings that favored the IT group for cooperative interaction, although not for decreased aggression. Schneider and Byrne suggest that a replication attempt is in order before firm conclusions are drawn about the cost-benefit of individualization. They suggest that target skills could be assessed in greater detail, and that future researchers might consider continuing this work amidst a larger peer network which would allow subjects a "fresh start" once they have acquired new social skills. Schneider and Byrne suggest that a more definitive test of non-individualized SST should be included to more clearly distinguish between what should be two distinct approaches.

Social Skills Training Programs: Who is Benefiting?

Social skills training is a potentially powerful approach to preventive intervention with low social status, unpopular children (see Schneider, 1988 for a review). Nevertheless, controversy does exist regarding the ultimate value of intervention in the area of children's social skill development. This suggests that the SST treatment modality should be more closely scrutinized, and that the limits of its effectiveness, as well as the extent of its successes, be more clearly determined. The question of who is benefiting most from social skills intervention tailored toward specific skill deficits thus becomes a central issue for researchers to investigate (rejected versus neglected, for example, or, aggressive versus withdrawn, etc.). These issues form the focus of the present study.

Data from studies thus far cited clearly indicate that a wide variety of specific behaviors are associated with typical peer relation problems. This lends empirical support

to the hypotheses offered by Schneider and Byrne (1987), Tiffen and Spence (1986), and Asher (1985) that the programs most effective in bringing about improved social adjustment in low social status children will be those which are most closely tailored to the needs and deficiencies (and which build on the strengths) of the particular children to be helped. No single skill package can hope to adequately meet the diversity of needs which an undifferentiated group of unpopular children might present.

Coie (1985) suggests that for intervention purposes it is important to distinguish even among subtypes of, for example, rejected and neglected children. Before implementing a specific social skills package with a rejected or neglected group of youngsters, the specific target group for intervention must be further assessed on some of the major dimensions of competency that are related to their particular social deficit. To date, there is relatively little research investigating the impact of tailoring social skills training to address specifically the social skill deficits characteristic of different types of socially at-risk youngsters. By utilizing and describing a needs-tailored procedure, the present study attempts to provide empirical support to the current movement towards greater individualization of social skills training. While tailoring intervention programs to the needs of group members does not necessarily mean that programs must be designed one by one for each individual, it might well entail an increase in the expenditure of therapist time. Consequently, its benefits must be clearly established.

The Present Study

In summary, research has shown that as children grow older the peer group assumes an increasingly important role in the socialization process (e.g., Hartup, 1983). Early adolescence seems a period when social skill development and peer relationships acquire a new kind of importance. Lack of a supportive peer network during this

developmental stage has been found to be particularly limiting to the youngster's breadth of social experience, as well as highly predictive of later, and often more serious, social maladjustment (e.g., Parker & Asher, 1987). The current study focuses its assessment and treatment programs specifically toward the adolescent population of poorly accepted youngsters.

Further, research has shown that friendless or unpopular children are not a homogeneous group (e.g., French, 1988; Tiffen & Spence, 1986). Distinct subgroups seem identifiable; each characterized by specific behavioral tendencies, such as aggression and withdrawal (e.g., Bichard et al., 1988; Dubow & Cappas, 1988). If the population of poorly accepted youngsters can be so differentiated, that is, in terms of distinct behavioral profiles, it seems reasonable to assume that each subgroup might require substantially different social skill training if the intervention is to successfully address specific areas of deficit or social difficulty. The relative lack of attention given to the seeming heterogeneous nature of social skill difficulties, when implementing a treatment protocol, may account, at least in part, for the inconsistent results that social skill intervention programs have reported to date (e.g., Asher & Renshaw, 1981).

Following on the need to better assess the types of social skill deficits that characterize a given population of poorly accepted youngsters, it is imperative that a better understanding be gained of *who* is benefitting *in what manner* from available social skills training programs, and of the *type of deficits* that current programs are perhaps *not* adequately tapping or alleviating. By identifying a group of poorly accepted preadolescents, assessing the peer-rated behaviors and teacher-rated social skill deficits converging to differentiate these youngsters from their average and popular classmates as well as from one another (e.g., rejected-aggressive versus rejected-nonaggressive), and by then designing social skills training programs to specifically address the social deficits identified for a given group of socially rejected youngsters, the current study attempts to

answer questions regarding the significance of treatment specificity and type of social skill deficit (i.e., rejected-aggressive versus rejected-nonaggressive) in determining the overall success of social skills training.

Further, in an effort to better understand the nature and implications of peer relationship difficulties, as well as the amenability to social skills intervention of the different underlying skill deficits, research attention must also be paid to how it is that poorly-liked children view their own social competence. The role of social self-perception and attributional bias in social skill development may provide important links in the search for intervention programs and training paradigms that are more effective in assisting low social status (i.e., socially "at-risk) youngsters expand, and thus enhance the success and versatility of their social skill repertoires. To date, however, these issues have not received a particularly high research profile. The current investigation explores the relationship of social self-perception both with peer acceptance and type of social skill deficit in the hope of providing support to preliminary work conducted in the area.

In brief, the purpose of the present study was to investigate the different issues raised above. To this end, it was undertaken with four main goals in mind: corroborating conclusions drawn in recent research that socially rejected preadolescents might be either aggressive or non-aggressive, exploring the possible benefits of grouping socially rejected preadolescents according to common skill deficits and then providing intervention that has been specifically tailored to address those particular deficits, examining the function of type of social skill deficit in determining the ultimate success of social skills intervention, and investigating the relationship between social rejection and social self-perception. In an effort to meet these goals, the current study (using a non-clinical population) based its research on the following series of specific predictions and hypotheses.

(1) As aggression, in particular fighting and disruptiveness, has been cited as the most common reason given by youngsters for disliking a peer (e.g., Coie & Dodge, 1983;

Newcomb & Bukowski, 1984, etc.) it was predicted that a portion of the socially rejected preadolescents identified in the current study would likewise be described by peer raters as aggressive. However, based on research that as children approach adolescence, withdrawn behavior comes to be viewed by peers as significantly more dysfunctional than it was in early childhood (Cillessen et al., 1990; Younger & Boyko, 1987, etc.) it was further predicted that a percentage of the rejected preadolescents identified in this study would be rated by peers as withdrawn. Given that the preadolescent age group constituted the population of interest in this study, it was hypothesized that both aggressive and withdrawn youngsters would be amongst the group rated by peers as disliked. Further, the model adopted herein hypothesized that the social self-perceptions, peer ratings of likeability, peer-nominated behavioral repertoires, and teacher-rated social skill deficits of the peer-identified disliked youngsters would converge and produce two profiles, each characterizing a different sub-grouping of socially rejected youngsters (i.e., rejected-aggressive versus rejected-nonaggressive/withdrawn).

(2) Current research suggests that as children approach adolescence they adopt more highly differentiated determinants of social status which involve schemas for withdrawn as well as for aggressive behavior (Hodgens & McCoy, 1989; Younger & Boyko, 1987). Consequently, little overlap was expected between the two profiles referred to in the previous hypothesis. That is, it was predicted that the rejected-aggressive youngsters would be significantly more aggressive (in terms of peer nominations) than the rejected-nonaggressive youngsters, who, in turn, would be significantly more withdrawn (in terms of peer nominations) than the rejected-aggressive targets. Further, following on recent research suggestions that as children approach adolescence, shy/withdrawn behavior becomes more dysfunctional than in early childhood, and may actually be perceived by peers as *more* aversive than aggressive behavior (Younger & Boyko, 1987), it was predicted that the rejected-nonaggressive preadolescents (i.e., the sensitive-isolated targets)

would receive significantly *lower* likeability ratings from peers than would the rejected-aggressive preadolescents (i.e., the aggressive-disruptive targets). Finally, given past research findings (e.g., Boivin & Begin, 1989) that aggressive children tend to report distorted social perceptions in which they describe themselves as more highly liked and more socially competent than their peers indicate, while withdrawn children tend to underestimate their own competence, it was predicted that the rejected-nonaggressive subjects in the present study (i.e., the sensitive-isolated targets) would report significantly more negative social self-perceptions than their aggressive-disruptive counterparts.

(3) While the benefits of social skills training in influencing the course of children's social interactions and peer relations have not been firmly established, there is empirical evidence to demonstrate the positive impact of at least some social skills training programs. Consequently, concerning the treatment planned for the current study, it was hypothesized that social skills intervention would be superior to wait-list control and no treatment (self-selected control) in terms of increasing peer-rated likeability and social self-perception, and simultaneously decreasing the percentage of aggressive behavior nominations received from peers by the aggressive-disruptive subjects, and the percentage of shy-withdrawn behavior nominations received from peers by the sensitive-isolated subjects.

(4) Concerning treatment, it was further predicted that diagnosis-specific intervention (i.e., intervention specifically tailored to address the social skill deficits identified as most characteristic of a specific subgroup of rejected youngsters; that is, the rejected-aggressive versus the rejected-nonaggressive) would produce more positive results than would crossover intervention (i.e., intervention tailored to meet the identified social skill needs of the opposite group of rejected youngsters than to whom it was administered). More specifically, it was predicted that for both the rejected-nonaggressive preadolescents (i.e., the sensitive-isolated targets) and the rejected-aggressive youngsters (i.e., the

aggressive-disruptive targets) diagnosis-specific intervention would be more effective than crossover treatment in reducing peer-nominated aggressive and withdrawn behaviors, increasing peer-rated likeability, and enhancing social self-perception. This hypothesis follows speculation by Tiffen and Spence (1986) that the package approach to social skills training, in which generic programs that do not consider the deficits particular to individual groups of trainees are somewhat blindly administered, may be inadequate.

(5) Peer nominations are thought to be sensitive to specific friendships and negative relationships, whereas peer ratings of likeability are thought to assess the youngster's overall reputation within the peer group as a whole (e.g., Kratochwill & French, 1984; Parker & Asher, 1987). Thus, the posttreatment pathway of change predicted for this study speculates that diagnosis-specific treatment may help target youngsters develop new problem solving skills and behaviors which enable them to be seen by at least a portion of the peer population (i.e., perhaps, potential friends) as less aggressive or less withdrawn, even though they may continue to be rated as relatively disliked by the majority of classmates. Peer nominations of aggression and withdrawal are thus predicted to be more sensitive to training effects than peer ratings of likeability.

(6) Questions have also been raised in the literature as to which type of low social status child is benefitting most from social skills training (e.g., Asher, 1985; Schneider, 1989; Schneider & Byrne, 1985; Tiffen & Spence, 1986). Given, for example, that socially rejected children display a variety of skill deficits, it is possible that some skills are inherently more amenable to the positive effects of direct social skills training than others. Certainly the results of existing research, albeit conducted largely with preschool populations (refer to the subsection of the Introductory chapter entitled Existing Social Skills Research), has found the benefits of social skills training to be much stronger with withdrawn than with aggressive youngsters. Based on these previous findings, it is hypothesized that the benefits of diagnosis-specific social skills training, in terms of

improving peer-rated likeability, social self-perception, and peer-nominated aggression or social withdrawal, will be more clearly seen with the sensitive-isolated than with the aggressive-disruptive targets.

(7) Finally, if current social skill training programs are better suited to address *skill* deficits than *performance* deficits (i.e., those resulting from underlying anxiety and fear) (see Gresham, 1986) then any posttreatment benefits realized by the sensitive-isolated targets could as likely result from the simple social support of the training group and the positive attention of two adult therapists, as from the actual content of the program. If this is indeed the case, then specificity of treatment would seem less important for the sensitive-isolated than for the aggressive-disruptive targets. Accordingly, benefits following crossover intervention are predicted to be more evident (across dependent variables) with the shy-withdrawn (i.e., sensitive-isolated) than with the aggressive-disruptive subjects.

METHOD

Overview

A wait-list control paradigm was used in order to test the hypotheses rigorously without denying assistance to children identified as "at risk". The study was conducted in two phases and spanned two school years. Phase I included the screening and identification of participants, and implementation of social skills treatment. A total of 455 grade six students from the Ottawa-Carleton area participated. From this larger group, a cohort of 78 low social status, rejected youngsters was identified. This subgroup of study participants ("target children") formed the nucleus of the investigation. Their classroom peers, however, continued to participate as raters of social behaviour throughout the project. Phase II (follow-up) was conducted the following academic year at the junior high school level, with the same cohort of 78 target children. In addition, 627 classroom peer raters participated, of whom 43% were Phase I participants, while 57% had not been involved in the project prior to Phase II. Refer to Figure 1 for a diagrammatic representation of the study.

During Phase I each target child participated in ten once-weekly social skills training sessions (these are described later). There was an immediate treatment group ($n=38$), a wait-list control group ($n=40$), and a self-selected control group ($n=11$). The latter consisted of peer-identified rejected youngsters who chose not to participate in the social skills training offered to them. In addition, there were two treatment conditions. One, referred to as diagnosis-specific intervention, provided targets with social skills training designed to remediate the social deficits assessed as specific to the group of targets to whom it was being offered (i.e., an aggressive-disruptive or a sensitive-isolated group). The second treatment condition, crossover intervention, provided targets with social skills

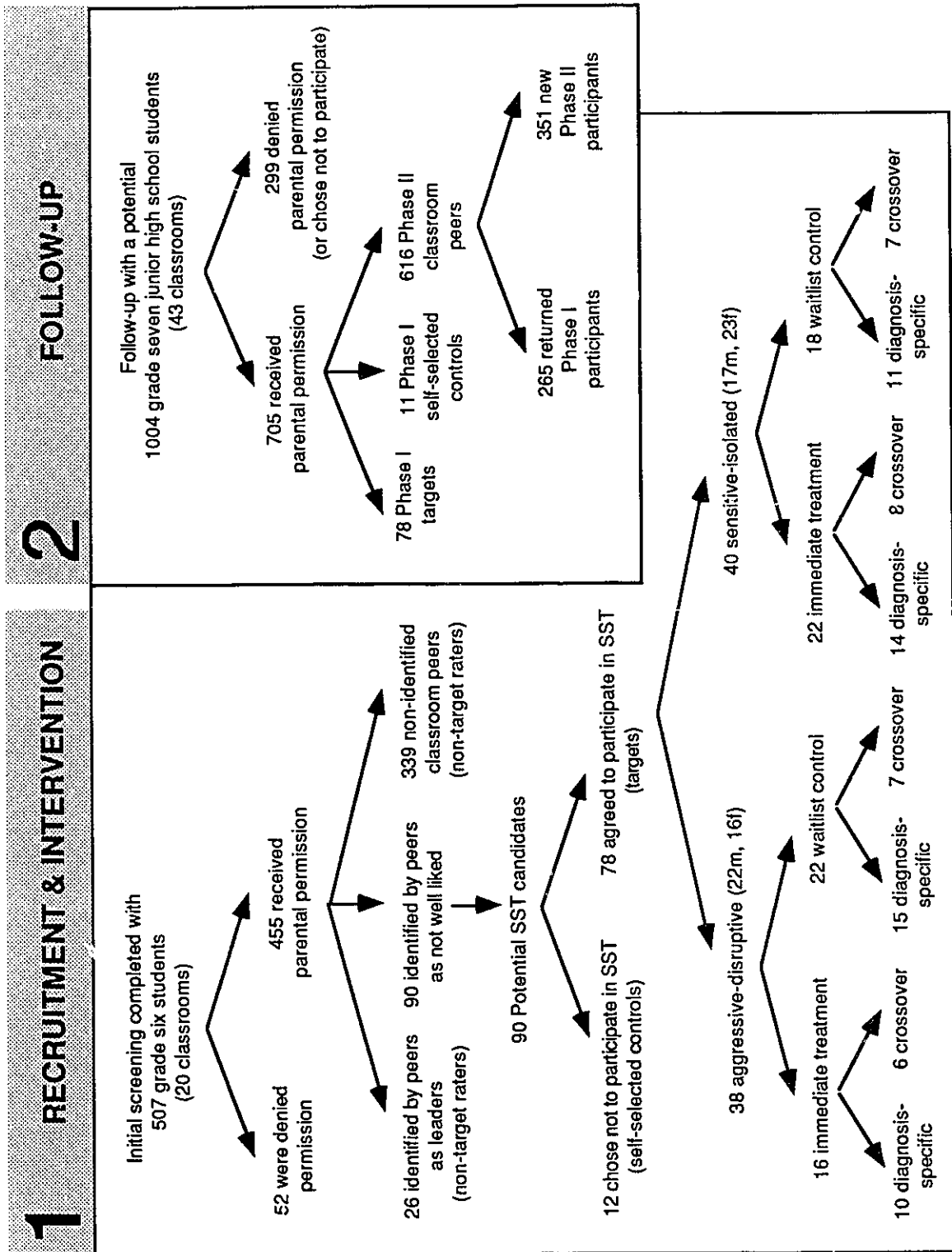


Figure 1. Diagrammatic overview of participants and procedure

training developed to address the social deficits assessed as specific to the opposite group of targets than to whom it was being offered (for example, a group of aggressive-disruptive targets was provided with the intervention developed to meet the needs of the sensitive-isolated targets). Dependent measures included, at one or more points in the study's course, teacher, peer, and self ratings of perceived social competence.

Target children were randomly assigned, after blocking by initial diagnosis (aggressive-disruptive and sensitive-isolated), to one of the two treatment conditions (diagnosis-specific or crossover), and concomitantly, to the immediate treatment category or to the wait-list control category. Thirty-eight of the 78 target children participated in the immediate treatment groups, while 40 were randomly placed in the wait-list control groups. Fifty members of the same group of 78 targets received the diagnosis-specific treatment condition (24 from the immediate treatment category, and 26 from the wait-list control category). Conversely, twenty-eight targets (14 from both the immediate treatment and the wait-list control categories) received the crossover treatment. All social skills training sessions were conducted in a small group format.

Phase II of the study involved a follow-up assessment of the social status of the target children in a new social environment (junior high school). The peer- and self-measurements of social competence used during Phase I were re-administered to the target children and their classroom peers on a single occasion during the latter portion of the grade seven school year.

Procedure and Participants

Recruitment of Participants (Grade Six/Phase I)

Target children were drawn from a population of 455 grade six students (each with parental permission to participate in the study) attending ten publicly funded Roman

Catholic elementary schools in the Ottawa-Carleton regional municipality. Participating schools were those offering kindergarten to grade six education only; those also offering grades seven and/or eight were excluded so that follow-up (which was to investigate the pattern of change in the social status of target children the following school year) could be conducted in a new school situation. Schools meeting this basic inclusion criteria, and whose principals and teachers were interested in participating in the study, provided the principal investigator with 20 individual grade six classrooms in which to administer the pre-intervention sociometric, peer rating, and self-competence measures.

A letter (see Appendix B) providing details of the purpose, procedure, and general nature of the study, along with participant requirements, was first sent home with each grade six child in the 20 participating classrooms (507 students). Children enrolled in social adjustment classes and/or programs for the mentally handicapped were excluded at the outset. It was felt that while youngsters in these two categories might well benefit from social skills intervention, their inclusion in training groups designed for children from less specialized programs would result in a target population that was not sufficiently homogeneous.

Included with each letter was a consent form (see Appendix B) asking parents to indicate in writing whether their child would be permitted to participate in the project. The parental consent form was constructed so that, at this phase of the investigation, parents were asked only to authorize participation in the peer-, teacher-, and self-ratings. Students who failed to return consent forms, and those denied parental permission to participate, were subsequently excluded from the investigation. Also excluded was one youngster known to be participating in a social skills group at another location. Together, 52 students (approximately 10% of the overall grade six population in the participating schools) were thus excluded. Four hundred and fifty-five eligible subjects (approximately 90%) received permission to participate in the initial screening.

Initial screening

The principal investigator administered the three paper-and-pencil measures described more fully in the "Measures" section (Peer Rating of Likeability Scale, Minnesota Revised Class Play, and Perceived Self Competence Scale) to each of the 455 eligible study participants. Subjects completed the paper-and-pencil inventories independently but in a group setting during the regular school day. Non-participants were typically removed from the classroom during administration of the measures (approximately one to one-and-one-quarter hours in duration). In some instances non-participating students did remain in the classroom but were engaged in independent work activities that did not appear to interfere with completion of the forms by the subjects. This initial administration of the self- and peer-ratings was used both as a screening process to identify potential social-skills training candidates, and as a baseline measure that would allow subsequent testing of pre-to-post intervention differences.

Study participants were identified as targets for intervention using two criteria. This allowed two distinctions: the child's level of acceptance ("Is the child liked?"), and the child's behavioral style ("What is the child like?") (Parker & Asher, 1987). The first criterion involved scores on a Peer Rating of Likeability Scale, (see Appendix G). Only those participants with average scores of 3.5 or less (out of a possible 7) on the likeability scale were considered as possible social skills training candidates ("targets"). The second criterion entailed examination of the nominations received by each potential target from his/her peers on the Minnesota Revised Class Play (see Appendix H). The 30 items of the Minnesota Revised Class Play (MRCP) load on three individual factors: Sociability-Leadership, Aggressive-Disruptive, and Sensitive-Isolated (Masten, Morison & Pellegrini, 1985). Potential social skills training candidates whose proportion of nominations on either the Aggressive-Disruptive, or on the Sensitive-Isolated factors was greater than their proportion of nominations on the Sociability-Leadership factor met the second level

inclusion criterion. By contrast, children with low ratings on the Peer Rating of Likeability Scale (i.e., seemingly disliked, socially rejected youngsters) whose proportion of nominations on the Sociability-Leadership factor of the MRCP was greater than their proportion of nominations on either of the remaining two factors were to be excluded, but none of the potential social skills training targets fell into this category.

Having successfully identified a group of socially rejected youngsters (targets), the next step was to determine each target's more specific social-skill diagnosis; that is, aggressive-disruptive or sensitive-isolated. A diagnosis was established by further examination of the MRCP nominations. Socially rejected youngsters who received more nominations on the Aggressive-Disruptive than on the Sensitive-Isolated factor were diagnosed as Aggressive-Disruptive. By the same token, targets who received more nominations on the Sensitive-Isolated than on the Aggressive-Disruptive factor were diagnosed as Sensitive-Isolated. Finally, those who received approximately equal percentages of peer nominations on the two factors (Aggressive-Disruptive and Sensitive-Isolated) were categorized as "controversial". It was decided that while such children would be permitted to participate in the social skills training sessions, their data would not be included in the subsequent analyses, in order to facilitate interpretation of the data. Two children fell into this category; they are not included as part of the total target count.

Study participants also completed a self-perception inventory, the Perceived Competence Scale for Children (see Appendix I). These data were collected to allow investigation of pre- to post intervention changes in the self-concept of children targeted for social skills training. However, while we were interested to see how targets compared with non-targets, the self-perception data were not used as a target selection criterion.

Target children. The recruitment and screening process identified 78 target subjects (that is, children rated by their peers as rejected, not well liked) who subsequently received parental permission and were willing to participate in the social skills training sessions.

This group was composed of 38 youngsters identified as aggressive/disruptive (22 males, 16 females), and 40 youngsters identified as socially isolated (17 males, 23 females). Target children ranged in age from 12 years, 8 months to 10 years, 2 months; the average age was 11 years, 5 months.

Self-selected controls. This group of 12 youngsters was also identified by classroom peers as not well liked. They differed from the target group in that these youngsters chose not to participate in the social skills training component of the study. The group consisted of eight males (six aggressive-disruptive, and two socially-isolated), and four females (one aggressive-disruptive, and three socially-isolated). In each case, the males decided themselves not to participate in the training sessions, despite parent and teacher encouragement to take part. In the case of the three socially-isolated females, it was the parents who denied participation at this level. On the returned consent forms they denied participation but each added a hand-written note supporting the study and explaining the reason for the denial. In each case, the parents expressed a belief that it would be "too difficult" for their shy daughters to confront their problems in a group format. Finally, in the case of the single aggressive-disruptive female, time conflicts with previous commitments prevented participation in the training sessions. Each of the twelve peer-identified youngsters just described, however, continued to participate in the other components of the investigation. As such, these individuals are used as a self-selected control group, similar on all significant variables to the other 78 socially rejected preadolescents, but lacking the social skills intervention. One of the six aggressive-disruptive males was expelled from school at the start of the seventh grade; data analysis on the self-selected control group is thus conducted on a final sample size of 11.

Leaders. The 90 children described above constitute the target and self-selected control groups only. The screening process also identified a group of 26 leaders (12 males, 14 females) rated by their sixth grade peers as highly liked and socially competent.

Leaders were participants whose average peer-rated likeability scores were 5.0 or greater (at least .5 above the mean score of all participants), and whose proportion of peer nominations on the Sociability-Leadership factor of the MRCP was greater than the proportion of nominations received on either the Aggressive-Disruptive or the Sensitive-Isolated factors. These youngsters constitute a comparison group that allowed us to state with greater confidence that children rated by peers as less well liked appeared to be rejected on the basis of behaviors (i.e., aggression or withdrawal) that consistently differentiated them from classmates rated by peers as highly liked.

Non-identified grade six classroom peers. While the social skills training component of the present study involved only the 78 target children, all grade six students with parental permission to participate completed the paper and pencil inventories used in the study (and described fully in the Measures section). In the first year of the study, then, these ratings and measures were administered to a total of 455 youngsters (78 targets, 12 self-selected controls, 26 leaders, and 339 non-identified classroom peers), on three separate occasions during the school year.

Average peers. Another group of 78 youngsters was randomly selected from the non-identified grade six study participants to serve as a comparison group against which to contrast the social skill profiles of the 78 target children. Subsequently labelled the "average peer group", these youngsters were not required to perform any special duties in course of the study. Unlike the remainder of the 339 non-identified classroom peers, however, the scores (social self-perception and peer rated likeability) of the Average Peer Group were used in a series of univariate analyses of variance in order to draw comparisons with the target group regarding initial social profiles.

In the case of both the Average Peer and the Leader groups, only self-perception data and peer ratings of likeability were coded beyond the pretreatment measurement point. The MRCP (which provides ratings of aggressiveness and social isolation/withdrawal) was

introduced as a diagnostic tool with which to identify types of socially rejected youngsters. Although ratings of aggression and social isolation/withdrawal were collected on all groups at all measurement points, only the pretreatment MRCP data were coded and analyzed in the case of the Average Peer and Leader groups. While this was necessary to statistically illustrate that the targets (and self-selected controls) constituted a distinct, socially deviant group, further coding of the MRCP scores for the Average Peer and Leader groups was beyond the scope of the current study.

Assessment of Skill Deficits

Following the screening process, each participating teacher was provided with a randomly ordered list of the children from his/her class who had been identified by classroom peers as aggressive-disruptive (and disliked), as sensitive-isolated (and disliked), or as an average peer (and liked). Teachers, who were kept blind concerning the peer rating status and nomination category of individual subjects, were subsequently asked to rate each child, on the list given them, in terms of a 60-item Teacher Checklist (McGinnis & Goldstein, 1984; see Appendix E) using a 5 point Likert rating scale. The 60 items of the Teacher Checklist load onto five factors (McGinnis & Goldstein, 1984): Classroom Survival Skills, Friendship-Making Skills, Skills for Dealing with Feelings, Skill Alternatives for Aggression, and Skills for Dealing with Stress.

The previously completed Peer Rating of Likeability scale indicated *which* children were, on average, less well liked by their peers. The MRCP nominations of these youngsters were then examined in order to determine, in general terms, *why* these children were disliked. It was found that peers consistently identified members of the disliked group as either too aggressive or too withdrawn. The purpose of the Teacher Checklist was to more clearly delineate the specific skills in which the disliked youngsters appeared deficient. The intent, then, was to use the identified skill deficits to develop diagnosis-specific social skills training programs. Teacher ratings were also intended as a means by

which to cross-validate the previous peer selections by demonstrating that the youngsters identified by peers as disliked were also consistently rated by teachers as lacking in certain social skills that differentiated them from more popular youngsters.

Completed teacher ratings were examined to identify the skills that differentiated average social status peers most consistently and significantly from aggressive-disruptive targets, those that most consistently and significantly differentiated average peers from sensitive-isolated targets, and those that most consistently differentiated between the two target groups (i.e., the Aggressive-Disruptive group and the Sensitive-Isolated group). To the degree that all sources of information yielded consistent data, it was assumed that the social skill deficits thus defined for each target group constituted highly salient features which contributed to the children's low peer status. The case could then be made that both groups (i.e., the aggressive-disruptive group and the sensitive-isolated group) required social skills training, and that each group had deficits particular to the make-up of that group, which differentiated it from the other peer-rejected group.

The "blind" teacher ratings consistently supported student selections of both the target and average peer groups. More specifically, teachers rated members of the target groups as deficient in a number of the skills listed on the Checklist, while they consistently rated members of the average peer group as proficient in those and the majority of other skill areas represented by the scale (see Appendix F). Furthermore, the skill deficits identified by teachers clearly differentiated between the two diagnostic groups of targets; that is, the ten skill deficits cited as most profound and frequent among the Aggressive-Disruptive targets were different from the ten deficits cited as most profound and frequent among the Sensitive-Isolated targets. There was virtually no overlap.

The ten skill deficits rated by teachers as most characteristic of the Sensitive-Isolated targets were subsequently used to develop a social skills curriculum aimed at meeting the specific needs of that group. Similarly, the ten skill deficits rated by teachers

as most characteristic of the Aggressive-Disruptive targets subsequently formed the core of the social skills curriculum designed to meet the specific needs of that group. Since the areas of social difficulty rated by teachers as most problematic for the sensitive-isolated targets were different from those rated as most problematic for the aggressive-disruptive targets, two distinct social skill training packages could be developed (see Appendix J for abridged versions). It should be noted that items constituting Factor 1 of the Teacher Checklist (i.e., Classroom Survival Skills) were not considered for inclusion in the skills training packages because they were seen as something peripheral to peer-related social interaction. In addition, the skill of reacting to failure/dealing with rejection was incorporated in the closing session of both the Aggressive-Disruptive and the Sensitive-Isolated packages to help children appreciate that it is unrealistic to expect every social approach with peers or every positive change in social behavior to be met with success.

The skills package designed to meet the identified needs of the Sensitive-Isolated targets focused on: Introducing Oneself/Greeting Others, Beginning Conversations, Joining In, Dealing with Fear, Rewarding Oneself, Problem Solving, Registering Complaints, Dealing with Embarrassment, Relaxing, and Dealing with Group Pressure. By contrast, the skills package designed to meet the identified needs of the Aggressive-Disruptive targets focused on: Recognizing Others' Feelings, Showing Understanding of Another's Feelings, Expressing Concern for Another, Dealing with One's Own Anger, Dealing with Another's Anger, Using Self-Control, Responding to Teasing, Staying Out of Fights, Accepting Consequences, and Answering Complaints.

Permission for Social Skills Training

A second letter and accompanying parental consent form (see Appendix C) were sent to parents of the 90 peer-identified socially rejected targets. The letter explained the social skill training procedure for which the particular child was being considered, and sought parental consent for the child's participation in the interventions. In addition, the

targets were encouraged to decide for themselves whether they would participate in the groups. Ultimately, twelve of the 90 peer-identified socially rejected preadolescents (eight boys and 4 girls) did not participate in the social skills training component of the study. The demographic characteristics of this group are detailed elsewhere.

Social skills intervention was ultimately conducted with the remaining 78 target children. Each of these youngsters remained with the investigation through its two-year course. Parents who consented to the social skills training intervention for their child were subsequently contacted by telephone with additional information regarding the time, location, and content of the training sessions. This more personal contact afforded the primary investigator the opportunity of addressing any individual questions or concerns, and may in part have accounted for the somewhat surprising lack of sample attrition.

Treatment Group Assignment

The 78 participating target children were randomly assigned (after blocking by diagnosis, i.e. Aggressive-Disruptive versus Sensitive-Isolated) either to one of the eight immediate treatment groups or to one of eight wait-list control groups. Thirty-eight target subjects (20 males and 18 females) were thus assigned to the immediate treatment groups, while forty target subjects (19 males and 21 females) were assigned to the wait-list control groups. Those targets randomly assigned to the wait-list control groups began their social skills training sessions in the latter part of the same school year (grade six), but after the immediate treatment groups had completed their ten-week course, and following the first post-treatment administration of the three peer- and self-rating measures used at pre-treatment. The training procedures and treatment packages used with the wait-list control groups were identical to those used with the immediate treatment groups. The wait-list control group was introduced to provide a means of ascertaining that any measurable pre-to-post intervention changes in a target group's social status or self-perception could indeed be attributed to the intervention.

Furthermore, to establish that any post-treatment differences between the Aggressive-Disruptive and the Sensitive-Isolated targets were attributable to the particular diagnostic group's response to treatment and/or treatment specificity rather than to other training features, a sub-group of the total number of target children received a crossover treatment package. Accordingly, 14 sensitive-isolated and 14 aggressive-disruptive targets, selected randomly, received the skill package designed for the opposite diagnostic group. That is, 14 sensitive-isolated targets received the skills package designed to meet the skill deficits of the aggressive-disruptive targets, and 14 aggressive-disruptive targets received the skills package designed to meet the skill deficits of the sensitive-isolated targets. The remaining 50 targets received the diagnosis-specific treatment package (that is, the training program designed to meet their identified needs). Anticipated sample attrition led us to use caution in terms of the number of targets randomly assigned to the crossover condition. Youngsters who received the crossover treatment were subsequently offered a second treatment period (following completion of all components of data collection) at which time the diagnosis-specific skills package was presented. Eleven of the 28 relevant children pursued the offer and participated in a second ten-week social skills training course at the end of grade seven.

Social Skills Training

Two procedure manuals were designed. One was developed to address the skill deficits identified for the aggressive-disruptive target youngsters; a second was developed to address the skill deficits identified as characteristic of the sensitive-isolated target youngsters. The manuals contained explicit directions for the treatment sessions with which they were concerned. Each presented 10 skill modules; one module per training session. This format made it possible to indicate to the co-therapists which set of modules was prescribed for each treatment group without revealing either the hypotheses under study or the type of group with which they were involved (the principal investigator, who

participated in all treatment sessions, was of course an exception in that she was not blind to the conditions). As detailed in the abridged versions of the manuals (Appendix J), the fundamental social skills training techniques adopted in the current study (problem-identification, problem-solving, self-statements, modelling, and role play) were derived from existing social skills training programs (e.g., Hazel, Schumaker, Sherman, & Sheldon-Wildgen, 1984; McGinnis & Goldstein, 1984; Michelson, Sugai, Wood & Kazdin, 1983; Walker, McConnell, Holmes, Todis, Walker & Golden, 1983).

Explicit, highly detailed manuals were developed to facilitate the standardization of treatment across groups and therapists. Each of the 160 treatment sessions (16 groups, 10 sessions per group) was audiotaped. Subsequently, ten percent of the sessions (16), selected randomly after blocking by type of intervention package (i.e., diagnosis-specific versus crossover) and type of group (i.e., aggressive-disruptive versus sensitive-isolated), were coded by four independent research assistants for compliance with the manual. They rated 93.1% of the 960 minutes of session time presented for rating as consistent with the manual (92.5% for Rater 1; 94.3% for Rater 2; 93.1% for Rater 3; and 92.5% for Rater 4; inter-rater agreement calculated for each session was 95% or greater). Sessions were also rated for therapeutic potency. The intent was to demonstrate that the two treatment packages developed for the project were similar in structure, style, and strategy even though their contents were quite different. This was done to help establish that post-treatment differences recorded on the dependent variables for the various diagnosis by treatment specificity combinations (i.e., aggressive-disruptive targets in diagnosis-specific treatment versus those in crossover treatment versus sensitive-isolated targets in diagnosis-specific treatment versus those in crossover treatment) could be attributed to characteristics of the particular diagnostic group, and to the appropriateness of the match between the target group's identified social deficits and the content of the treatment package presented, rather than to possible differences in the underlying *format* of the treatment sequences

presented. Four raters independently assessed ten percent of the sessions (16), selected randomly after blocking by treatment package (i.e., aggressive-disruptive program versus sensitive-isolated program), using a standardized rating scale of 39 items (refer to Appendix K). The treatment package designed to meet the identified needs of the aggressive-disruptive targets and that designed to meet the identified needs of the sensitive-isolated targets were found to be highly similar in terms of their overall format. While each had a distinct content in terms of the particular skills it contained, the two programs presented their skills in very similar styles, used the same strategies and techniques (for example, homework, role-play, modeling, feedback, etc.), and used those strategies and techniques in highly similar sequences with similar percentages of time allowed for similar activities. Overall, the four independent raters found the social skills training program designed to meet the needs of the aggressive-disruptive targets, and the social skills training program designed to meet the needs of the sensitive-isolated targets, to be 96.9% in agreement with each other in terms of the structure, style, and strategy that they incorporated to present their content. Inter-rater agreement calculated for each rated session was 89% or greater.

Therapists were three female doctoral students in clinical psychology (including the study's principal investigator), and four undergraduate psychology majors (two females, and two males). All therapists (group leaders) had undergone training sessions in how to conduct social skills training programs prior to their participation in the current project. Meetings between the co-therapists and principal investigator were held once weekly while the study was underway in order to ensure adherence to the training manuals, and to circumvent potential or observed problems. In addition, the principal investigator participated in all treatment sessions with the target children. The 78 youngsters slotted to receive social skills training were divided into 16 groups that were homogeneous in terms of diagnosis. That is, any one group consisted only of children of a specific diagnosis

(aggressive-disruptive or sensitive-isolated); in no case, were children of the two different diagnoses mixed. Group size ranged from three to seven youngsters, with the average group consisting of five participants (plus two adult therapists). Each session was approximately one hour in duration for a total of ten hours of direct instruction in the social skills area prescribed by the identification process outlined earlier. Sessions were held in the participating schools, during the school day, during lunch period, or immediately after school.

Games, records, and filmstrips were used to supplement didactic presentations in both treatment programs (i.e., that designed for the aggressive-disruptive targets and that designed for the sensitive-isolated targets). Extensive use was made of audiotaped vignettes, modelling displays, role plays, and audio-taped feedback. Vignettes focused primarily on how a socially successful child might cope with problematic situations, etc., but, in combination, also illustrated unsuccessful responses to social situations, and the typically negative consequences of those responses. Both the antecedents and consequences of various behavioral responses, and problem solving strategies, were modelled, discussed, role-played, and evaluated. Ten to 15 minutes of unstructured activity concluded each session. This enabled the reinforcement of newly-acquired social behaviors.

A combined token reinforcement and response-cost program was used in order to reinforce participation during the training sessions (Kendall & Wilcox, 1980; Schneider & Byrne, 1987). Each group member was given five poker chips at the start of the first session. Bonus chips (to a maximum of ten per session) could then be earned by individual youngsters for facilitating the group procedure or for using target skills during the didactic or free-play portions of the sessions. Behaviors such as volunteering for role play, sharing ideas, and reinforcing others earned bonus chips. Concomitantly, chips could be lost for behaviors including inattentiveness, arguing, and rudeness to others.

Chips were accumulated across the ten sessions and at the conclusion of the final meeting were redeemed for prizes that the children had themselves suggested in earlier sessions (for example, five-dollar movie passes, costume jewelry, etc.).

Post-treatment Outcome Measurement

Following completion of the first ten-week training session with the immediate treatment groups, the pre-intervention measures (Peer Rating of Likeability Scale, MRCP, and Self-Perception Inventory) were re-administered to the targets and participating classroom peers. The wait-list control groups began their ten-week social skills training program immediately following this second phase of data collection. Following completion of the second ten-week treatment period, the three pre-intervention measures were again administered to the targets and participating classmates, while they were still at the grade six level.

Follow-up at Phase II (Junior High School/Grade Seven)

As was noted in the introductory chapter, change in behavior is often most difficult to implement in familiar surroundings. This seems especially true for older children with well-established behavior patterns and social reputations (Cillessen & Ferguson, 1989). When relationships have past histories, peers familiar with the target child may be unable or unwilling to alter their opinions of him/her even if there are significant changes in the target child's behavior. Therefore, it is important to consider whether changes observed by training-group peers and instructors are more readily and easily generalized to social situations in unfamiliar than familiar situations. To assess this aspect of social skill training, as well as its success in producing stable/longterm change in the peer-rated social behavior and acceptance of target youngsters, and its ability to teach targets generalizable social skills, follow-up measurements were taken the academic year following the interventions, in a new social/academic environment (junior high school). This follow-up investigation constituted Phase II of the study. The pre/post-intervention measures used in

Phase I were re-administered to the targets and all participating classmates.

In Phase II of the study, targets were followed to each of five receiving junior high schools. A receiving school was defined as one which, at the entry level of grade seven, was fed by grade six students from a much larger number of elementary schools, primarily from the same school board. Although significantly larger both in physical size and in student population, the number of junior high schools belonging to the participating board (five), was greatly outnumbered by the board's total number of elementary schools (35). Because all five of the board's junior high schools participated in Phase II of the present study, target subjects could potentially be rated by a large proportion of *new* peers. It was hoped that this factor would counter the reputation effect which the literature cites as often hindering children in their efforts to implement behavioral changes effectively or successfully. The five junior high schools provided 43 individual grade seven classrooms, each containing one or more of the 78 target youngsters identified in Phase I of the study, in which to administer the follow-up sociometric, peer rating, and social self-competence measures.

Since the junior high school environment included a large number of youngsters who came from elementary schools that had not participated in Phase I of the study, written parental consent for participation was required before Phase II data collection could begin. A letter (see Appendix D) providing details of the purpose, procedure, and general nature of the study, along with participant requirements, was sent home with each grade seven child in the 43 participating junior high school classrooms (1004 students). Included with each letter was a consent form (see Appendix D) asking parents to indicate in writing whether their child would be permitted to participate in the project. As before, students who failed to return consent forms, and those denied parental permission to participate, were subsequently excluded from the investigation. All told, 299 students (approximately 30% of the overall grade seven population in the five participating junior high schools)

were excluded, leaving 705 eligible subjects. Participants in the final phase of the current project included the 78 targets identified in grade six, 11 of the self-selected controls identified in grade six, and 616 classroom peers. Fifty-seven percent of the latter group of 616 were youngsters who had not participated in the study at the grade six level. The group of 616 constituted the non-identified grade seven subjects.

Treatment Re-administration

Because targets in the crossover treatment condition received training that might be inconsistent with their needs, a second training series, providing those youngsters with diagnosis-specific treatment, was offered. This second series of training followed administration of the peer- and self-rating measures at the junior high school level (Phase II). Eleven of the 28 children from the crossover treatment condition took advantage of this offer. Three groups (two for aggressive-disruptive youngsters, and one for sensitive-isolated youngsters) were formed. Each met on a once weekly basis for ten weeks with the principal investigator and one female undergraduate psychology student. Procedures were identical to those used in the initial training series (described elsewhere). Sessions were approximately one hour in duration.

Measures

The Peer Rating of Likeability Scale. (PRLS; Rostacher, 1974; Singleton & Asher, 1977).

Used extensively in previous research (e.g., Asher, 1985; Asher & Wheeler, 1985; Ladd, 1981; Oden & Asher, 1977; Singleton & Asher, 1977) the PRLS (see Appendix G) is one of two commonly used sociometric measures of peer status. On this measure youngsters rate each of their eligible classmates on a one-to-seven scale in terms of how much they would like to be with that individual at school (a score of "one" would indicate "not at all", and a score of "seven" would indicate "very much"). As a reminder to the

youngsters of who was eligible for votes, an alphabetical roster listing all students in the class (including absentees, but excluding those for whom parental consent had not been obtained) was included with the response sheet. Completion time was approximately one-half hour. The investigators' rationale for using sociometric criteria was based on a number of considerations. First, past research has shown that sociometric acceptance scores correlate positively with rates of initiating and receiving positive interaction and correlate negatively with rates of initiating and receiving negative interaction (Greenwood, Walker, & Hops, 1977; Gresham & Nagle, 1980). Second, low sociometric status has been shown to be predictive of concurrent and future behavioral difficulties (e.g., Cartledge & Milburn, 1978, 1986; Cowen, Pederson, Babigian, Izzo & Trost, 1973; Gronlund & Anderson, 1963). Third, low sociometric status provides an indication that children have few positive peer relationships, and that they may indeed be suffering in some way from this low social status (e.g., Parker & Asher, 1987). To increase the likelihood of identifying subtle but critical pre-to-post intervention changes, the inclusion of this measure seemed warranted.

The Minnesota Revised Class Play. (MRCP; Masten, Morison & Pellegrini, 1985).

The MRCP (see Appendix H) is a peer nomination instrument on which school-aged youngsters select classmates for positive and negative roles in an imaginary class play. The revised version of the Class Play includes 15 positive roles which load on a factor of Sociability/Leadership, and 14 negative roles which load on two factors (Aggressive/Disruptive and Sensitive/Isolated). As a reminder to the study participants of who was eligible for nominations, an alphabetical roster listing all students in the class (including absentees, but excluding those for whom parental consent was not obtained) was included with the response sheet. The scale required approximately twenty to thirty minutes to complete. Each participating student was asked to choose from amongst the "eligible" list, those students who would play each role best — those students who in real

life matched one or more of the descriptive statements most closely. The inventory maintains alpha reliability coefficients of internal consistency ranging from .81 to .95, 17-month stability correlates that range from .77 to .80, and good cross-sex reliability (.78 to .86) (Masten et al., 1985).

The Perceived Competence Scale for Children. (PCSC; Harter, 1982).

The PCSC (see Appendix I) is a 28-item self-report instrument designed to measure the school-aged child's perceived competence across the cognitive, social, and physical domains; the more global trait of general self-esteem is also tapped. The youngster is first asked to choose which kind of person he/she is most like — the one described on the right or the one described on the left of the scale. Once having chosen, the youngster decides whether the description he/she has chosen is "sort of true" or "very true" for him/her. The scale took approximately fifteen to 30 minutes to complete. The sub-scales are non-overlapping, and have internal consistencies ranging from .73 to .86; test-retest reliability coefficients range from .69 to .87 (Harter, 1982, 1983). Validity data reveal congruence coefficients among different samples ranging from .67 to .84 (Harter, 1982, 1983), and correlations between teacher and student ratings ranging from .43 to .73 (Harter, 1982, 1983). While subjects in the current investigation completed the entire scale, the investigators were interested primarily in the Social factor; data analysis considers only this aspect of the children's self competence measure.

The Teacher Skill Checklist. (TSC; McGinnis & Goldstein, 1984).

The Teacher Skill Checklist (see Appendix E) is a 60-item inventory based on a five factor structure: classroom survival skills, friendship making skills, skills for dealing with feelings, skill alternatives to aggression, and skills for dealing with stress. It was used to identify specific skill deficiencies in the target children. The checklist requires that teachers respond to descriptions of various skills in terms of the frequency of a particular student's use of the skill. In the case of the present study the particular students of interest were

those nominated by class peers as "aggressive-disruptive", or "sensitive-isolated", and a randomly selected group of peer-identified "average" classmates. In providing an opportunity for the teacher to identify situations in which use of a specific skill is especially problematic, the student's skill behaviors can be rated and summarized. This yields a numerical proficiency value for each skill and helps pinpoint the particular situations associated with difficulty in skill use (McGinnis & Goldstein, 1984). Internal consistency reliabilities range from .87 to .93; inter-rater reliability figures are equally strong ranging from .90 to .95 (McGinnis & Goldstein, 1984). The scale required approximately 20 minutes to complete per child.

RESULTS

Overview of Statistical Analysis

Statistical analyses were completed using the SAS System for data analysis. Preliminary analyses were implemented to statistically illustrate group differences between youngsters identified for treatment and those not identified (in terms of the four dependent variables of interest in the study). To accomplish this task, a series of one-way analyses of variance were conducted. Presentation of those results is followed by a second set of ANOVAs implemented to statistically demonstrate differences between the two diagnoses (i.e., aggressive-disruptive versus sensitive-isolated) in social self-perception, peer-rated likeability, peer-rated aggression, and peer-rated withdrawal. As target youngsters were randomly assigned, after blocking by diagnosis, to one of four treatment groups (i.e., diagnosis-specific / immediate treatment versus diagnosis-specific / waitlist control versus crossover / immediate treatment versus crossover / waitlist control) a final pretreatment analysis (ANOVA) was conducted to demonstrate the absence of significant pretreatment differences between same-diagnosis treatment groups.

A mixed within/between repeated measures profile analytic design was applied to test the posttreatment outcome data. Two models were invoked: a three-way (diagnosis by treatment specificity by treatment phase) analysis, whose results are presented in Appendix M, and a two-way (diagnosis by treatment specificity) analysis which is reported in the main body of the dissertation. Explanations of the two models and why they were invoked are presented in considerable detail later in this chapter. The initial posttreatment analysis, however, which involved a series of ANOVAs and *t*-test difference scores, was implemented to demonstrate differences that would hopefully exist between targets from the immediate treatment phase (who at the time of this particular analysis had undergone social

skills treatment), and targets from the waitlist control treatment phase (who at the time of the analysis had NOT yet undergone intervention). It was anticipated that the data involved in this initial posttreatment analysis would show the immediate treatment phase targets to have improved in terms of the four dependent variables, while the waitlist treatment phase targets would report scores that would not be significantly different from those reported for the group at pretreatment. As this was in fact illustrated, the case was made that the waitlist control group had served its purpose, and that the immediate treatment and waitlist treatment groups could be collapsed to produce the two-way model referred to above. Subsequent analyses presented in the body of the dissertation are based on this collapsed model. Particulars of the collapsing process are presented in considerable detail later in this chapter.

To study the patterns of change recorded on each of the dependent variables across the course of the study by diagnosis and treatment specificity, the repeated measures profile analysis referred to earlier was implemented. In turn, each dependent variable was examined using the three sub-tests that comprise a profile analysis: flatness, parallelism, and levels. Descriptions of these procedures and what each test measures are provided as they are discussed below. Significant main and interaction effects revealed by the flatness, parallelism, and levels tests were explored further with follow-up ANOVAs and Tukey tests; follow-up results are discussed immediately after presentation of the main and/or interaction effects for a given test — flatness, parallelism, levels — by dependent variable. The overall pattern of change recorded for each dependent variable, between pretreatment and follow-up, by each diagnosis and treatment specificity combination was then examined using a series of *t*-tests (to investigate between-time change or difference scores). Results of these analyses are presented by dependent variable immediately following presentation of the repeated measures profile analyses and follow-up data. Data from the overall pattern of change are presented in three sections for each variable: changes by diagnosis, changes

by treatment specificity, and changes by diagnosis and treatment specificity combinations. Thus, the complete analysis conducted on each of the dependent variables provides information concerning degree of change as well as patterns of change. As such, the analyses illustrate differences between and within diagnostic and treatment specificity combinations at individual measurement points as well as the profiles of change which they demonstrated across time.

While major analyses were conducted with target subjects collapsed across sex, findings are separated on that variable in a subsidiary analysis. The results are presented in Appendix N. In addition, although a repeated measures profile analysis was chosen as the primary statistical procedure in this investigation, a single MANOVA was subsequently completed to investigate the correlation between the dependent variables. Results pertaining to that subsidiary analysis are reported in Appendix O. Finally, Appendix L presents the results of a power analysis that was conducted to test the validity of the sample size used, and Appendix P presents a discussion and evaluation of the basic assumptions of profile analysis as they pertain to the current investigation.

Comparisons of Treatment Targets with Peers Not Selected for Intervention

The mean pretreatment scores of the 78 peer-identified socially rejected preadolescents (treatment targets) were compared with the mean pretreatment scores of three peer groups: randomly selected "average" classmates ($n=78$), self-selected controls (a group of 11 youngsters also rated by peers as not highly liked and subsequently diagnosed as either aggressive-disruptive or sensitive-isolated but who chose not to participate in the social skills training component of the study), and peer-identified leaders ($n=26$). These comparisons were conducted in order to establish that, in relation to average and highly

liked youngsters, the target and self-selected control groups displayed pretreatment deviance on each of the variables of interest. Means and standard deviations for all social status groups on the pretreatment dependent variables are presented in Table 3.

Between-group comparisons were conducted using a series of one-way analyses of variance. As expected, group status (targets versus self-selected controls versus "average" peers versus leaders), accounted for a significant portion of the observed variance in the dependent variables: social self-perception, $F(3, 189)=4.42, p<.0019$; peer ratings of likeability, $F(3, 189)=78.73, p<.0001$; peer ratings of aggression, $F(3, 189)=18.39, p<.0001$; and peer ratings of social isolation/withdrawal, $F(3, 189)=35.92, p<.0001$.

Significant main effects were explored further with Tukey (HSD) tests. These post hoc comparisons revealed that the target children received significantly lower scores than either the average-peer or the leader groups, both on the social self-perception measure ($M=2.663$ versus $M=2.980$ versus $M=3.247$, respectively, $p<.05$) and on peer ratings of likeability ($M=2.927$ versus $M=4.033$ versus $M=4.855$, respectively, $p<.05$). Tukey tests also revealed, not surprisingly, that compared to the average-peer and leader groups, target children received significantly higher peer nominations of aggression ($M=10.587$ versus $M=6.022$ versus $M=4.592$, respectively, $p<.05$), and significantly higher peer nominations of social isolation/withdrawal ($M=10.361$ versus $M=4.476$ versus $M=2.101$, respectively, $p<.05$). Together, these results validated the selection of a peer-identified group of socially rejected youngsters (targets) who differed significantly from non-rejected classmates (i.e., leaders and average peers) on self-ratings of social competence, and on peer ratings of likeability, aggressiveness, and social isolation/withdrawal. Compared to the leader and average peer groups, the self-selected controls were also found to have significantly lower social self-perceptions, significantly lower likeability ratings from peers, and significantly higher peer nominations on the aggression and social withdrawal measures. The three post-hoc Tukey (HSD) comparisons described above, however,

Table 3
Pretreatment Means and Standard Deviations by Social Status (uncollapsed data)

Social Status Group	N	Self-Rating		Peer Ratings	
		Social Self-Concept M SD	Likeability M SD	Aggression M SD	Social Isolation M SD
Leaders	26	3.247 0.652	4.855 0.535	4.592 2.565	2.101 2.095
Average Peers	78	2.980 0.624	4.033 0.605	6.022 2.785	4.476 3.211
Peer-identified Youngsters (Targets and Self-selected Controls Combined)					
Aggressive-Disruptives	44	2.971 0.560	3.061 0.593	19.857 12.960	3.413 5.686
Sensitive-Isolates	45	2.419 0.753	2.775 0.491	1.909 1.985	17.081 7.790
Targets Only					
Combined across diagnosis	78	2.663 0.726	2.927 0.529	10.587 14.771	10.361 10.009
Aggressive-Disruptives	38	2.977 0.546	3.099 0.518	19.613 16.926	2.987 5.575
Sensitive-Isolates	40	2.364 0.754	2.762 0.492	2.013 2.046	17.366 8.063
Self-selected Controls Only					
Combined across diagnosis	11	2.896 0.614	2.847 0.692	13.254 5.970	10.063 7.234
Aggressive-Disruptives	6	2.735 0.636	2.559 0.801	21.946 9.788	5.713 6.173
Sensitive-Isolates	5	2.857 0.647	2.881 0.529	1.085 1.252	14.806 5.140

NOTE: The social self-perception and likeability scores are absolute values, based on ratings actually received by subjects (the range of possible scores on the social self-perception variable is 1 to 4; the range of possible scores on the likeability variable is 1 to 7). The aggression and social isolation values are percentage scores representing the proportion of possible nominations received by a particular group on a given variable.

failed to reveal significant differences between the self-selected control and target groups on any of the dependent measures.

Pre-Treatment Comparisons of Diagnostic Groups

To further investigate differences between the two diagnostic categories of peer-identified socially rejected youngsters (aggressive-disruptive versus sensitive-isolated) in both the target and self-selected control groups, a series of two-way (Means of selection, i.e., target versus self-selected control) X (Diagnosis, i.e., aggressive-disruptive versus sensitive-isolated) analyses of variance (ANOVAS) were conducted. This set of analyses failed to find a significant effect for means of selection (target versus self-selected control) on any of the four dependent variables, verifying that the target and self-selected control groups were suitably matched in terms of the measures used.

The two-way Means of Selection (i.e., target versus self-selected control) by Diagnosis analysis of variance described above did, however, reveal a significant effect for type of diagnosis (aggressive-disruptive versus sensitive-isolated) on each of the four dependent variables: social self-perception, $F(1, 86)=13.81, p<.0004$; peer ratings of likeability, $F(1, 86)=5.00, p<.0279$; peer ratings of aggressiveness, $F(1, 86)=55.18, p<.0001$; and peer ratings of social isolation/withdrawal, $F(1, 86)=89.83, p<.0001$. These were explored further with Tukey (HSD) tests, reported below by dependent variable.

Social Self-Perception and Peer Ratings of Likeability

Tukey comparisons revealed that, combined across both the target and the self-selected control groups, peer-nominated aggressive-disruptive subjects displayed significantly higher self-ratings of social competence ($M=2.971$ versus $M=2.419$, respectively, $p<.05$), and significantly higher peer ratings of likeability ($M=3.061$ versus $M=2.775$,

respectively, $p < .05$) than their peer-nominated sensitive-isolated counterparts. Similar results were revealed by Tukey comparisons conducted on the target group data alone (i.e., data from the group of peer-identified socially rejected youngsters who subsequently received intervention, and excluding that of the self-selected controls). Once again, the peer-nominated aggressive-disruptive subjects were shown to display significantly higher social self-perception scores ($M=2.977$ versus $M=2.364$, $p < .05$) and significantly higher peer ratings of likeability ($M=3.099$ versus $M=2.762$, $p < .05$) than the peer-nominated sensitive-isolated targets. Thus, amongst the group of socially rejected preadolescents, those subsequently diagnosed as sensitive-isolated (in terms of their higher-than-average percentage of peer nominations on a measure of socially withdrawn behavior) appeared to feel less socially competent about themselves, and were significantly less well liked by classmates than the group of socially rejected aggressive-disruptive subjects (see Table 3).

Peer Ratings of Aggression

Tukey post hoc comparisons also revealed that, as implied by their diagnosis, the aggressive-disruptive youngsters (combined across both the target and self-selected control groups) received a significantly higher proportion of the overall number of peer nominations of aggression than did the group of sensitive-isolates ($M=19.857$ versus $M=1.909$, respectively, $p < .05$). An identical analysis applied to the target group data alone (i.e., excluding the self-selected control group) revealed similar results. In summary, these findings, as detailed in Table 3, indicate that youngsters rated by their peers as being not well liked (i.e., socially rejected), and subsequently diagnosed as aggressive-disruptive (by virtue of their higher than average percentage of peer nominations on the aggression scale of the MRCP), were seen by those peers as being significantly more aggressive in their social interactions than either their popular classmates (i.e., leaders and average peers) or the group of peer-rated socially rejected youngsters subsequently diagnosed as sensitive-isolated.

Peer Ratings of Social Isolation/Withdrawal

Finally, Tukey comparisons revealed that, combined across both the target and the self-selected control groups, the peer-nominated sensitive-isolated youngsters, as implied by their diagnosis, received a significantly higher proportion of the overall number of peer nominations of social isolation/withdrawal than the peer-nominated aggressive-disruptives ($M=17.081$ versus $M=3.413$, respectively, $p<.05$). Tukey comparisons conducted with the Target group data alone (i.e., excluding that of the self-selected controls) revealed highly similar significant results. These results (see Table 3) indicate that the group of preadolescents rated by peers as not well liked, and subsequently diagnosed as sensitive-isolated because of the high proportion of peer nominations they received on the sensitive-isolated (social withdrawal) scale of the MRCP, were regarded by peers as being significantly more socially withdrawn than either their popular classmates (i.e., leaders and average peers) or the group of peer rejected preadolescents subsequently diagnosed as aggressive-disruptive.

In brief, Tukey tests results (described above) exploring differences among the group of peer-identified socially rejected preadolescents provide supportive evidence for the hypothesis that disliked preadolescents are not necessarily of only one behavioral type; rather, both *rejected-aggressive* and *rejected non-aggressive* youngsters were identified. More specifically, the current study found that approximately fifty percent of the peer-rejected preadolescents ($n=38$) were rated by peers as highly aggressive (and concomitantly, as very low in shy withdrawn behavior), while the other fifty percent of the peer-rejected preadolescents ($n=40$) were rated by those same peers as extremely non-aggressive and instead as very shy and withdrawn. These findings, showing heterogeneity in the peer-rated behavioral style of socially rejected children, lend support to the hypothesis that socially rejected preadolescents can be informally classified according to at least two different social profiles. Moreover, when combined with findings (reported

earlier) showing the rejected-*nonaggressive* youngsters to be significantly less well-liked by their peers than the group of rejected-*aggressive* youngsters, and with findings showing the rejected-*nonaggressive* youngsters to report significantly lower self-perceptions of social competence than their rejected-*aggressive* counterparts, evidence of heterogeneity in the population of socially rejected preadolescents suggests that these youngsters are as likely to be perceived by peers as shy and withdrawn as they are to be perceived as aggressive and disruptive. Both the aggressive and the withdrawn behavioral styles, at least during early adolescence, appear to be viewed negatively by peers.

Pre-Treatment Comparisons of Treatment Phase and Treatment Specificity Groups

Target children were randomly assigned, after blocking by diagnosis, to one of two treatment phases (immediate treatment or wait-list control treatment), and one of two treatment specificity conditions (diagnosis-specific intervention or crossover intervention). Because of the randomized assignment, no significant pretreatment differences were expected between youngsters as a function of the treatment phase or treatment specificity condition to which they had been assigned. A series of three-way (Diagnosis) X (Treatment Phase) X (Treatment Specificity) analyses of variance (ANOVAS) conducted on each of the four pretreatment dependent variables supported this hypothesis. Prior to intervention, target children randomly assigned to the various treatment phase by treatment specificity combinations (i.e., diagnosis-specific immediate treatment, diagnosis-specific wait-list treatment, crossover immediate treatment, and crossover wait-list treatment) differed on the four dependent variables only as a function of diagnosis, as indicated in the previous paragraphs. No significant differences were detected on the dependent variables between groups of target children of the same diagnosis assigned randomly to different

treatment phase and/or treatment specificity groups. In other words, before treatment aggressive-disruptives resembled other aggressive-disruptives and sensitive-isolates resembled other sensitive-isolates regardless of the treatment phase by treatment specificity condition (diagnosis-specific immediate treatment versus diagnosis-specific wait-list treatment versus crossover immediate treatment versus crossover wait-list treatment) to which they had been randomly assigned. Group means and standard deviations on each dependent variable at pretreatment per treatment condition (i.e., treatment phase and treatment specificity) are presented in Table 4.

Posttreatment Data

Two issues were of primary interest in this study. The first concerned the main effects over time of treatment specificity (diagnosis-specific social skills training versus crossover training) on peer acceptance/likeability, on social behavior (aggression or withdrawal), and on social self-perception. The second focused on the main effect of diagnosis (aggressive-disruptive versus sensitive-isolated) in predicting the outcome of social skills training. Therefore, a mixed within/between repeated measures analytic design was applied to test the outcome data.

Under this repeated measures profile design two models were invoked: a three-way (Diagnosis) X (Treatment Specificity) X (Treatment Phase) model, and a two-way (Diagnosis) X (Treatment Specificity) model. The second model permitted exclusion of the independent variable Treatment Phase by collapsing the wait-list and immediate treatment groups into a single unit. By so combining the two treatment phase groups for purposes of analyses, the two-way model was able to base its calculations on treatment specificity cells (diagnosis-specific and crossover) that were approximately double in size from those used in the three-way analysis (which used the full or uncollapsed data and therefore based its

Table 4
Pretreatment Means and Standard Deviations by Treatment Specificity and Treatment Phase (uncollapsed data)

Treatment Group	N	Self-Rating		Peer Ratings					
		Social Self-Concept M SD	Social Self-Concept SD	Likeability M SD	Aggression M SD	Social Isolation M SD			
AGGRESSIVE-DISRUPTIVE TARGETS									
Immediate Treatment Phase									
Diagnosis-Specific Treatment	10	2.943	0.548	3.115	0.516	15.294	9.819	2.622	3.593
Crossover Treatment	6	3.000	0.578	3.034	0.598	24.919	11.928	2.152	2.775
Waitlist Treatment Phase									
Diagnosis-Specific Treatment	15	3.095	0.638	3.145	0.558	21.588	22.677	3.885	8.247
Crossover Treatment	7	2.755	0.257	3.037	0.464	17.004	15.056	2.301	1.924
SENSITIVE-ISOLATED TARGETS									
Immediate Treatment Phase									
Diagnosis-Specific Treatment	14	2.378	0.899	2.879	0.449	1.595	1.378	19.771	9.715
Crossover Treatment	8	2.036	0.673	2.381	0.632	2.488	2.282	14.393	7.416
Waitlist Treatment Phase									
Diagnosis-Specific Treatment	11	2.507	0.555	2.861	0.425	2.677	2.865	17.029	8.003
Crossover Treatment	7	2.490	0.841	2.811	0.353	1.260	1.073	16.482	4.556

NOTE: The social self-perception and likeability scores are absolute values, based on ratings actually received by subjects (the range of possible scores on the social self-perception variable is 1 to 4; the range of possible scores on the likeability variable is 1 to 7). The aggression and social isolation values are percentage scores representing the proportion of possible nominations received by a particular group on a given variable.

calculations on treatment specificity cell populations divided between wait-list and immediate treatment subgroups). The collapsing procedure, however, requires further explanation.

A wait-list control paradigm was implemented. Therefore, at measurement Time B of the dependent variables (see Figure 2) only one-half of the total number of target children had undergone social skills training ($n=38$). Targets randomly assigned to the wait-list control treatment phase ($n=40$) had not yet participated in the planned interventions.

If changes indicating improvement on each of the four dependent variables were observed at measurement Time B with the immediate treatment phase but not the wait-list control phase, the case could be made that the improvements were a function of the intervention, and not simply a result of the passage of time or some other extraneous variable. And, indeed, this proved to be the case. A set of post hoc paired t -tests, analyzing the Time A to Time B difference scores revealed degrees of improvement on each dependent variable for the immediate treatment phase that were not matched by the wait-list control phase (see Table 5 and Figure 3). The wait-list control phase did not demonstrate significant improvement between Time A and Time B on any of the four dependent measures. Thus, at Time B, youngsters randomly assigned to the wait-list phase reported similar self perceptions of social competence as they had at Time A and received similar peer ratings of likeability, aggressiveness, and social isolation as they had at Time A.

On the same variables the targets who had undergone treatment by measurement Time B demonstrated significant or near significant improvements. In summary, in the absence of social skills treatment, no significant change was recorded on any dependent variable for the wait-list phase between measurement Time A and measurement Time B. On the other hand the finding that the implementation of treatment between measurement Times A and B for the the immediate treatment group did result in improvements, provided

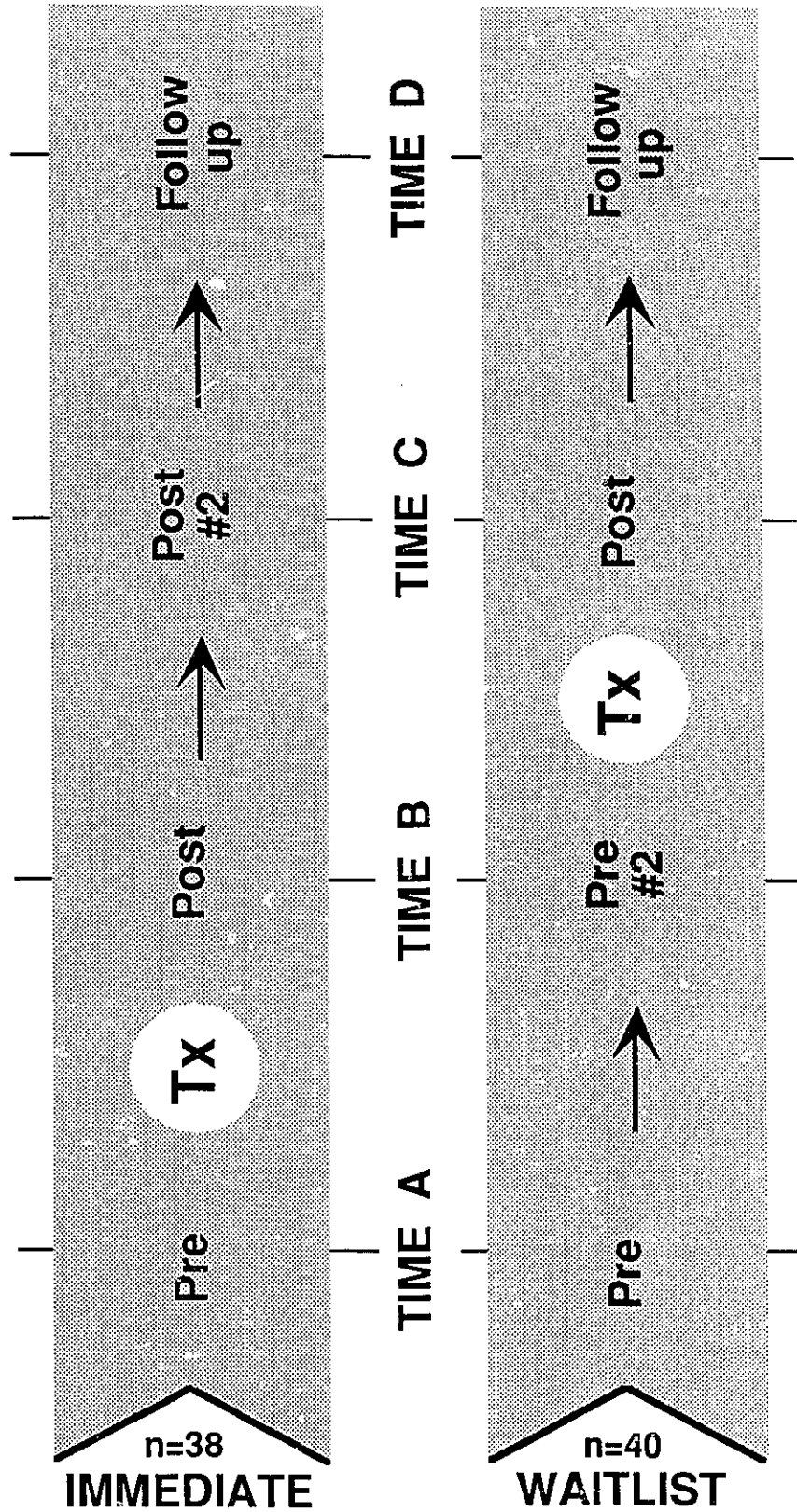


Figure 2. Measurement times for the immediate and waitlist treatment phases. 'Tx' identifies when social skills training was administered

evidence in support of the hypothesis that social skills intervention is superior to wait-list control (i.e., no treatment) in improving the peer-rated likeability of disliked preadolescents, in reducing their peer-nominations of aggressive and withdrawn behavior, and in increasing their social self-perceptions. Evidence supporting the hypothesis that social skills treatment is superior to wait-list control was strengthened with the finding that following treatment (i.e., Time C), the wait-list control targets showed improvements from pretreatment on each of the dependent variables that were similar to those demonstrated by the immediate treatment targets following their intervention (i.e., Time B).

The wait-list control group had thus fulfilled its purpose. Lack of a significant Time A to Time B change for the wait-list phase (which was anticipated given that intervention had not yet occurred with this group of targets) allowed us to collapse the wait-list and the immediate treatment phases into a single unit (Christensen, 1980; Tabachnick & Fidell, 1989). This was accomplished by redefining the pretreatment score category as being composed of those scores that immediately preceded treatment, from both the immediate and wait-list treatment phases. The redefined pretreatment scores for use in the collapsed (two-way) model were thus composed of the Time B scores of the wait-list phase, (for all dependent variables) and the Time A scores of the immediate treatment phase. Redefined posttreatment scores included those revealed immediately after treatment (that is, the Time C scores of the wait-list treatment phase, and the Time B scores of the immediate treatment phase). Follow-up scores were those revealed one year following intervention (for both phases). Figure 4 depicts the collapsing process schematically.

The three-way repeated measures model (which uses the full or uncollapsed data as illustrated in Figure 2) incorporates scores from each of four measurement times (Time A, Time B, Time C, and follow-up). By contrast, the 2-way repeated measures (collapsed) model described above incorporates scores from only three measurement times (pretreatment, posttreatment, and follow-up). In the collapsed or two-way model the Time

Table 5

Time A to Time B Difference Scores per Dependent Variable:
Immediate Treatment vs Wait-list Treatment Phases (uncollapsed data)

Dependent Variable	Immediate Treatment		Wait-list Control	
	Difference Score	Significance Level	Difference Score	Significance Level
Social self-perception	-0.4285	p<.0005	0.0714	p<.4468
Peer-rated likeability	-0.2473	p<.0163	0.1132	p<.0788
Peer-rated aggression	2.7335	p<.0760	0.4154	p<.4932
Peer-rated social isolation	2.0232	p<.0471	-1.6130	p<.0920

NOTE: Improvement is indicated by positive change scores in the case of peer-rated aggression and social isolation (i.e., lower mean scores at Time B than at Time A), and by negative change scores in the case of peer-rated likeability and social self-perception (i.e., higher scores at Time B than at Time A).

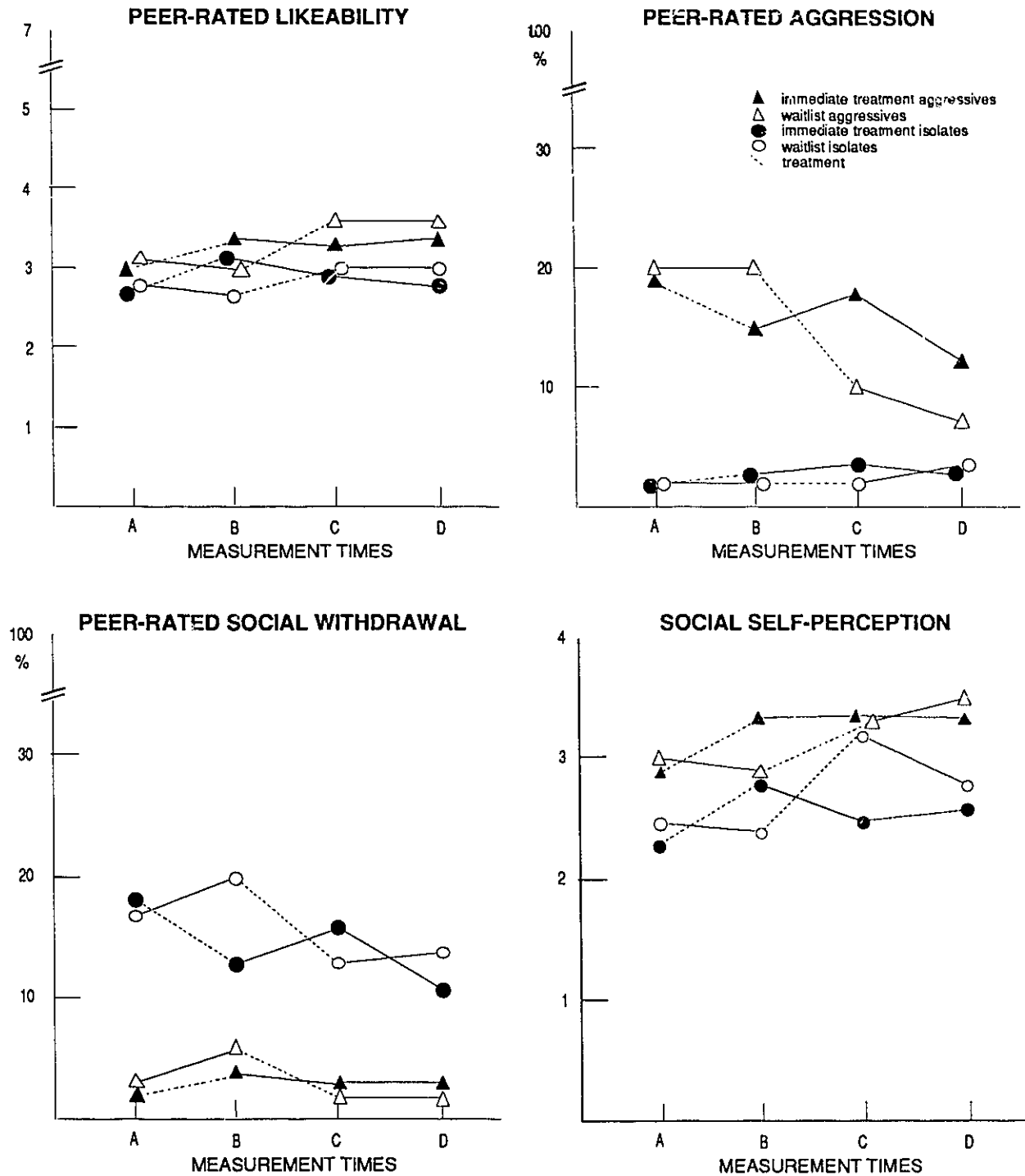


Figure 3. Patterns of change in peer-rated likeability, peer-rated aggression, peer-rated social withdrawal, and social self-perception prior to and following social skills training for the immediate and waitlist phases. Dotted lines indicate intervals during which treatment was administered. The legend applies to all graphs.

C data collected with the immediate treatment phase groups, and the Time A data from the wait-list phase groups are excluded, as illustrated in Figure 4. The collapsed follow-up category is unchanged from the uncollapsed version with both incorporating the junior high school scores. The two-way collapsed model, (Diagnosis) X (Treatment Specificity), is thus a pre-post-follow-up design. The three-way repeated measures model, (Diagnosis) X (Treatment Specificity) X (Treatment Phase) is based on a somewhat more complicated pretreatment-posttreatment#1-posttreatment#2-follow-up design.

The following section reports results from the two-way (collapsed) model. The benefit of the two-way model rests in the increased cell sizes that it is able to provide for statistical procedures. The benefit of the full three-way (uncollapsed) model, summarized in Appendix M, is its use of unmanipulated data. In addition, it permits analysis of the stability and pattern of treatment effects by providing separate analyses for each of the two treatment phases, albeit with smaller cell sizes. By so doing, it also provides data from a three-month follow-up (in addition to the one-year follow-up) for approximately one-half of the target subjects.

Profile Analysis

With time as the within-subjects independent variable, the assumption of homogeneity of covariance was very likely violated (Tabachnick & Fidell, 1989, pp. 470-472). Traditional univariate solutions compensate for a lack of homogeneity by evaluating observed F ratios more stringently against critical values adjusted by the Greenhouse-Geisser and Huynh-Feldt correction procedures which lead to a more accurate Type I error rate. To circumvent problems associated with violation of the assumption of homogeneity of covariance, however, Tabachnick and Fidell (1989, pp. 470-472) propose a statistical procedure known as profile analysis. When applied to repeated measurements of the same

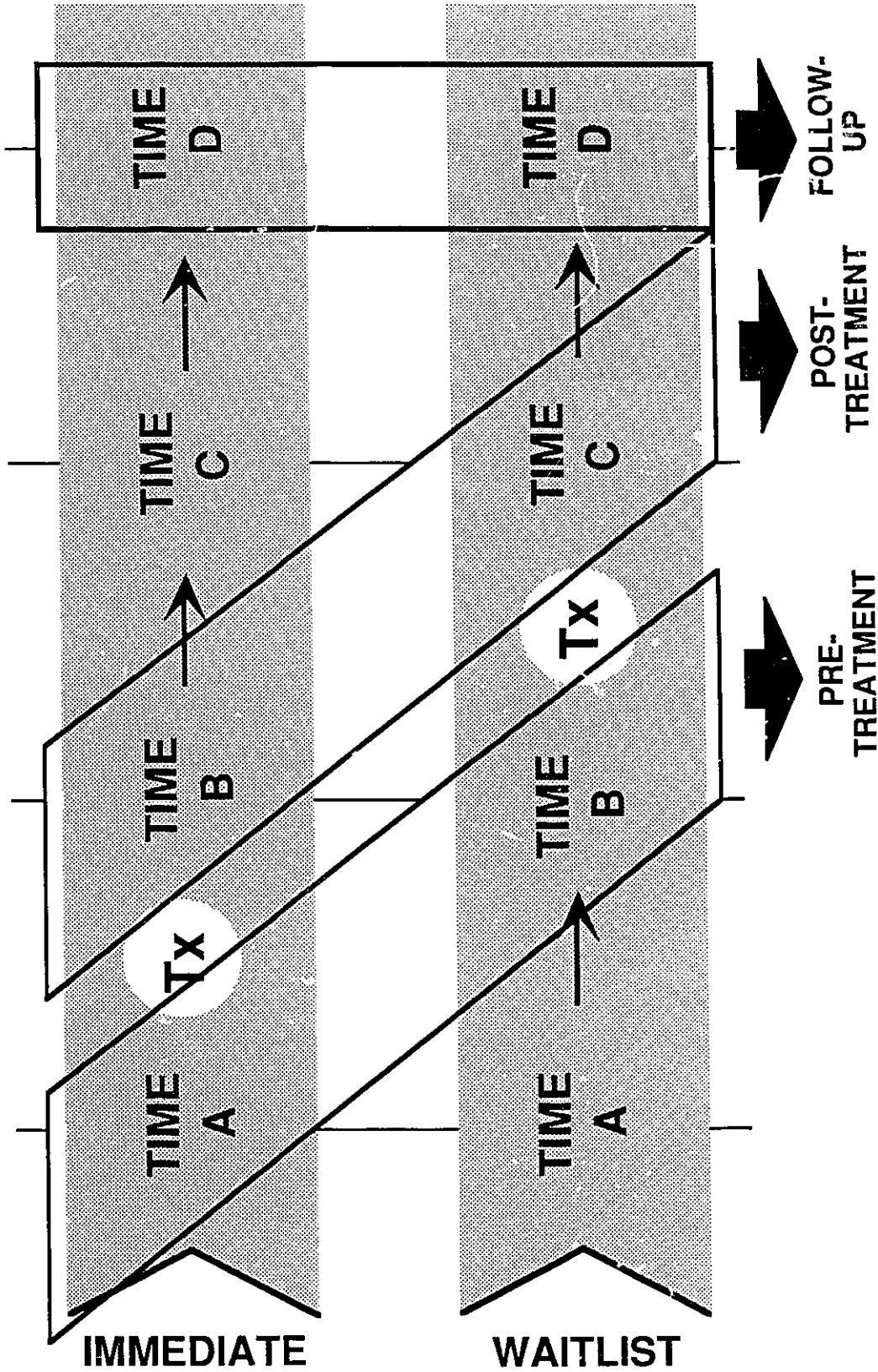


Figure 4. Illustration of the data collapsing process showing how individual treatment times (from both treatment phases) were combined to form the collapsed pretreatment, posttreatment and follow-up data categories.

dependent variable with the same subjects, profile analysis serves as an alternative to univariate repeated measures ANOVA (Tabachnick & Fidell, 1989, p. 437). Called the multivariate approach to repeated measures because the single within-subjects independent variable of time is replaced by multiple dependent measures (that is, time segments) the assumption of homogeneity of covariance is no longer required. Profile analysis is highly robust to violation of the assumption of normality (Tabachnick & Fidell, 1989, p.441).

The major question addressed by profile analysis in terms of the current study is whether the social self-perception profiles, the likeability profiles, the aggression profiles, and the social-isolation profiles differ across time between diagnostic groups (aggressive-disruptive versus sensitive-isolated) and between treatment specificity conditions (diagnosis-specific versus crossover). The values that are actually tested in the analysis are difference scores (referred to as segments) of the adjacent measurements within each dependent variable (Tabachnick & Fidell, 1989, pp. 437-438).

Three major tests comprise a profile analysis: tests of flatness, parallelism, and levels (Tabachnick & Fidell, 1989, chap. 10). In the case of the current study, each of these investigates aspects of change occurring across the two time segments used (pretreatment to posttreatment, and posttreatment to follow-up) as they relate to the group of targets (combined across diagnosis and treatment specificity). Subsequent post hoc tests and planned orthogonal contrasts determine the more specific effects of intervention as they relate to a specific diagnostic and/or treatment specificity group within a specific time segment.

The *flatness test* concerns the similarity of responses across time on a given dependent variable, combined across all treatment and diagnostic groups. In terms of the current study, it tests whether, with treatment specificity and diagnostic groups combined, difference scores observed across the two adjacent time segments (i.e., pretreatment to posttreatment, and posttreatment to follow-up) deviated from zero in terms of change on the

particular dependent variable. In other words, it assesses whether social self-perception, and peer ratings of likeability, aggression and social-isolation/withdrawal (combined across diagnostic and treatment specificity groups) changed over the course of the study. Thus, the flatness test essentially evaluates the same hypothesis as the within-subjects main effect in repeated-measures ANOVA (Tabachnick & Fidell, 1989, pp. 438-439, p. 447).

The related *parallelism test* investigates whether different treatment groups and different diagnostic groups produced parallel profiles across time for each dependent variable. In the case of the present study, the parallelism test constitutes the most important analysis in that it determines if the profile of likeability scores, for example, observed across the two adjacent time segments (pretreatment to posttreatment, and posttreatment to follow-up) is the same for aggressive targets who received diagnosis-specific treatment, aggressive targets who received crossover treatment, sensitive-isolated targets who received diagnosis-specific treatment, and sensitive-isolated targets who received crossover treatment. In brief, it is a test of interaction and asks whether all diagnostic and treatment conditions lead to the same pattern of gains on a specific dependent variable. It investigates whether changes observed over time on a specific dependent measures are identical for all diagnostic and/or treatment specificity groups, or whether they are a function of the treatment group's diagnostic make-up (aggressive-disruptive versus sensitive-isolated), the specificity of the treatment program implemented (diagnosis-specific versus crossover), or a combination of the within (time)/between (diagnosis by treatment specificity) independent variables (Tabachnick & Fidell, 1989, p. 438, 444).

Finally, whether or not groups produced parallel profiles on a given dependent variable in terms of change observed across time, it is necessary to determine if one group (on average) scored higher on the specific measure than did the others. Thus, when applied in the repeated measures analysis of the current study, the *levels test* is used to determine whether one type of diagnosis (aggressive-disruptive versus sensitive-isolated)

and/or one type of treatment specificity condition (diagnosis-specific versus crossover) leads to greater overall improvement than the other diagnosis or the other treatment specificity condition. The levels test of a profile analysis is similar to the between-subjects test used in repeated measures ANOVA (Tabachnick & Fidell, 1989, pp. 438, 443).

Main and interaction effects that were significant at a $p < .05$ level were explored further with a series of planned orthogonal contrasts, Tukey (HSD) post hoc comparisons, and paired t -tests. Bonferroni modifications applied to correct for alpha slippage (because the number of planned comparisons often exceeded the degrees of freedom associated with the between groups mean square) resulted in an adjusted significance level of $p < .01$ to be used when evaluating post hoc planned or unplanned pairwise comparisons. Means and standard deviations (on the collapsed data) are presented in Table 6 by dependent variable for each diagnosis and treatment specificity combination, as well as for the two self-selected control groups.

Peer Ratings of Likeability

Tests of Flatness

The two-way (Diagnosis by Treatment Specificity) repeated measures profile analysis (conducted on the collapsed data) indicated that the likeability ratings given by classmates over time (pretreatment, posttreatment, and follow-up) to the target youngsters (diagnostic and treatment specificity groups combined) produced a profile that deviated significantly from flatness, $F(2, 73) = 19.73, p < .0001$ (see Figure 5). That is to say, the overall change in peer-rated likeability that was recorded across the two time segments combined (pretreatment to posttreatment, and posttreatment to follow-up) deviated significantly from zero for the target children (combined across diagnosis and treatment specificity). Hypotheses were tested using the Wilks' Lambda and Pillai's Trace statistics.

Table 6

**Means and Standard Deviations by Treatment Specificity
and Dependent Variable Across Time (collapsed data)**

Dependent Variable by Group	N	Pretreatment		Posttreatment		Follow-up	
		M	SD	M	SD	M	SD
PEER-RATED LIKEABILITY							
Diagnosis-Specific Treatment							
Aggressive Targets	25	3.08	0.57	3.53 ***	0.92	3.83 ***	0.74
Sensitive-Isolated Targets	25	2.84	0.52	3.27 ***	0.76	3.02	0.66
Crossover Treatment							
Aggressive Targets	13	2.96	0.59	3.47 **	1.01	3.31	0.56
Sensitive-Isolated Targets	15	2.45	0.58	2.49	0.77	2.77	0.85
Self-selected Controls							
Aggressive-Disruptives	6	2.56	0.80	2.47	0.93	2.40	0.63
Sensitive-Isolates	5	2.88	0.53	2.81	0.60	2.55 --	0.33
PEER-RATED AGGRESSION							
Diagnosis-Specific Treatment							
Aggressive Targets	25	18.62	12.96	9.78 *	5.73	7.40 **	6.06
Sensitive-Isolated Targets	25	1.88	1.69	2.55	3.29	2.47	4.23
Crossover Treatment							
Aggressive Targets	13	20.79	13.63	19.16	17.62	12.03	13.61
Sensitive-Isolated Targets	15	1.77	1.94	3.04	4.39	4.43	5.81
Self-selected Controls							
Aggressive-Disruptives	6	21.95	9.79	27.15 -	10.29	31.86 --	19.59
Sensitive-Isolates	5	1.09	1.25	0.80	1.79	0.82	1.46
PEER-RATED SOCIAL ISOLATION/ WITHDRAWAL							
Diagnosis-Specific Treatment							
Aggressive Targets	25	4.84	14.11	2.23	2.25	2.38	3.13
Sensitive-Isolated Targets	25	20.58	12.29	12.75 ***	8.54	9.36 ***	5.99
Crossover Treatment							
Aggressive Targets	13	3.32	6.53	3.33	5.08	1.60	2.10
Sensitive-Isolated Targets	15	15.60	6.10	14.21	9.88	18.26	17.69
Self-selected Controls							
Aggressive-Disruptives	6	5.71	6.17	3.57	4.32	1.21	2.35
Sensitive-Isolates	5	14.81	5.14	16.31	4.66	14.76	8.30
SOCIAL SELF-PERCEPTION							
Diagnosis-Specific Treatment							
Aggressive Targets	25	2.91	0.56	3.29 ***	0.64	3.51 ***	0.45
Sensitive-Isolated Targets	25	2.43	0.72	3.06 ***	0.67	2.70	0.79
Crossover Treatment							
Aggressive Targets	13	2.99	0.52	3.14	0.45	3.24	0.54
Sensitive-Isolated Targets	15	2.16	0.80	2.96 ***	0.95	2.69 *	0.95
Self-selected Controls							
Aggressive-Disruptives	6	2.74	0.64	2.78	0.71	2.43 -	0.44
Sensitive-Isolates	5	2.86	0.65	2.69	0.78	2.29 --	0.66

NOTE: Improvements in social self-perception and peer-rated likeability are reflected by increased mean scores across time; conversely, improvements in peer-rated aggression and peer-rated social isolation are reflected by decreased mean scores across time. Bonferroni adjusted p levels were used to test for significance.

LEGEND * = improvement from pretreatment that approaches significance, $p < .05$ (positive trend).
 ** = significant improvement from pretreatment, $p < .01$.
 *** = significant improvement from pretreatment, $p < .005$.
 - = deterioration from pretreatment that approaches significance, $p < .05$ (negative trend).
 -- = significant deterioration from pretreatment, $p < .01$.

Univariate solutions using the Greenhouse-Geisser adjustment to correct for violation of the homogeneity of co-variance assumption produced similar results for the within subjects main effect of Time, $F(2, 148)=12.00, p<.0001$. Together these findings show that peer ratings of likeability, averaged over time and combined across all target children, independent of diagnosis and treatment specificity, changed significantly over the course of the study.

A post hoc analysis of variance was applied to the adjacent segments (pretreatment to posttreatment, and posttreatment to follow-up) to further explore the overall change observed in the likeability ratings given the target children by their peers. This analysis revealed that the change observed across time, from pretreatment to follow-up, amongst the group of targets (independent of diagnostic and treatment specificity groups) was accounted for primarily by a significant increase in peer-rated likeability between pretreatment ($M=2.863$) and posttreatment ($M=3.236$), $F(1, 74)=26.35, p<.0001$. No additional significant change was revealed for time segment two (posttreatment to follow-up). However, because the increase observed at posttreatment was effectively maintained at follow-up ($M=3.217$), the overall pretreatment to follow-up improvement in peer-rated likeability proved significant, $p<.01$. These findings are summarized in Table 6 which presents treatment group means and standard deviations at each of the three measurement times by dependent variable. In addition, Figure 5 graphically depicts the changes across time segments in peer-rated likeability for each diagnosis/treatment specificity combination, and for each of the two self-selected control groups.

Tests of Parallelism

Tests of between/within subject interactions showed the likeability profiles, depicting patterns of change in peer-rated likeability achieved across time by the various target groups (i.e., diagnosis, treatment specificity, and diagnosis by treatment specificity combinations), to be essentially parallel to each other. Univariate solutions yielded

PEER-RATED LIKEABILITY

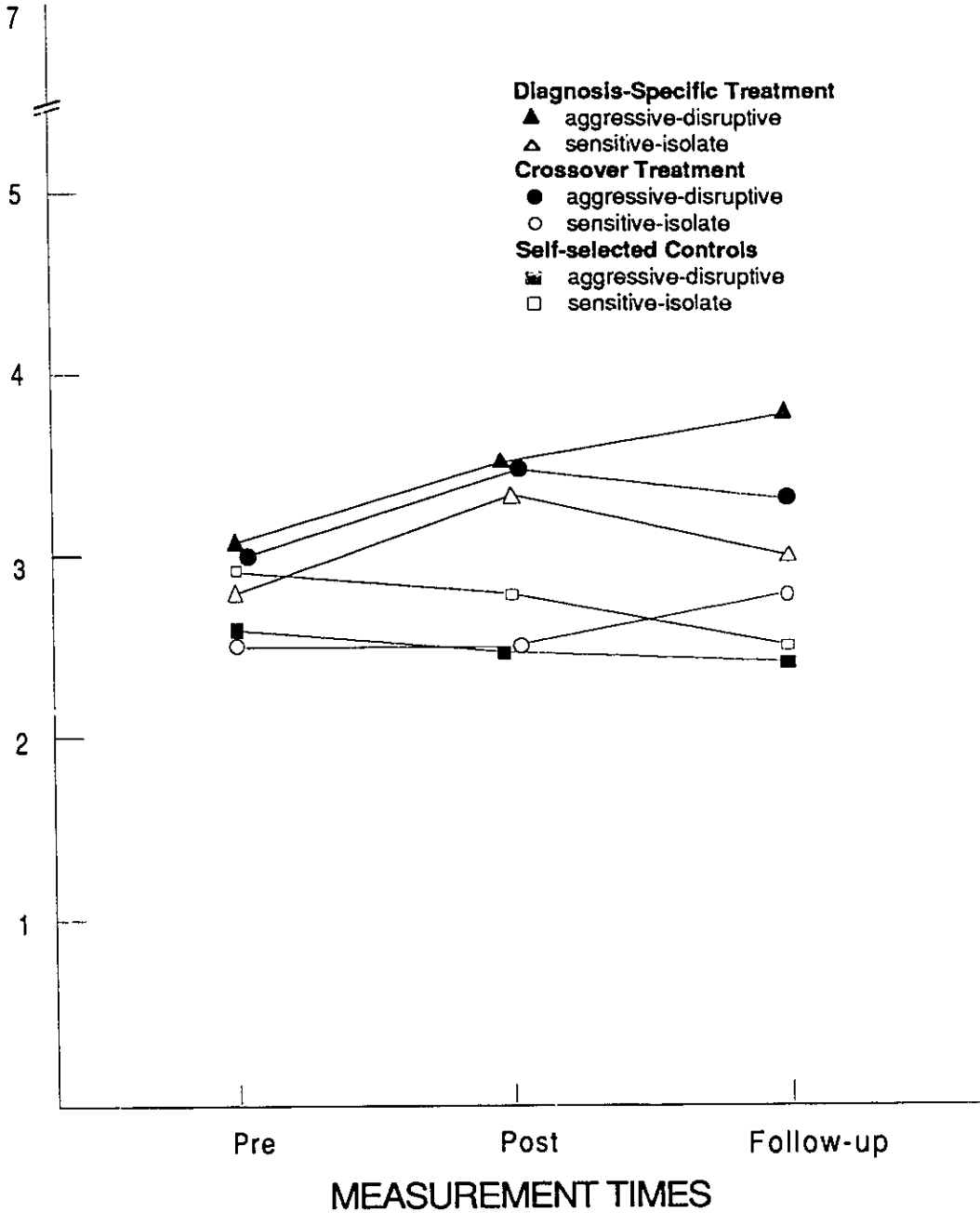


Figure 5. Pattern of change from pretreatment to follow-up in peer-rated likeability by diagnosis for treatment specificity targets and self-selected controls (collapsed data).

essentially similar results but indicated a trend toward non-parallelism in the case of the time by treatment specificity by diagnosis interaction, $F(2, 148)=2.94$, $p<.0647$. This latter finding suggests that the likeability profiles of the four diagnosis by treatment specificity combinations (i.e., aggressive-disruptives in diagnosis-specific treatment versus aggressive-disruptives in crossover treatment versus sensitive-isolates in diagnosis-specific treatment versus sensitive-isolates in crossover treatment) produced patterns that, although not sufficiently different from one another to absolutely reject parallelism, demonstrated a degree of difference between their respective profiles that approached significance (see Table 6 and Figure 5). Thus, for the simple main effects (i.e., diagnosis and treatment specificity) parallelism was accepted; the patterns or profiles of peer-rated likeability recorded across time as a function of diagnosis (independent of treatment specificity) and as a function of treatment specificity (independent of diagnosis) were essentially parallel to one another. A near significant effect was revealed, however, as a function of the time by diagnosis by treatment specificity interaction, indicating rejection of the parallelism hypothesis. This finding is discussed in further detail in the following paragraph.

Time by diagnosis by treatment specificity interaction. During time segment one (pretreatment to posttreatment) diagnosis-specific treatment was followed by significant improvements in the peer-rated likeability of both aggressive-disruptive and sensitive-isolated targets, $p<.0022$ and $p<.0006$. Crossover treatment, on the other hand, resulted in significantly improved peer-rated likeability scores in the case of the aggressive-disruptive targets ($p<.0118$), but not for the sensitive-isolated targets ($p<.7954$). During the second time segment (i.e. posttreatment to follow-up) no additional significant changes in peer-rated likeability were reported for any of the diagnosis by treatment specificity combinations. The sensitive-isolated youngsters randomly assigned to the crossover treatment condition, however, reported a posttreatment to follow-up difference score in peer-rated likeability that indicated change in the predicted direction, $p<.0836$.

The results discussed above suggest that social skills intervention (both the diagnosis-specific and crossover conditions) are effective in improving the peer-rated likeability of target preadolescents. The results also indicate, however, that the greatest benefit in terms of improved peer-rated likeability was realized by the aggressive-disruptive subjects in the diagnosis-specific treatment condition.

The Levels Test

Despite the presence of relatively parallel likeability profiles amongst the various target groups (i.e., diagnostic, treatment specificity, and diagnosis by treatment specificity), the flatness test presented above showed that the targets' likeability ratings changed over the course of the study (see Table 6 and Figure 5). The slopes showing change between pretreatment and posttreatment, and between posttreatment and follow-up were not flat. The purpose of the levels test was to evaluate whether one target group, on average, scored higher on the collected set of likeability ratings than the other target groups (i.e., diagnosis and treatment specificity). It revealed a statistically significant difference in mean likeability scores across time, between diagnoses, $F(1, 74)=13.80, p<.0004$, and between treatment specificity conditions, $F(1, 74)=5.27, p<.0245$. Significant main effects are discussed in greater detail in the following paragraphs.

It is important to note that the follow-up analyses, whose results appear next, explore differences between target groups (i.e., diagnostic, treatment specificity, and diagnosis by treatment specificity combinations) on specific dependent measures as they existed at each of the three individual measurement points used (pretreatment, posttreatment, and follow-up). Recall that the flatness, parallelism and levels tests, on the other hand, evaluated segments or difference scores.

Diagnostic group comparisons. A series of univariate analyses of variance and follow-up Tukey (HSD) tests were implemented to further explore significant findings established by the levels test. Results indicated that the aggressive-disruptive targets

(combined across the diagnosis-specific and crossover treatment groups) received significantly higher peer ratings of likeability than their sensitive-isolated counterparts at pretreatment, $F(1, 77) = 7.55, p < .008$ ($M = 3.041$ versus $M = 2.694$, respectively), at posttreatment, $F(1, 77) = 7.39, p < .008$ ($M = 3.507$ versus $M = 2.978$, respectively), and at follow-up, $F(1, 77) = 13.65, p < .0004$ ($M = 3.551$ versus $M = 2.928$, respectively). Group means and standard deviations as measured across the course of the study are presented in Table 6 and Figure 5.

Treatment specificity comparisons. Univariate ANOVAs and follow-up Tukey tests were also conducted to further investigate the significant Treatment Specificity (diagnosis-specific versus crossover) effect revealed through the levels test. These follow-up analyses showed that at pretreatment, differences in likeability ratings between targets (combined across diagnostic groups) randomly assigned to the diagnosis-specific treatment condition and those randomly assigned to the crossover treatment condition approached, but did not attain, significance, $F(1, 77) = 3.27, p < .076$ ($M = 2.961$ versus $M = 2.722$, respectively). At posttreatment, however, the mean likeability ratings of the diagnosis-specific treatment groups (independent of diagnosis) were significantly higher than those reported for the crossover treatment groups, $F(1, 77) = 4.75, p < .033$ ($M = 3.400$ versus $M = 2.975$, respectively), attesting to the apparent superiority of diagnosis-specific social skills training, over crossover treatment, in enhancing the peer-rated likeability of poorly accepted preadolescents. By follow-up, the likeability ratings of targets (combined across diagnosis) from the diagnosis-specific treatment condition were again similar to those of targets from the crossover treatment condition. That is, the differences in peer-rated likeability between targets randomly assigned to the diagnosis-specific treatment condition and those randomly assigned to the crossover treatment condition did not differ significantly, $F(1, 77) = 2.89, p < .093$ ($M = 3.432$ versus $M = 3.055$). Table 6 and Figure 5 present this information in graph and tabular formats.

Overall, the levels test results showed that both before and after intervention (including at follow-up), the aggressive-disruptive target youngsters were better liked by their classmates than were their sensitive-isolated counterparts. The levels test also showed that, when combined across diagnostic groups, likeability ratings displayed a significant increase immediately following diagnosis-specific treatment that was not observed with crossover treatment. By follow-up, however, the degree of difference between the diagnosis-specific and the crossover treatment conditions had significantly diminished. The overall decrease of the between-group (i.e., treatment specificity) differences seems attributable to the (albeit nonsignificant) posttreatment-to-follow-up increase in the likeability ratings of the crossover condition. Combined with the absence of further improvement in the likeability ratings of the diagnosis-specific targets, the increase recorded for the crossover targets had the net effect of significantly reducing the difference between the two treatment specificity conditions at follow-up (see Table 6 and Figure 5).

Overall Pattern of Change in Peer-rated Likeability

Likeability changes over time within each diagnostic category and treatment condition (i.e., aggressive-disruptive, sensitive-isolated; diagnosis-specific treatment, crossover treatment; aggressive-disruptives in diagnosis-specific treatment, aggressive-disruptives in crossover treatment, sensitive-isolates in diagnosis-specific treatment, sensitive-isolates in crossover treatment) were examined. Paired *t*-tests were computed to investigate changes in peer-rated likeability as they occurred in each of three time segments (pretreatment to posttreatment, posttreatment to follow-up, and pretreatment to follow-up).

Changes by diagnosis. As the data presented in Table 6 and Figure 5 indicate, the likeability scores for both the aggressive-disruptive and the sensitive-isolated targets (independent of treatment specificity) increased significantly immediately following intervention (i.e., during the pretreatment to posttreatment time segment), $p < .005$. During the posttreatment to follow-up time segment, neither the aggressive-disruptive targets nor

the sensitive-isolated targets demonstrated additional significant change in peer-rated likeability. Nonetheless, changes, albeit statistically nonsignificant in degree, were recorded during this time segment, and the fact that they were in opposite directions for the aggressive-disruptives and the sensitive-isolates, bore an ultimate impact on the overall scope of the pretreatment to follow-up improvement in peer-rated likeability recorded for each of the two diagnoses. That is to say, because the mean likeability score of the aggressive-disruptive targets continued to show a slight increase between post-treatment and follow-up, while the mean likeability score of the sensitive-isolated group began to show a small decline, examination of the overall change observed between pretreatment and follow-up indicated a significant overall increase in peer-rated likeability for the aggressive-disruptive targets ($p < .005$), but an overall increase in peer-rated likeability for the sensitive-isolated targets that only approached significance at $p < .05$ (when specificity of treatment was not considered).

Changes by treatment specificity. During the pretreatment to posttreatment time segment, the mean likeability score of targets (independent of diagnosis) assigned to the diagnosis-specific treatment condition demonstrated a significant increase, $p < .005$. While targets assigned to the crossover condition also demonstrated improved likeability scores between pretreatment and posttreatment, the increase approached ($p < .05$) but did not actually attain Bonferroni corrected levels of significance ($p < .01$). During the posttreatment to follow-up time segment neither of the two treatment conditions demonstrated additional significant change, but changes nonetheless occurred, at least in the case of the crossover treatment condition. The net effect of the additional change, which showed a slight (although statistically nonsignificant) posttreatment to follow-up increase, was an overall pretreatment to follow-up improvement in peer-rated likeability that attained significance ($p < .01$). The posttreatment improvement in peer-rated likeability obtained by targets in the diagnosis-specific treatment condition was effectively maintained

to follow-up. In summary, examination of the overall change observed between pretreatment and follow-up indicated a highly significant overall increase in peer-rated likeability for both the diagnosis-specific treatment group ($p < .005$), and for the crossover treatment group ($p < .01$).

Changes by diagnosis and treatment specificity combination. As illustrated in Table 6 and Figure 5, during the pretreatment to posttreatment time segment, both the aggressive-disruptives and the sensitive-isolates assigned to diagnosis-specific intervention demonstrated a significant increase in peer-rated likeability, $p < .005$. The aggressive-disruptives in the crossover treatment condition demonstrated a similar increase ($p < .01$). On the other hand, the peer-rated likeability of sensitive-isolated targets in the crossover treatment condition failed to show any sort of significant change following treatment. During the posttreatment to follow-up time segment, neither of the two diagnostic groups in either of the two treatment specificity conditions showed additional significant change in peer-rated likeability. Non-significant changes did, however, continue to occur. More specifically, the mean likeability score of the aggressive-disruptives in the diagnosis-specific treatment condition, and that of the sensitive-isolates in the crossover condition continued to show slight increases. By contrast, the mean likeability scores of the sensitive-isolates in the diagnosis-specific treatment condition, and of the aggressive-disruptives in the crossover treatment condition began to show a slight decline between posttreatment and follow-up. The net effect of the ongoing, albeit nonsignificant, changes recorded between posttreatment and follow-up in the peer-rated likeability of the various diagnosis by treatment specificity combinations was that only one combination produced an overall (i.e., pretreatment to follow-up) significant increase in peer-rated likeability. Only the aggressive-disruptives in the diagnosis-specific treatment condition demonstrated a significant improvement ($p < .005$) in their overall pretreatment to follow-up likeability ratings.

To summarize, the paired t -test results served to verify findings presented by the parallelism, flatness and levels tests. In the short term, diagnosis-specific treatment was significantly more successful than crossover treatment in improving the peer-rated likeability of socially rejected preadolescents (diagnosis not considered). In the long-term, moreover (i.e., at one year follow-up), social skills intervention, both the diagnosis-specific and the crossover conditions, produced significant improvements in the likeability variable. In addition, amongst the socially rejected preadolescents, aggressive-disruptive targets fared better from social skills intervention (specificity not considered) than the sensitive-isolated youngsters, in terms of improved peer-rated likeability.

More specifically, while both diagnoses showed significant improvements in their likeability ratings immediately following treatment, the aggressive-disruptive targets were more successful than their sensitive-isolated counterparts in maintaining that improvement at one year follow-up. Finally, the strongest and most stable improvement in peer-rated likeability was seen with the aggressive-disruptive targets who had received diagnosis-specific intervention. Sensitive-isolated youngsters in the diagnosis-specific treatment condition showed a significant posttreatment improvement in their likeability ratings, but the improvement was not effectively maintained at follow-up. Similarly, crossover treatment produced a significant improvement in the peer-rated likeability of the aggressive-disruptives immediately following treatment, but the improvement was not maintained to follow-up. Crossover treatment was unsuccessful in improving the likeability ratings received by the sensitive-isolated targets from their peers in either the short-term or the long-term.

Peer Ratings of Aggression

Tests of Flatness

The 2 X 2 (Diagnosis by Treatment Specificity) repeated measures profile analysis conducted on aggression difference scores (collapsed data) revealed a significant Time effect. The aggression ratings given by classmates over time (pretreatment, posttreatment, and follow-up) to the combined group of targets (independent of diagnosis and treatment specificity) produced a profile that deviated significantly from flatness over the course of the study, $F(2, 73)=3.58, p<.0328$ (see Figure 6). That is to say, the overall change in peer-rated aggression that was recorded across the two time segments combined (pretreatment to posttreatment, and posttreatment to follow-up) deviated significantly from zero. Hypotheses were tested using the Wilks' Lambda and Pillai's Trace statistics. Univariate solutions using the Greenhouse-Geisser adjustment to correct for violation of the homogeneity of co-variance assumption produced similar results for the within subjects main effect of Time, $F(2, 148)=4.83, p<.0157$. Together these findings show that peer ratings of aggression, averaged over time and combined across all target children, independent of diagnosis and treatment specificity, changed significantly from pretreatment to posttreatment to follow-up (see Table 6 and Figure 6).

Post hoc analyses of variance were conducted on the adjacent segments (pretreatment to posttreatment, and posttreatment to follow-up) to further explore the overall change in the aggression ratings given the target children by their peers. This analysis revealed that the overall change in peer nominations of aggression observed from pretreatment to follow-up amongst the group of targets (independent of diagnosis and treatment specificity) was accounted for by decreases approaching significance between pretreatment ($M=10.374$) and posttreatment ($M=7.728$), $F(1, 74)=5.27, p<.0245$, and between posttreatment ($M=7.728$) and follow-up ($M=6.022$), $F(1, 74)=4.33, p<.0409$.

These findings are summarized in Table 6 which presents treatment group means and standard deviations at each of the three measurement times by dependent variable. In addition, Figure 6 graphically depicts the changes across time segments in peer nominations of aggression for each diagnosis/treatment specificity combination, and for each of the two self-selected control groups.

Tests of Parallelism

Tests of between/within subject interactions led to rejection of the parallelism hypothesis. The aggression profiles of the various target groups (i.e., the various diagnosis by treatment specificity combinations) did not all follow parallel paths across the course of the study. More specifically, Wilks' Lambda and Pillai's Trace statistics revealed a significant time by diagnosis effect, $F(2, 73) = 6.75, p < .0020$, which was supported by univariate solutions, $F(2, 148) = 9.34, p < .0006$, and a significant time by diagnosis by treatment specificity effect, $F(2, 73) = 3.85, p < .0163$, also supported by Greenhouse-Geisser adjusted univariate solutions, $F(2, 148) = 3.06, p < .0534$. All remaining between/within interactions yielded nonsignificant results.

Rejection of the parallelism hypothesis indicated that the patterns of change in peer-rated aggression as recorded across the two adjacent time segments (pretreatment to posttreatment, and posttreatment to follow-up) differed between the sensitive-isolated and the aggressive disruptive diagnoses (treatment specificity not considered), and between the diagnosis by treatment specificity combinations (i.e., aggressive-disruptives in diagnosis-specific treatment, aggressive-disruptives in crossover treatment, sensitive-isolates in diagnosis-specific treatment, and sensitive-isolates in crossover treatment). These differences are discussed further in the following paragraphs.

Time by diagnosis interaction. During time segment one (pretreatment to posttreatment) the mean peer-rated aggression score of the aggressive-disruptive targets (independent of treatment specificity) displayed a decrease that approached significance at

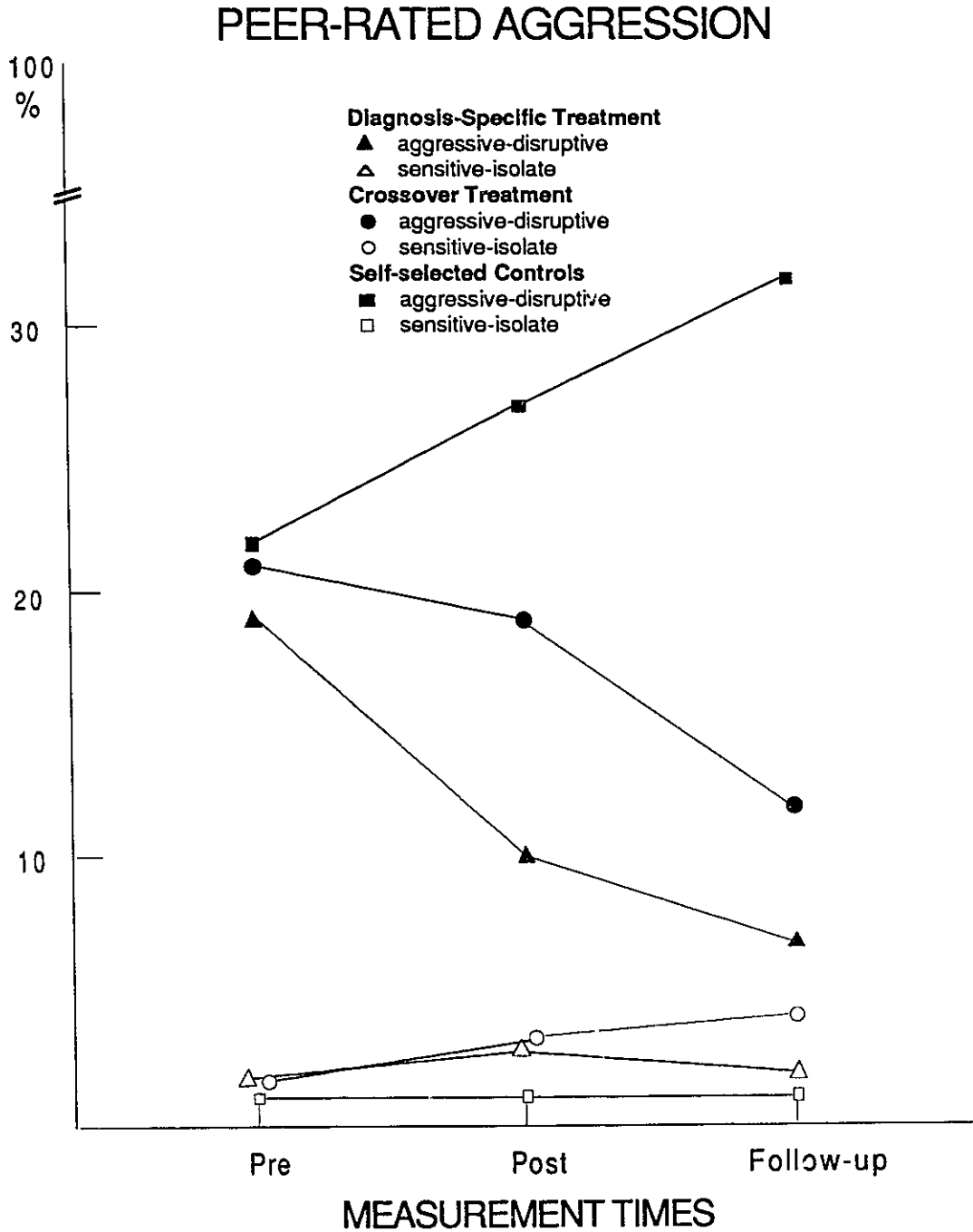


Figure 6. Pattern of change from pretreatment to follow-up in peer-rated aggression by diagnosis for treatment specificity targets and self-selected controls (collapsed data).

$p < .0205$ (from $M = 19.361$ to $M = 12.986$). By contrast, during this first time segment the mean aggression score of the sensitive-isolated targets (also independent of treatment specificity) showed a slight albeit nonsignificant increase, $p < .0764$ (from $M = 1.837$ to $M = 2.734$). During the posttreatment to follow-up time segment, the mean aggression score for the aggressive-disruptive targets exhibited a further decrease approaching significance, $p < .0220$ ($M = 12.986$ versus $M = 8.985$, respectively), while the change in the mean aggression score of the sensitive-isolated targets during this second time segment failed to reach significance, $p < .6215$ ($M = 2.734$ to $M = 3.206$).

Time by diagnosis by treatment specificity interaction. Follow-up analysis indicate that during time segment one (pretreatment to posttreatment) the mean peer-nominated aggression score of aggressive-disruptive targets who had received diagnosis-specific treatment decreased to a level that approached Bonferroni corrected levels of significance, $p < .0252$ ($M = 18.617$ versus 9.776). By contrast, the aggression scores of aggressive-disruptive targets who had received the crossover treatment, and those of sensitive-isolated youngsters in both the diagnosis-specific and the crossover treatment conditions, failed to show significant change. No significant changes in peer nominations of aggression were revealed during time segment two (posttreatment to follow-up) for any of the diagnosis by treatment specificity combinations, but changes recorded at posttreatment were, in each instance, at least maintained at follow-up (see Figure 6).

In summary, the results discussed above show that, following social skills intervention (independent of specificity of treatment), the aggressive-disruptive targets displayed a decrease in peer-rated aggression that approached significance. This decrease was maintained at follow-up one year later. By contrast, the low pretreatment aggression scores of the sensitive-isolated targets showed a slight, but nonsignificant, increase following intervention, and the increase was also maintained at follow-up. Further, the results indicated that in the case of the aggressive-disruptive targets, diagnosis-specific

treatment was more effective in reducing aggression than was crossover treatment. Means and standard deviations are presented in Table 6.

The Levels Test

The purpose of the levels test was to evaluate whether one target group (i.e., diagnosis or treatment specificity), on average, scored lower on the collected set of aggression ratings (i.e., pretreatment, posttreatment, and follow-up) than the other diagnosis or treatment specificity conditions. It revealed a statistically significant difference in mean aggression scores, across time, between the two diagnoses (independent of treatment specificity), $F(1, 74)=54.18, p<.0001$. It also revealed differences across time in mean aggression that occurred as a function of treatment specificity (i.e., diagnosis-specific versus crossover). While the amount of variance recorded on the aggression variable that could be attributed to treatment specificity (across time and diagnosis) did not obtain, it clearly approached, significance, $F(1,74)=3.62, p<.0611$. These effects are discussed in greater detail in the following paragraphs. Once again, recall that these follow-up analyses will explore differences on the specific dependent measures as they existed at each of the three individual measurement points used (pretreatment, posttreatment, and follow-up). By contrast, the flatness, parallelism and levels tests evaluated difference scores.

Diagnostic group comparisons. A series of univariate analyses of variance and follow-up Tukey (HSD) tests were implemented to further explore significant findings established by the levels test. Results indicated that the aggressive-disruptive targets (collapsed across the diagnosis-specific and crossover treatment conditions) received significantly higher peer ratings of aggression than their sensitive-isolated counterparts at pretreatment, $F(1, 77)= 40.34, p<.0001$ ($M=19.361$ versus $M=1.837$, respectively), at posttreatment, $F(1, 77)=30.06, p<.0001$ ($M=12.986$ versus $M=2.734$, respectively), and at follow-up, $F(1, 77)=12.03, p<.0009$ ($M=8.985$ versus $M=3.206$, respectively).

Group means and standard deviations as measured across the course of the study are presented in Table 6 and Figure 6.

Treatment specificity condition comparisons. Because the treatment specificity effect (diagnosis-specific versus crossover) approached significance, it was also explored further with univariate ANOVAs and follow-up Tukey tests. At pretreatment, targets (combined across diagnosis) randomly assigned to the diagnosis-specific treatment condition and those randomly assigned to the crossover treatment condition did not differ significantly in terms of peer-rated aggression, $F(1, 77)=0.12, p<.7349$ ($M=10.248$ versus $M=11.278$, respectively). At posttreatment, however, the mean aggression ratings of the diagnosis-specific treatment groups (independent of diagnosis) were significantly lower than those reported by the crossover treatment groups, $F(1, 77)=5.89, p<.0177$ ($M=6.163$ versus 11.201 , respectively), attesting to the seeming superiority of diagnosis-specific social skills training, over crossover treatment, in decreasing the peer-rated aggression of socially rejected preadolescents. The benefits of diagnosis-specific intervention were effectively maintained, and although at one-year follow-up differences between the two treatment specificity conditions in terms of peer-rated aggression had diminished slightly, they continued to approach significance, $p<.0670$ ($M=4.937$ versus $M=8.636$). Table 6 and Figure 6 present this information in tabular and graphic formats.

Diagnosis by treatment specificity combination comparisons. Although the levels test failed to find a significant diagnosis by treatment specificity interaction effect in terms of peer-rated aggression across time, the follow-up ANOVAS and Tukey tests indicated that at posttreatment this interaction did indeed account for a significant proportion of the observed variance. At pretreatment the mean aggression ratings of aggressive-disruptive targets assigned to the diagnosis-specific treatment condition did not differ significantly from the mean aggression ratings of aggressive-disruptive targets assigned to the crossover treatment condition, $F(1, 77)=.0.16, p<.6924$ ($M=18.617$ versus $M=20.791$). At

posttreatment, however, the aggression ratings of aggressive-disruptives randomly assigned to the diagnosis-specific condition had significantly decreased and now differed significantly from the aggression ratings reported for the aggressive-disruptive targets randomly assigned to the crossover treatment condition $F(1, 77)=5.20, p<.0177$ ($M=9.776$ versus $M=19.158$). The significantly lower posttreatment aggression ratings of the aggressive-disruptives assigned to the diagnosis-specific treatment condition were effectively maintained at follow-up, attesting to the seeming superiority of diagnosis-specific social skills training over crossover treatment in reducing the peer-rated aggression of socially rejected aggressive preadolescents. The mean aggression score of the sensitive-isolated targets assigned to diagnosis-specific treatment did not differ significantly from the mean aggression score of the sensitive-isolated youngsters in the crossover condition. The mean aggression scores of the sensitive-isolated targets in both the diagnosis-specific and the crossover treatment conditions, however, were significantly lower than the mean aggression scores reported by the aggressive-disruptive targets in both the diagnosis-specific and the crossover conditions. These findings are summarized in Table 6 and Figure 6.

In brief, the levels test results showed that, as expected, the aggressive-disruptive targets (regardless of treatment specificity) received higher aggression ratings from their peers than did the sensitive-isolated targets. This difference was evident both before and immediately after treatment, as well as at follow-up. The aggressive targets, however, demonstrated a significant decrease in aggression following treatment, while the already low aggression scores of the sensitive-isolated targets did not demonstrate significant change over time. The levels test also indicated that, for aggressive-disruptive targets, the diagnosis-specific treatment was followed by a significantly greater decrease in peer-rated aggression than was the crossover type of intervention.

Overall Pattern of Change in Peer-rated Aggression

Changes in aggression over time within each diagnostic category and treatment condition (i.e., aggressive-disruptive, sensitive-isolated; diagnosis-specific treatment, crossover treatment; aggressive-disruptives in diagnosis-specific treatment, aggressive-disruptives in crossover treatment, sensitive-isolates in diagnosis-specific treatment, sensitive-isolates in crossover treatment) were examined. Paired t tests were computed to investigate changes in peer-rated aggression as they occurred in each of three time segments (pretreatment to posttreatment, posttreatment to follow-up, and pretreatment to follow-up).

Changes by diagnosis. As the data presented in Table 6 and Figure 6 indicate, the peer-rated aggression scores of aggressive-disruptive targets (independent of treatment specificity) decreased immediately following intervention, $p < .05$. During the posttreatment to follow-up time segment, the aggression scores of the aggressive-disruptive targets demonstrated a further decrease approaching significance, $p < .05$. The cumulative effect of these two changes was an overall (pretreatment to follow-up) decrease in the peer-rated aggression of the aggressive-disruptive targets that was highly significant, $p < .005$. In the case of the sensitive-isolated targets, the paired t tests indicated that intervention did not further reduce the already low aggression scores.

Changes by treatment specificity. During the pretreatment to posttreatment time segment, there was a decrease approaching significance ($p < .05$) in the mean aggression score of the combined group of targets (independent of diagnosis) randomly assigned to the diagnosis-specific treatment condition. By contrast, the mean aggression score of targets (independent of diagnosis) randomly assigned to the crossover treatment condition did not change following intervention. During the posttreatment to follow-up time segment neither of the two treatment conditions demonstrated additional significant change in peer-rated aggression. Subsequent examination of the overall change (i.e., between pretreatment and follow-up) in the mean aggression score of the target youngsters (aggressive-disruptives

and sensitive-isolates combined) indicated a decrease in peer-rated aggression (approaching significance, $p < .05$) for the diagnosis-specific condition, but no such improvement for the crossover treatment condition.

Changes by diagnosis and treatment specificity combination. As summarized in Table 6 and graphically illustrated in Figure 6, during the pretreatment to posttreatment time segment, aggressive-disruptive targets randomly assigned to the diagnosis-specific treatment condition displayed a decrease in peer-rated aggression that approached significance, $p < .05$. By contrast, aggressive-disruptive targets randomly assigned to the crossover treatment condition failed to demonstrate any sort of significant change in their mean aggression score during the pretreatment to posttreatment time segment. During the second time segment (i.e., posttreatment to follow-up), neither the aggressive-disruptives in diagnosis-specific treatment nor the aggressive-disruptives in crossover treatment demonstrated significant or near significant changes in their mean aggression ratings. Examination of the overall (i.e., pretreatment to follow-up) change in peer-rated aggression, showed a significant decrease across time in the case of the aggressive-disruptive targets who had received diagnosis-specific treatment ($p < .01$), but no significant change in the case of aggressive-disruptive targets from the crossover treatment condition.

To summarize, results of the paired t -tests corroborate findings presented by the parallelism, flatness and levels tests. Aggressive-disruptive targets displayed higher peer-nominated aggression scores than their sensitive-isolated counterparts at pretreatment, posttreatment, and follow-up. However, following intervention (treatment specificity at this point not considered) the aggressive-disruptives demonstrated a significant decrease in their mean peer-rated aggression score. The improvement was effectively maintained at one-year follow-up. By contrast, the already low aggression scores of the sensitive-isolated targets did not change as a function of treatment (diagnosis-specific or crossover).

Of note, there was no *a priori* intention of attempting to change the peer-rated aggressive behavior of the sensitive-isolated targets; rather, the planned interventions for this group of rejected preadolescents focused on reducing their socially isolated and withdrawn behavior (refer to the following section for greater detail). Finally, diagnosis-specific intervention with the rejected aggressive preadolescents (i.e., the aggressive-disruptive targets) was significantly more successful than crossover treatment in reducing the percentage of aggressive nominations attributed to this group of targets by classroom peers.

Peer Ratings of Social Isolation/Withdrawal

Tests of Flatness

The two-way (Diagnosis by Treatment Specificity) profile analysis conducted on social isolation segment scores (collapsed data set) revealed a significant Time effect (see Figure 7). The social isolation ratings given by classmates over time (pretreatment to posttreatment to follow-up) to the combined group of target youngsters (i.e., independent of diagnosis and treatment specificity) produced a social isolation profile that deviated significantly from zero over the course of the study, $F(2, 73)=3.52, p<.0349$ (refer to Figure 7). In other words, the profile depicting degree of peer-perceived social isolation/withdrawal was not flat; peer ratings changed significantly across the two time segments (i.e., pretreatment to posttreatment, and posttreatment to follow-up). Hypotheses were tested using the Wilks' Lambda and Pillai's Trace statistics. Univariate solutions using the Greenhouse-Geisser adjustment to correct for violation of the homogeneity of covariance assumption produced similar results for the within subjects main effect of Time, $F(2, 148)=3.16, p<.0515$. These findings showed that peer ratings of social isolation/withdrawal, averaged over time and combined across all target children, independent of diagnosis and treatment specificity, changed significantly over the course of the study.

A post hoc analysis of variance was applied to the adjacent difference scores (pretreatment to posttreatment, and posttreatment to follow-up) to further investigate the overall change recorded in the social isolation nominations given the combined group of target youngsters by their peers during the course of the study. This analysis revealed that the overall change observed across time, from pretreatment to follow-up, amongst the group of targets (independent of diagnosis and treatment specificity) was accounted for primarily by a significant decrease in social isolation nominations between pretreatment ($M=11.701$) and posttreatment ($M=8.090$), $F(1, 74)=7.13$, $p<.0093$. No additional significant decrease was revealed in peer-rated social isolation during time segment two (i.e., posttreatment and follow-up) but the improvement recorded at posttreatment was effectively maintained at follow-up ($M=8.090$ versus $M=7.543$, respectively). These findings are summarized in Table 6 which presents treatment group means and standard deviations at each of the three measurement times by dependent variable. In addition, Figure 7 graphically depicts the changes across time segments in peer-rated likeability for each diagnosis/treatment specificity combination, and for each of the two self-selected control groups.

Tests of Parallelism

Tests of between/within subject interactions led to acceptance of the parallelism hypothesis. Although a time by treatment specificity interaction effect in the predicted direction, $F(2, 73)=2.61$, $p<.0802$, and a time by treatment specificity by diagnosis interaction effect also in the predicted direction, $F(2, 73)=2.57$, $p<.0814$, were revealed, results of the parallelism test suggested that the social isolation profiles of the various target groups (i.e., diagnosis and treatment specificity) followed essentially parallel paths across the course of the study. This suggests that the *pattern of change* observed across time, in terms of peer-rated social isolation, was essentially the same regardless of the treatment specificity condition (diagnosis-specific versus crossover) or diagnosis (aggressive-

PEER-RATED SOCIAL WITHDRAWAL

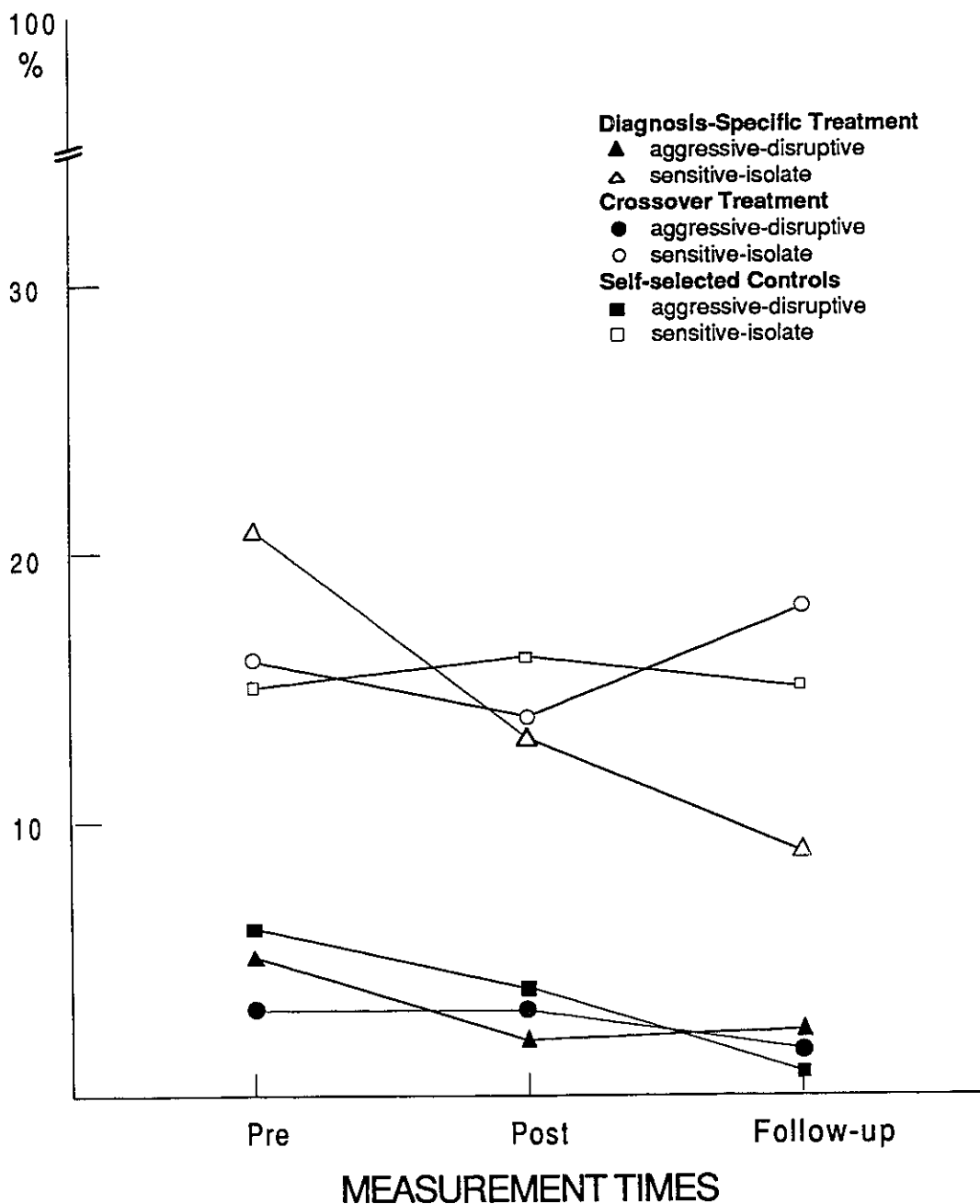


Figure 7. Pattern of change from pretreatment to follow-up in peer-rated social withdrawal by diagnosis for treatment specificity target and self-selected controls by (collapsed data).

disruptive versus sensitive-isolated) being examined. Univariate solutions yielded somewhat stronger overall results showing a significant time by treatment specificity effect, $F(2, 148)=3.41, p<.0421$, and a time by treatment specificity by diagnosis effect that approached significance, $F(2, 148)=2.96, p<.0606$. As such, results of univariate analyses indicate that the social isolation profiles of the two treatment specificity conditions (diagnosis-specific versus crossover) were not parallel, but rather, resulted in significantly different patterns of change across time. Univariate solutions also suggest that the pattern of change in peer-rated social isolation recorded across time varied somewhat as a function of the specific diagnosis by treatment specificity combination involved; that is, not all diagnosis by treatment specificity combinations resulted in parallel paths of change between pretreatment and follow-up. This latter interaction effect approached but did not attain significance. Significant and near significant effects are discussed in greater detail in the following paragraphs.

Time by treatment specificity interaction. During time segment one (pretreatment to posttreatment) the mean peer-rated social isolation/withdrawal score of target youngsters (independent of diagnosis) randomly assigned to the diagnosis-specific treatment condition exhibited a significant decrease, $p<.0016$ (from $M=12.709$ to $M=7.490$). By contrast, during this first time segment the mean social isolation score of target youngsters (again, independent of diagnosis) randomly assigned to the crossover treatment condition failed to reveal any sort of significant change, $p<.5002$ ($M=9.516$ versus $M=8.777$, respectively). During the second time segment (posttreatment to follow-up) neither the diagnosis-specific treatment condition nor the crossover treatment condition revealed significant change in mean peer-rated social isolation/withdrawal. The significant decrease recorded at posttreatment in the diagnosis-specific condition, however, was effectively maintained at follow-up ($M=7.490$ versus $M=5.873$). In the case of targets (independent of diagnosis) randomly assigned to the crossover treatment condition, the mean social isolation score

obtained at pretreatment ($M=9.516$) remained relatively constant across time (posttreatment $M=8.777$, and follow-up $M=10.140$).

Time by treatment specificity by diagnosis interaction. Follow-up analysis indicated that during time segment one (pretreatment to posttreatment), the mean peer-nominated social isolation/withdrawn score of sensitive-isolated targets who had received diagnosis-specific treatment decreased significantly, $p<.0001$ ($M=20.580$ versus 12.745). In contrast, the social isolation/withdrawn scores of sensitive-isolated targets who had received the crossover treatment, and those of aggressive-disruptive youngsters in both the diagnosis-specific and the crossover treatment conditions, failed to show significant change between pretreatment and posttreatment. No significant changes in peer nominations of social isolation/withdrawal were revealed during time segment two (posttreatment to follow-up) for any of the diagnosis by treatment specificity combinations. Significant changes recorded at posttreatment following diagnosis-specific social skills training, however, were effectively maintained at follow-up (see Table 6 and Figure 7).

In summary, the results discussed above demonstrated the superiority of diagnosis-specific social skills training over crossover treatment in reducing the percentage of social isolation/withdrawn nominations that socially rejected preadolescents (independent of diagnosis) received from classroom peers. The results discussed above also indicated that when socially rejected aggressive preadolescents (i.e., aggressive-disruptives) and socially rejected nonaggressive preadolescents (i.e., sensitive-isolates) were considered separately, the benefits of diagnosis-specific social skills training over crossover treatment in decreasing peer-rated social isolation were more dramatic. Following diagnosis-specific social skills intervention, the peer-rated social isolation of sensitive-isolated preadolescents showed a highly significant decrease that was effectively maintained at one-year follow-up. Crossover treatment, in contrast, did not alter peer-perceptions regarding the withdrawn behavior of sensitive-isolated targets.

The Levels Test

The purpose of the levels test was to evaluate whether one target group (i.e., diagnosis or treatment specificity), on average, scored higher on the collected set of social isolation/withdrawn ratings than the other diagnosis or treatment specificity conditions. It revealed a statistically significant difference in mean social isolation scores across time between the two diagnoses (independent of treatment specificity), $F(1, 74)=55.95$, $p<.0001$. Significant main effects are discussed in greater detail in the following paragraphs. Recall that the follow-up analyses and contrasts examine the scores observed at each of the three individual measurement points (pretreatment, posttreatment, and follow-up). In contrast, the significance tests in profile analysis for parallelism, flatness, and levels evaluate difference scores.

Diagnostic group comparisons. A series of univariate analyses of variance and follow-up Tukey (HSD) tests were implemented to further explore significant findings established by the levels test. Results indicated that the sensitive-isolated targets (independent of treatment specificity) received significantly higher peer ratings of social isolation/withdrawal than their aggressive-disruptive counterparts at pretreatment, $F(1, 77)=31.67$, $p<.0001$ ($M=18.714$ versus $M=4.318$, respectively), at posttreatment, $F(1, 77)=46.46$, $p<.0001$ ($M=13.296$ versus 2.609 , respectively), and at follow-up, $F(1, 77)=19.92$, $p<.0001$ ($M=12.700$ versus 2.114 , respectively). Group means and standard deviations as measured across the course of the study are presented in Table 6 and graphically illustrated in Figure 7.

Diagnosis by treatment specificity combination comparisons. The levels test did *not* show a significant diagnosis by treatment specificity effect across time. Univariate ANOVAs conducted on the social isolation/withdrawal scores, however, indicated that while at pretreatment and posttreatment the mean peer-rated social isolation/withdrawal scores of the sensitive-isolated/diagnosis-specific treatment combination and those of the

sensitive-isolated/crossover treatment combination did not significantly differ, the differences recorded at follow-up *did* approach significance, $F(1, 77)=3.82, p<.0544$. Subsequent Tukey tests showed that at follow-up the mean social isolation scores of the sensitive-isolated targets who had received diagnosis-specific treatment were significantly lower than the mean social isolation scores of the sensitive-isolated targets who had received crossover treatment ($M=9.364$ versus $M=18.258$, respectively). Tukey tests also revealed that the mean social isolation score of the aggressive-disruptives randomly assigned to diagnosis-specific treatment and the mean score of the aggressive-disruptives randomly assigned to the crossover condition did not differ significantly from one another at pretreatment, posttreatment, or follow-up. The social isolation scores of the aggressive-disruptives in both the diagnosis-specific and the crossover conditions were, however, consistently and significantly lower than those of the sensitive-isolates at each of the three measurement points. These findings are summarized in Table 6 and in Figure 7.

In brief, the levels test results showed that, as expected, the sensitive-isolated targets (regardless of treatment specificity) received higher social isolation ratings from their peers than did the aggressive-disruptive targets. This difference was evident both before and immediately after treatment, as well as at follow-up. The sensitive-isolated targets, however, demonstrated a significant decrease in social-isolation immediately following treatment, while the already low social isolation scores of the aggressive-disruptive targets did not demonstrate significant change over time. The levels test also indicated that for sensitive-isolated targets diagnosis-specific treatment was followed by a significantly greater decrease in peer-rated social isolation than was the crossover type of intervention.

Overall Pattern of Change in Peer-rated Social Isolation/Withdrawal

Changes in social isolation/withdrawal over time within each diagnostic group and treatment specificity condition were examined. Paired t -tests were computed to investigate

changes in social isolation/withdrawal as they occurred in each of three time segments (pretreatment to posttreatment, posttreatment to follow-up, and pretreatment to follow-up).

Changes by diagnosis. As the data presented in Table 6 and Figure 7 indicate, the peer-rated social isolation scores of the sensitive-isolated targets (independent of treatment specificity) decreased immediately following intervention (i.e., during the pretreatment to posttreatment time segment), $p < .005$. No further significant change was observed in the mean social isolation score of the sensitive-isolated targets during the posttreatment to follow-up time segment. The significant decrease recorded during the pretreatment to posttreatment time segment, however, was quite effectively maintained to one-year follow-up, resulting in an overall (pretreatment to follow-up) reduction in the peer-rated socially isolated/withdrawn behavior of the sensitive-isolated targets that approached significance, $p < .05$. Paired t -tests also indicated that social skills intervention (independent of treatment specificity) seemed relatively ineffective in altering the already low social isolation scores of the aggressive-disruptive targets.

Changes by treatment specificity. During the pretreatment to posttreatment time segment a significant decrease ($p < .005$) was recorded in the mean social isolation score of the combined group of targets (independent of diagnosis) randomly assigned to the diagnosis-specific treatment condition. In contrast, the mean social isolation score of targets (also independent of diagnosis) randomly assigned to the crossover treatment condition did not change following intervention. During the posttreatment to follow-up time segment neither of the two treatment conditions demonstrated additional significant change in peer-rated social isolation/withdrawal. Subsequent examination of the overall change (i.e., between pretreatment and follow-up) in the mean social isolation score of the target youngsters (aggressive-disruptives and sensitive-isolates combined) indicated a highly significant decrease in peer-rated social isolation/withdrawal ($p < .005$) for the diagnosis-specific condition, but no such improvement for the crossover treatment

condition.

Changes by diagnosis and treatment specificity combination. As summarized in Table 6 and graphically illustrated in Figure 7, during the pretreatment to posttreatment time segment, sensitive-isolated targets randomly assigned to the diagnosis-specific treatment condition displayed a significant decrease in peer-rated social isolation/withdrawal, $p < .005$. In contrast, sensitive-isolated targets randomly assigned to the crossover treatment condition failed to demonstrate any sort of significant change in their mean social isolation score during the pretreatment to posttreatment time segment. During the second time segment (i.e., posttreatment to follow-up), neither the sensitive-isolates in diagnosis-specific treatment nor their counterparts in crossover treatment demonstrated significant or near significant changes in their mean social isolation ratings. Examination of the overall (i.e., pretreatment to follow-up) change in peer-rated social isolation, showed a significant decrease across time in the case of the sensitive-isolated targets who had received diagnosis-specific treatment ($p < .005$), but no significant change in the case of sensitive-isolated targets from the crossover treatment condition.

To summarize, results of the paired t -tests corroborate findings presented by the parallelism, flatness and levels tests. Sensitive-isolated targets displayed higher peer-nominated social isolation scores than their aggressive-disruptive counterparts at pretreatment, posttreatment, and follow-up. However, following intervention (treatment specificity at this point not considered) the sensitive-isolates demonstrated a significant decrease in their mean peer-rated social isolation score. The improvement was effectively maintained at one-year follow-up. By contrast, the already low social isolation scores of the aggressive-disruptive targets did not change as a function of treatment (diagnosis-specific or crossover). Of note, there was no *a priori* intention of attempting to change the peer-rated socially isolation/withdrawal of the aggressive-disruptive targets; rather, the planned interventions for this group of rejected preadolescents focused on reducing their

aggressive behavior. Finally, diagnosis-specific intervention with the rejected nonaggressive preadolescents (i.e., the sensitive-isolated targets) was significantly more successful than crossover treatment in reducing the percentage of social isolation nominations attributed to this group of targets by classroom peers.

Ratings of Social Self-Perception

Tests of Flatness

The two-way (Diagnosis by Treatment Specificity) profile analysis conducted on social self-perception difference scores (collapsed data set) revealed a significant Time effect. Over the course of the study, the mean social self-perception scores of the combined group of targets (independent of diagnosis and treatment specificity) deviated significantly from zero, $F(2, 73)=27.60, p<.0001$ (see Figure 8). That is to say, the slope recording the pattern of change from pretreatment to posttreatment to follow-up in the social self-perception of the target youngsters (independent of diagnosis and treatment specificity) was not flat. Hypotheses were tested using the Wilks' Lambda and Pillai's Trace statistics. Univariate solutions using the Greenhouse-Geisser adjustment to correct for violation of the homogeneity of co-variance assumption produced similar results for the within subjects main effect of Time, $F(2, 148)=16.38, p<.0001$. In brief, social self-perception, averaged over time and combined across all target children independent of diagnosis and treatment specificity, changed significantly from pretreatment to posttreatment to follow-up.

A post hoc analysis of variance was applied to the adjacent difference scores (pretreatment to posttreatment, and posttreatment to follow-up) to further investigate the overall change observed in the social self-perception of the target children over the course of the study. This analysis revealed that the change observed across time, from pretreatment to follow-up, amongst the group of targets (independent of diagnosis and

SOCIAL SELF-PERCEPTION

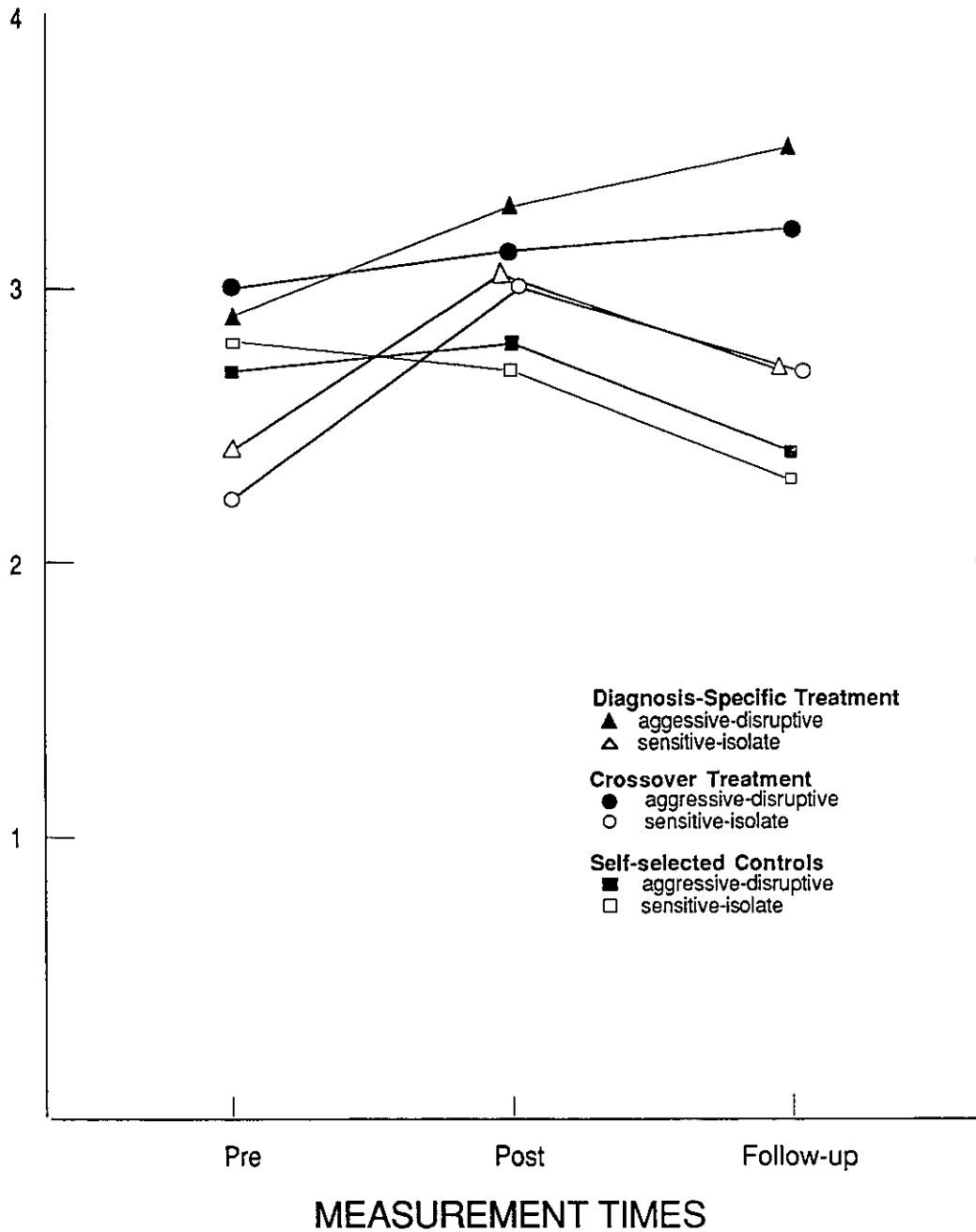


Figure 8. Pattern of change from pretreatment to follow-up in social self-perception by diagnosis for treatment specificity targets and self-selected controls (collapsed data).

treatment specificity) could be attributed primarily to a significant increase between pretreatment ($M=2.626$) and posttreatment ($M=3.128$), $F(1, 74)=46.32$, $p<.0001$. No additional significant change was revealed for time segment two (posttreatment to follow-up). However, because the increase observed at posttreatment was quite effectively maintained at follow-up ($M=3.128$ versus $M=3.048$, respectively), the overall pretreatment to follow-up improvement in social self-perception proved significant, $p<.01$. These findings are presented in Table 6 which summarizes treatment group means and standard deviations at each of the three measurement times by dependent variable. In addition, Figure 8 graphically depicts the changes across time segments in social self-perception for each diagnosis/treatment specificity combination, and for each of the two self-selected control groups.

Tests of Parallelism

Tests of between/within subject interactions led to rejection of the parallelism hypothesis. The social self-perception profiles of the various target groups (that is, diagnosis, treatment specificity, and diagnosis by treatment specificity combinations) did not all follow parallel paths across the course of the study. Rather, Wilks' Lambda and Pillai's Trace statistics revealed a significant Time by Diagnosis effect, $F(2, 73) = 5.10$, $p<.0084$. This finding was supported by Greenhouse-Geisser adjusted univariate solutions, $F(2, 148)=4.26$, $p<.0215$. All remaining between/within interactions yielded nonsignificant results (i.e., essentially parallel profiles).

Rejection of the parallelism hypothesis in the case of the Time by Diagnosis interaction indicated that the patterns of change in social self-perception as recorded across the two adjacent time segments (pretreatment to posttreatment, and posttreatment to follow-up) differed significantly between the sensitive-isolated and the aggressive disruptive diagnoses (when considered independent of treatment specificity). By contrast, the social self-perception profiles of the diagnosis-specific and the crossover treatment conditions

(considered independent of diagnoses) demonstrated parallel paths of change over time in terms of social self-perception. Relatively parallel paths of change in social self-perception across time were also demonstrated by the four treatment specificity by diagnosis combinations (aggressive-disruptives in diagnosis-specific treatment, aggressive-disruptives in crossover treatment, sensitive-isolates in diagnosis-specific treatment, and sensitive-isolates in crossover treatment). Significant differences are discussed further in the following paragraphs.

Time by diagnosis interaction. During the first time segment (pretreatment to posttreatment) the mean social self-perception score of the aggressive-disruptive targets (independent of treatment specificity) exhibited a significant increase, $p < .0021$ (from $M = 2.936$ to $M = 3.237$). A significant pretreatment to posttreatment increase was also recorded in the mean social self-perception of the sensitive-isolated targets, $p < .0001$ (from $M = 2.332$ to $M = 3.025$). During the posttreatment to follow-up time segment (time segment two) the mean social self-perception score of the aggressive-disruptive targets (independent of treatment specificity) revealed an additional increase that did not obtain statistical significance, $p < .0927$, but that changed in the predicted direction. In contrast, during time segment two, the mean social self-perception score of the sensitive-isolated targets (also independent of treatment specificity) displayed a decrease that approached significance, $p < .0583$. The time segment two changes displayed by the aggressive-disruptive targets, combined with the time segment two changes displayed by the sensitive-isolated targets, albeit statistically nonsignificant in both instances, were in opposite directions (i.e., improvement versus deterioration) and of sufficient magnitude to produce overall nonparallel profiles.

In summary, the results discussed above show that immediately following social skills intervention (independent of treatment specificity) the social self-perception scores of both the aggressive-disruptive and the sensitive-isolated targets improved significantly. No

significant change in social self-perception was recorded during time segment two (i.e., posttreatment to follow-up). The increase observed immediately after treatment with the aggressive-disruptive targets, however, was effectively maintained at follow-up, and even showed signs of ongoing although nonsignificant improvement between posttreatment and follow-up. By contrast, the posttreatment social self-perception scores of the sensitive-isolated targets began to decline during the posttreatment to follow-up phase. Means and standard deviations are presented in Table 6.

The Levels Test

The purpose of the levels test was to evaluate whether one target group (i.e., diagnosis or treatment specificity), on average, scored higher on the collected set of social self-perception ratings than the other diagnosis or treatment specificity conditions. It revealed a statistically significant difference in the mean social self-perception scores, across time, between the two diagnoses (independent of treatment specificity), $F(1, 74)=17.72, p<.0001$. The levels test, however, did not find significant differences between the collected set of social self-perception ratings of the two treatment specificity conditions (diagnosis-specific versus crossover, independent of diagnosis) or between the four treatment specificity by diagnosis combinations (aggressive-disruptives in diagnosis-specific intervention, aggressive-disruptives in crossover intervention, sensitive-isolated in diagnosis-specific treatment, and sensitive-isolated in crossover treatment). Significant main effects are discussed in greater detail in the following paragraphs. Recall that the follow-up analyses and contrasts examine the scores observed at each of the three individual measurement points (pretreatment, posttreatment, and follow-up). By contrast, the significance tests in profile analysis for parallelism, flatness, and levels evaluate difference scores.

Diagnostic group comparisons. A series of univariate analyses of variance and follow-up Tukey (HSD) tests were implemented to further explore significant findings

established by the levels test. Results indicated that the aggressive-disruptive targets (collapsed across the diagnosis-specific and crossover treatment groups) had significantly higher social self-perception scores than their sensitive-isolated counterparts at both pretreatment, $F(1, 77) = 16.47, p < .0001$ ($M = 2.936$ versus $M = 2.332$, respectively), and at follow-up, $F(1, 77) = 20.92, p < .0001$ ($M = 3.417$ versus $M = 2.696$, respectively). Interestingly, at posttreatment, mean social self-perception did not differ significantly as a function of diagnosis, $p < .1815$ ($M = 3.237$ versus 3.025). As indicated earlier, both the aggressive-disruptives and the sensitive-isolates displayed a significant pretreatment to posttreatment increase in social self-perception. Because the improvement reported by the sensitive-isolates was greater than that reported by the aggressive-disruptives, the ultimate difference between the mean social self-perception scores of the two diagnostic groups was significantly reduced, resulting in posttreatment scores that did not differ significantly by diagnosis. By follow-up, however, the significant posttreatment increase reported by the sensitive-isolated targets had begun to decline, while that reported by the aggressive-disruptives was effectively maintained. This reinstated (at follow-up) the significant diagnosis effect first seen at pretreatment, with the aggressive-disruptives once again reporting significantly higher social self-perceptions than the sensitive-isolates. These findings are summarized in Table 6 and Figure 8.

In brief, the levels test results showed that prior to treatment and at follow-up the aggressive-disruptive targets reported significantly higher social self-perception than their sensitive-isolated counterparts. At posttreatment the mean social self-perception scores of the two groups were not significantly different. Both the aggressive-disruptives and the sensitive-isolates reported significant posttreatment improvements in social self-perception. However, whereas the improvement reported by the aggressive-disruptive targets was effectively maintained at follow-up, that demonstrated by the sensitive-isolated targets showed signs of regression at follow-up.

Overall Pattern of Change in Social Self-Perception

Changes in social self-perception over time within each diagnosis and treatment specificity condition were examined. Paired t -tests were computed to investigate changes in social self-perception as they occurred in each of three time segments (pretreatment to posttreatment, posttreatment to follow-up, and pretreatment to follow-up).

Changes by diagnosis. As the data presented in Table 6 and Figure 8 indicate, the social self-perception scores of both the aggressive-disruptive and the sensitive-isolated targets (independent of treatment specificity) significantly increased immediately following intervention (i.e., during the pretreatment to posttreatment time segment), $p < .005$. No further significant changes were observed in the mean social self-perception scores of either diagnostic group during time segment two (i.e., posttreatment to follow-up), but changes approaching significance were recorded. In the case of the aggressive-disruptive targets, social self-perception scores between posttreatment and follow-up displayed a change that did not reach statistical significance, $p < .0927$, but that moved in the predicted direction; in the case of the sensitive-isolated targets, social self-perception scores displayed a *decrease* between posttreatment and follow-up that approached significance, $p < .0583$. The net effect of the ongoing, albeit statistically nonsignificant, changes recorded in the social self-perceptions of the two diagnostic groups (independent of treatment specificity) between posttreatment and follow-up was to produce overall (i.e., pretreatment to follow-up) increases in social self-perception that in the case of the aggressive-disruptives were highly significant, $p < .005$, and that in the case of the sensitive-isolates approached significance, $p < .05$.

Changes by treatment specificity. During time segment one (i.e., pretreatment to posttreatment) there was a significant increase ($p < .005$) in the mean social self-perception reported by targets (independent of diagnosis) randomly assigned to the diagnosis-specific treatment condition, and also by those targets (independent of diagnosis) randomly

assigned to the crossover treatment condition. During the posttreatment to follow-up time segment neither of the two treatment conditions demonstrated additional significant change in social self-perception. Subsequent examination of the overall change (i.e., between pretreatment and follow-up) in the mean social self-perceptions of target youngsters (aggressive-disruptives and sensitive-isolates combined), indicated a highly significant increase in the case of the diagnosis-specific treatment condition ($p < .005$), and a somewhat smaller but nonetheless significant increase in the case of the crossover treatment condition ($p < .01$).

Changes by diagnosis and treatment specificity combination. As summarized in Table 6 and graphically illustrated in Figure 8, during the pretreatment to posttreatment time segment, aggressive-disruptive and sensitive-isolated targets randomly assigned to the diagnosis-specific treatment condition, and sensitive-isolated targets randomly assigned to the crossover treatment condition all displayed significant increases in social self-perception, $p < .005$. During this initial time segment (i.e., pretreatment to posttreatment) only the aggressive-disruptive targets randomly assigned to the crossover treatment condition failed to show significant change in their mean social self-perception score ($p < .1793$). During the second time segment (i.e., posttreatment to follow-up), none of the diagnosis by treatment specificity combinations demonstrated further *significant* changes in their mean social self-perceptions. Changes, albeit not statistically significant in magnitude, did however continue to occur, and bore an overall impact that had significant implications in the pretreatment to follow-up changes recorded. More specifically, in the case of aggressive-disruptive targets (those in the diagnosis-specific treatment condition as well as those in the crossover treatment condition) showed small ongoing improvements in their social self-perceptions between posttreatment and follow-up. In contrast, sensitive-isolated targets in the crossover treatment condition showed a small *decrease* in their social self-perception between posttreatment and follow-up, and sensitive-isolated targets in the

diagnosis-specific treatment condition displayed a change in the predicted direction, $p < .0907$. Subsequent evaluation of the overall change in social self-perception (i.e., between pretreatment and follow-up) thus revealed a highly significant increase in the social self-perception of aggressive-disruptive targets randomly assigned to the diagnosis-specific treatment condition, $p < .005$, and an improvement approaching significance in the case of the sensitive-isolated targets randomly assigned to the crossover treatment condition, $p < .05$. By contrast, the overall pretreatment to follow-up change in social self-perception reported by aggressive-disruptives randomly assigned to the crossover treatment condition, and that reported by sensitive-isolates randomly assigned to the diagnosis-specific treatment condition both failed to obtain statistical significance. In the case of the aggressive-disruptives in crossover treatment, a significant change in social self-perception was never realized (i.e., not between any of the three time segments). In the case of the sensitive-isolated targets in diagnosis-specific treatment, however, a significant improvement had been realized between pretreatment and posttreatment, but was essentially lost between posttreatment and follow-up, resulting in an overall pretreatment to follow-up change that failed to obtain significance.

In brief, results of the paired t -tests are consistent with findings reported by the parallelism, flatness and levels tests. Following social skills intervention (for the moment, treatment specificity not considered), both the aggressive-disruptive and the sensitive-isolated targets reported significantly improved social self-perception. However, whereas the aggressive-disruptive targets successfully maintained their posttreatment improvements in social self-perception at follow-up, the improvement recorded immediately following treatment in the case of the sensitive-isolated targets was significantly less stable and by follow-up showed clear signs of regression toward pretreatment levels. Results of the paired t -tests also showed that diagnosis-specific social skills training and crossover treatment (when considered independent of diagnosis) achieved approximately equal levels

of success in terms of improving the social self-perception of socially rejected preadolescents, and maintaining that improvement over a one year period. The results, however, were somewhat less clear cut when comparing the results reported by the four diagnosis by treatment specificity combinations. In the case of the aggressive-disruptive targets, diagnosis-specific intervention was significantly superior to crossover treatment in improving social self-perception, and maintaining that improvement to one year follow-up. In the case of the sensitive-isolated targets, diagnosis-specific and crossover social skills training appeared equally successful in improving social self-perception in the short term (i.e., immediately following treatment). The improvements reported by the sensitive-isolates, however, were not as successfully maintained over the long term as were the improvements reported by the aggressive-disruptives; the posttreatment improvements in social self-perception reported by sensitive-isolates in the diagnosis-specific treatment condition as well as those in the crossover treatment condition showed signs of regression (approaching significance) between posttreatment and follow-up.

SUMMARY AND DISCUSSION

To briefly reiterate, the model presented in the current study hypothesized that both aggressive and withdrawn preadolescents are socially rejected by peers (i.e., not well liked; poorly accepted). It predicted that the likeability ratings, peer-perceived behavioral constellations, teacher-identified skill deficits, and social self-perceptions of the socially rejected youngsters in the present investigation would converge to reveal two distinct profiles of social maladjustment. These social-behavioral profiles would differentiate the two diagnostic groups of disliked youngsters (i.e., the rejected aggressive targets and the rejected non-aggressive targets) not only from their popular and average classmates, but from one other as well. Further, the model predicted that responsiveness to social skills training would vary as a function of the diagnosis of the target group, the specificity of the intervention administered, and the outcome variable being measured.

Overview of Findings

In terms of the hypotheses posited in course of the current investigation, and based on the results of the data analyses conducted herein, the following conclusions were drawn: Both withdrawn and aggressive preadolescents were socially rejected by their classroom peer group. Comparisons of the rejected-aggressive and the rejected-non-aggressive targets on the dependent variables of interest revealed little overlap between the two groups. The aggressive-disruptive targets were found to be significantly more aggressive than the sensitive-isolated targets, who, in turn, were found to be significantly more withdrawn than the aggressive-disruptive targets. Further, the sensitive-isolated targets (i.e., the rejected-non-aggressive preadolescents) were significantly less well liked than their

aggressive-disruptive counterparts, and reported significantly lower self-perceptions of social competence.

Regarding the implementation of intervention, social skills training (independent of treatment specificity) was found to be superior to waitlist control and no treatment in terms of improving the social self-perceptions and the peer-ratings of likeability of target children, and in terms of reducing their peer-reported aggressive and withdrawn behavior. Further, diagnosis-specific treatment was found to be generally more effective than crossover treatment in producing the improvements just outlined. Two exceptions were, however, reported: the social self-perceptions of sensitive-isolated targets improved immediately following both diagnosis-specific *and* crossover treatment. Similarly, the peer-rated likeability scores of aggressive-disruptive targets displayed a significant improvement immediately following both diagnosis-specific *and* crossover treatment. In both cases, however, only the improvements following diagnosis-specific treatment were successfully maintained at one year follow-up.

Results demonstrating the impact of diagnosis in determining treatment outcome showed that in the short term (i.e., immediately following treatment) the aggressive-disruptive and the sensitive-isolated targets responded relatively similarly to diagnosis-specific intervention. In the long-term, however (i.e., at one year follow-up) the aggressive-disruptive targets demonstrated an ability to effectively maintain posttreatment (i.e., diagnosis-specific posttreatment) improvements, while many of the improvements recorded at posttreatment for the sensitive-isolated targets had begun to diminish. Crossover treatment was effective in significantly improving the social self-perceptions of the sensitive-isolated targets, and the peer-rated likeability of the aggressive-disruptive youngsters; both in the short-term. In the long-term (i.e., at one year follow-up), however, these effects had begun to decline, and no longer showed significant pretreatment to follow-up differences. Finally, a hypothesis predicting that peer-reported aggression

and peer-reported withdrawal would be more sensitive to social skills training than peer-rated likeability, received some support in the case of the sensitive-isolated targets but was not consistently supported.

Peer Rejection of Aggressive and Withdrawn Preadolescents

The 90 youngsters identified by peers as liked less than average reported social self-perceptions that were distinctly more negative than those reported by either the leader group (i.e., the most popular classmates) or the average peer group. Compared to their classmates, the group of 90 poorly accepted, socially rejected youngsters also received a significantly higher proportion of negative nominations on a scale measuring peer perceptions of aggression, withdrawal, and leadership. That is, members of the socially rejected group were nominated significantly more often than members of either the average peer or the leader groups for the aggressive-disruptive and the sensitive-isolated behaviors listed on the nomination scale. Furthermore, teachers rated members of the poorly accepted group as deficient in a number of social skill areas in which they rated members of the average peer group as demonstrating relatively high levels of competence. Areas in which teachers consistently rated individual members of the disliked group as deficient included, for example, friendship making, dealing with anxiety, taking another's perspective, and finding alternatives to aggression. Thus, as predicted, results indicated that youngsters who were relatively disliked by their immediate peer group appeared to experience social adjustment difficulties on a number of levels (overt peer-perceived behavior, underlying social skills/competence, and self-image) which converged to produce social-behavioral profiles that quite clearly differentiated these youngsters from their better liked classmates.

Such differentiation was found in the percentage of peer nominations of aggression which were received by at least some of the disliked youngsters. Moreover, results of the

current study are concordant with those reported by other investigators (e.g., Asher & Coie, 1990; Coie, Dodge & Kupersmidt, 1990; Newcomb & Bukowski, 1984; Parker & Asher, 1987) showing that youngsters identified as socially rejected by their peers are often aggressive, impulsive, and disruptive. Indeed, approximately one half of the poorly accepted preadolescents identified in the current study, received a higher-than-average proportion of aggressive behavior nominations from their peers (for example, "gets into a lot of fights", "shows off", "interrupts", etc.).

Accordingly, the two social skill areas rated by teachers as most deficient amongst this group of relatively disliked youngsters were the ability to take the perspective of another (for example, recognizing others' feelings, showing understanding of others, dealing with anger), and the ability to generate alternatives to aggression, such as, using self-control, responding to teasing, and staying out of fights. Previous research and clinical experience suggest that these skill deficits are consistently associated with aggressive behavior. Thus, the group profile which emerged for approximately one half of the poorly accepted, socially rejected preadolescents was characterized by a set of overt aggressive, disruptive type behaviors, and related underlying self-control deficits. To this end, the group resembled the aggressive-rejected population described by Bierman (1986a). Aggression, in particular fighting and disruptiveness, has been cited as the most common reason given by children for disliking someone (e.g., Newcomb & Bukowski, 1984).

Data from the current study, however, also confirm more recent conclusions drawn by researchers (such as, Coie & Koepl, 1990; Hymel, Rubin, Rowden & LeMare, 1990; Rubin, Hymel & Mills, 1989; Rubin, LeMare & Lollis, 1990; Younger and Boyko, 1987) that many youngsters, especially as they approach later childhood and adolescence, are rejected (i.e., poorly accepted and/or not well liked) for reasons *other* than aggression. More specifically, the data showed that approximately 50 percent of the socially rejected

preadolescents identified in the current study were disliked for reasons associated with shy, withdrawn and *not* aggressive behavior.

The pattern of peer ratings received by the entire group of 90 poorly liked preadolescents revealed that socially rejected youngsters seem more appropriately described according to two major behavioral profiles — one characterized by aggressive-disruptive behaviors, and the other characterized by shy-isolated and withdrawn behaviors. That is, in the current study, both aggressive and withdrawn preadolescents were rejected by their peers. Contrary to reports that aggression is the most common correlate of, and/or precursor to, poor peer acceptance (Coie & Dodge, 1983; Newcomb & Bukowski, 1984), a second and equally large group of low social status youngsters, rated by peers as extremely *nonaggressive*, was identified. Moreover, this latter group was rated as more poorly accepted in terms of overall likeability than was the rejected aggressive group. The behavioral style attributed by peers to the rejected nonaggressive youngsters included: "has trouble making friends", "is very shy", and "is often left out". The finding that this group of rejected youngsters was perceived by peers as behaving in a highly nonaggressive manner, coupled with the fact that they were rated by peers as more highly disliked than the aggressive-disruptive group, and that they (i.e., the shy, withdrawn subjects) reported significantly more negative social self-perceptions than the rejected aggressives, provides strong support for hypotheses cited in recent research (e.g., Hymel et al., 1990; Rubin, LeMare & Lollis, 1990; Coie & Koepl, 1990) positing that socially rejected preadolescents are as likely to be shy-withdrawn as they are to be aggressive-disruptive.

The existence and distinctness of a shy, withdrawn group of poorly accepted youngsters was further advanced by the descriptions attributed to this group by teachers. More specifically, the social deficits rated by teachers as most characteristic of the group of nonaggressive but nonetheless disliked youngsters included poor friendship-making skills (such as, introducing oneself, beginning a conversation, joining in), and limited skills for

dealing with anxiety (such as, registering a complaint, dealing with embarrassment, and relaxing). Once again, previous research and clinical experience suggest that these underlying social difficulties seem an inherent component of the shy-withdrawn profile, or at least are seen to consistently occur in association with that behavioral repertoire.

Interestingly, although they identified areas of distinct weakness for those socially rejected preadolescents perceived by peers as acting in a shy and withdrawn manner, teachers in many instances expressed surprise when they learned that these youngsters were rated by peers as poorly liked. By contrast, no such surprise was expressed by teachers when they learned that a group of youngsters, perceived by peers as highly aggressive, whom they (i.e., the teachers) had rated as deficient in perspective taking ability and in generalized self-control strategies, were similarly rejected by their peer group. It would appear then that the concordance between teacher and peer perspectives was higher when judging the likeability of aggressive subjects than it was judging the likeability of sensitive-isolated, withdrawn youngsters. One might conclude that what preadolescent peers and their teachers interpret as salient information in determining social acceptance is not always the same. While in the current study aggressive, disruptive behaviors appeared to be viewed as aversive by both preadolescent and adult raters, shy/withdrawn and socially isolated behaviors, although recognized by teachers as characteristic of a significant segment of the preadolescent population (see also Mills & Rubin, 1990), appear to have been considered aversive only by the preadolescent peer group. That is, it was only the targets' preadolescent age-mates who seemed to view shy, withdrawn behaviors as a relevant determinant when rating likeability.

Teachers commented that although in their perception the shy/withdrawn subjects seemed rarely to initiate contact with others, and seemed to lack a circle of friends, they (i.e., the teachers) did not perceive them as engaging in behaviors which they thought would actively alienate the preadolescent peer group. Teachers added that although the

sensitive-isolated youngsters were socially reticent and awkward, they also seemed to possess numerous redeeming qualities. More specifically, teachers reported that the shy/withdrawn youngsters were consistently punctual and attentive in class, readily followed directions and completed assignments, and although not active participants in classroom activities were also not disruptive to established procedures. These informal observations suggest that while teachers may be capable of objectively evaluating specific areas of social competence and social skill difficulty in the case of their shy/withdrawn students (in a variety of skill domains), they may be notably less successful when interpreting the impact of the shy youngster's social difficulties on his/her interpersonal relationships within the peer group.

In the current study, a halo effect of sorts may have been operating. That is, teachers may have unconsciously allowed their impression of the shy-withdrawn youngster as a "good" student (i.e., attentive, non-disruptive, punctual, quiet, etc.) to obscure their ability to view the shy-withdrawn youngster and his/her social deficits from the perspective of the youngster's peer group. Khan and Hoge (1983) suggest that conclusions regarding the impact of halo effects should serve as a caution when using adult ratings to determine a youngsters' social status among the peer group, or his/her degree of likeability. The informal observations reported herein would certainly lend support to that suggestion. While teacher ratings have repeatedly been shown to play an important role in social skills research and intervention, and often provide corroborating evidence to the data gathered from peer- and self-ratings of social competence, the possibility of interfering halo effects also suggests that teacher/adult ratings should likely *not* be used as sole indices of a youngster's social standing with his/her peers. Rather, their purpose may be better served if they are used to complement other measures.

Moreover, data from the current investigation support observations drawn by Cillessen, van IJzendoorn, van Lieshout and Hartup (1990) that although adults may

continue to attribute poor peer relations in childhood to aggressive, acting-out behavior, and while researchers have tended to focus on the more visible correlates of poor peer acceptance in childhood (such as aggression), in preadolescence there appears to be a set of less visible but equally consistent correlates of social rejection, namely the repertoire of shy/withdrawn behaviors. It is certainly the case that research with young rejected children (i.e., early childhood and preschool) has found aggression to be a much more salient determinant than shy, withdrawn behavior in a youngster's decision of whom he/she does or does not like (e.g., Coie & Dodge, 1983; Dodge, 1983; Pellegrini, 1988). However, that the current investigation, with its population of peer-rejected preadolescents, found shy, isolated, and withdrawn behavior to be as salient as aggressive behavior to peers in determining likeability, lends support to Younger and Boyko's (1987) preliminary findings that the salience of aggressive and withdrawn behavior, in forming impressions about peers, may actually change with the age of the peer *rater*. More specifically, as the young children discussed in much of the earlier research (e.g., Newcomb & Bukowski, 1984) have tended to focus almost solely on aggressive behavior when expressing dislike for a peer, while the preadolescents in the current study focused on both aggressive and withdrawn behavior, support is provided for Younger's and Boyko's (1987) suggestion that as children approach adolescence and begin to develop larger peer groups, withdrawn behavior may become more dysfunctional and thus more highly salient than aggression in determining likeability and social acceptance.

In their model, Younger and Boyko (1987) proposed that, with age, youngsters develop a schema for socially isolated behavior which renders a typically shy, withdrawn response style significantly more visible than it had been in early childhood, and thus a notably more important determinant in peer ratings of social maladjustment. Certainly, the results of the current study would lend credence to this speculation. To consistently select and nominate peers who were best described by each of a number of behavioral items, the

study participants (grade six and seven level youngsters) must first have attended both to aggressive and withdrawn behaviors as they occurred in the past. They must then have coded and recalled these behaviors (i.e., formed social schemas) in terms of which peers displayed instances of the behaviors, and which peers displayed them most consistently. Furthermore, they must have rated these behaviors in terms of their social acceptability/aversiveness.

In brief, the presence of two distinct groups of socially rejected youngsters (i.e., rejected aggressive youngsters, and rejected non-aggressive youngsters), each hypothesized to possess its own unique set of behavioral difficulties and social skill deficits, was strongly supported in the current investigation. The rejected aggressive targets were shown to be significantly more aggressive than the rejected non-aggressive targets, who by the same token, were shown to be significantly more shy and withdrawn than the rejected aggressive targets. In addition, individual members of the two groups of rejected youngsters were rated by teachers as deficient in a number of social skill domains in which those same teachers rated individual members of the leader and average peer groups as highly competent. Most importantly, there was virtually no overlap in the skill deficits identified by teachers as most characteristic of the rejected aggressive group, and those identified by teachers as most characteristic of the rejected non-aggressive (sensitive-isolated) group.

In addition to being less well liked than their aggressive-disruptive counterparts, the sensitive-isolates (i.e., the shy withdrawn preadolescents) in the current study were found to display significantly lower self-perceptions of social competence. This finding supports conclusions drawn in previous research (e.g., Dubow & Cappas, 1988) showing that children's self-reports of social adjustment tend to converge with peer reports. And that social rejection correlates with poor self-image and low self-esteem. That the aggressive-disruptives and the sensitive-isolates reported significantly different social self-perceptions

lends credence to the notion that all poorly accepted youngsters do not necessarily display the same degree of negativity concerning their own social competence (Boivin & Begin, 1989). While data showing that the sensitive-isolated targets reported lower social self-perceptions than the aggressive-disruptives may be an indication that sensitive-isolated rejected preadolescents underestimate their own competence, it may also be an indication of a diminished self-concept brought on by obvious peer rejection. The lack of social initiatives taken by withdrawn youngsters combined with their general reticence may lead outside observers to hypothesize that these youngsters do not wish to interact with peers.

A general conclusion that can be drawn from current research with withdrawn preadolescents, however, seems to be that this population of rejected youngsters is notably more peer-oriented than their socially-isolated behavior would suggest. If sensitive-isolated (i.e., shy/withdrawn, rejected non-aggressive) preadolescents are peer-oriented but actively spurned by those peers, and further if they *internalize* that social rebuff, it may be that the emotional impact of peer rejection is greater for them than it is for their aggressive-disruptive counterparts. That is, whereas the sensitive-isolates are reported to internalize their lack of social success, the aggressive-disruptives are reported to attribute the cause of their social difficulties to sources outside themselves (e.g., Lochman, 1987). This attributional bias combined with reports that aggressive youngsters often possess some leadership qualities, such as a sense of humor (e.g., Coie, Christopoulos, Terry, Dodge & Lochman, 1989), that win them some amount of peer affection and that partially offset the peer-perceived negative aspects of their behavior, may render aggressive youngsters more resistant than their sensitive-isolated counterparts to the negative impact of peer rejection.

Findings that the sensitive-isolated preadolescents in the current study appeared more rejected than the aggressive-disruptive youngsters by classroom peers, coupled with findings that the sensitive-isolated youngsters displayed a significantly lower negative social self-image, suggests that their social difficulties should be taken very seriously.

While rejected non-aggressive preadolescents (i.e., sensitive-isolated, shy/withdrawn youngsters) may not be at risk for the overt negative outcomes associated with ongoing, untreated aggressive behavior (for example, dropping out of school, delinquency, etc.), their combined peer rejection and negative social self-perceptions may well place them at significant risk for developing a variety of internalizing disorders, such as anxiety and depression (Hymel et al., 1990; Rubin et al., 1989; Strauss, 1988; Strauss et al., 1988). As Panella and Henggeler (1986) found, compared to well-adjusted and conduct-disordered adolescents, socially anxious-withdrawn youngsters showed more personal apprehension and less positive affect toward peers, and appeared relatively more unhappy and less socially competent. The authors concluded that such peer interaction difficulties, which were most pronounced when the anxious-withdrawn adolescents were interacting with strangers, exacerbate the withdrawal and social inhibition that this group of rejected youngsters experiences, and serve to evoke further avoidance by peers. Difficulty in developing satisfactory, reciprocal friendships during the preadolescent years would then seem an important contributing factor in intensifying existing relationship problems, and advancing the likelihood of interpersonal difficulties in later life whether the youngster is categorized as rejected-aggressive or rejected-nonaggressive.

Thus, while many researchers have questioned whether children characterized by shy, withdrawn and socially isolated behavioral profiles represent a valid "at risk" population (e.g., Asher, Markel & Hymel, 1981; Coie, 1985; Parker & Asher, 1987), data from the current study suggests that they may very well do so. Rubin (1985) speculated that although withdrawn behavior in early childhood and the preschool years appears highly unstable, showing evidence of variation as a function of the particular social situation, and signs of spontaneous dissipation as the child ages, it may be that continued isolation into later childhood *does* become associated with *peer-perceived* abnormality, and as such becomes socially dysfunctional. Younger and Boyko's (1987) findings lend

support to that hypothesis, as do the results of the current study, which suggest that the "costs" of socially isolated, withdrawn behavior during the preadolescent years appear to involve significantly decreased social self-perceptions, and significantly diminished peer acceptance. Although both the sensitive-isolated and the aggressive-disruptive youngsters received approximately the same proportion of negative behavior nominations from their peers, the sensitive-isolates were more disliked by those peers and, based on their more highly diminished self-perceptions of social competence, appeared to feel more badly about that rejection than did the aggressive-disruptive targets. These findings may be a clear indication of the greater aversiveness of shy, withdrawn, isolated behavior during preadolescence, and of its importance during the preadolescent years as a predictor of later life difficulties, such as depression.

To the degree that social withdrawal and shy, isolated behaviors have been shown to be associated with later social adjustment problems such as the DSM-III-R anxiety disorders, and depression (e.g., Kratochwill & French, 1984; Matter & Matter, 1985; Reisman, 1985) the shy-withdrawn preadolescent group does seem to represent a potentially volatile, "at-risk" population. In a more immediate sense, the finding that the sensitive-isolated youngsters reported the lowest social self-perceptions suggests that they may "be hurting" more, in an emotional sense, than their aggressive-disruptive counterparts. That in itself would seem to merit the implementation of intervention as a worthwhile endeavor. Furthermore, as Schneider (1989) suggests, even if shy and withdrawn behaviors should prove to be more transitory than aggressive-disruptive behaviors, problems need not be permanent to be painful. Social skills intervention might therefore be seen as serving two purposes: a preventive one for youngsters whose social difficulties might not spontaneously dissipate with time, and a more supportive one for youngsters whose social difficulties are emotionally hurtful, but perhaps transitory.

It is proposed that the social maladjustment of the aggressive-disruptive youngsters may rest in "what they do", that is, fight, interrupt, argue, etc. It is further proposed that aggressive-disruptive preadolescents may engage these behaviors primarily when aroused because they lack self-control strategies and because they lack skill alternatives for the aggressive-type responses that typically comprise their behavioral repertoire. In observing the aggressive-disruptive targets attempting to solve either in vivo or naturally occurring problem situations (such as teasing) during the social skills training sessions in the current study, they seemed to genuinely lack skill alternatives to aggression, even when coached by group leaders to "stop, think, remain calm", etc. In brief, the problem-solving repertoire displayed by this group of youngsters seemed somewhat limited, and heavily focused on aggressive, impulsive responses.

During treatment the aggressive-disruptive subjects frequently and emphatically espoused the value of aggression, describing it as a satisfying and effective problem-solving strategy. Furthermore, as noted earlier in this discussion, they tended to view the source of their social difficulties as resting in others rather than in themselves or their way of dealing with peers. It may be that this attributional bias was the basis of their aggression; that is, if aggressive youngsters believe that their social difficulties originate in the ongoing scapegoating by peers, it seems quite reasonable that the eventual frustration of being so treated might gradually be acted out through aggressive acts toward those peers. The apparent willingness of the aggressive-disruptive targets to implement the non-aggressive problem-solving strategies demonstrated by the group leaders during the social skills training sessions in the current study, however, suggested that their seeming commitment to aggression may have come about more as a result of not having an adequately varied social problem-solving repertoire. Thus, the aggressive-disruptive preadolescents in this study indeed seemed to present with social *skill* deficits. That is, prior to treatment the aggressive-disruptive targets appeared to either lack the necessary

social skills to interact successfully with peers, or perhaps to have not mastered a critical step, such as "self-control", in the performance of a specific skill (Gresham, 1986). In brief, it seems reasonable to speculate that aggressive preadolescents often "do what they do" even if it lands them in repeated confrontations that ultimately result in peer rejection, because they lack alternative problem-solving strategies.

While it is proposed that aggressive preadolescents are disliked for "what they do", sensitive-isolated preadolescents may be poorly accepted by their peer group for "what they do *not* do" (for example, join in, initiate conversation, get others to listen, give positive feedback to others, etc.). In short, they are tentative, socially reticent, and repeatedly demonstrate a lack of self-confidence. One might reason that these traits seem notably less aversive than the acting-out behaviors characteristic of aggressive-disruptive rejected youngsters. Why, then, should the sensitive-isolated targets (i.e., shy withdrawn preadolescents, in general) be so disliked by peers? The answer may rest in the highly visible nature of their social awkwardness. During the preschool and early school years, isolated play and lack of social confidence are perhaps not highly visible because they are part of the natural developmental process through which a child progresses (for example, the transition from independent to parallel to integrated play). Because these behaviors are not abnormal during early childhood, they are not regarded as aversive by peers. As the youngster approaches adolescence, however, isolated activity, the absence of a network of friends, and the lack of social confidence that prevents the initiation of common activities such as beginning a conversation or joining an activity, do become aberrant and highly visible. As such, it seems possible that they also become highly aversive to peers who may come to regard the withdrawn preadolescent as odd and therefore socially unacceptable. Moreover, if shy/withdrawn preadolescents radiate a lack of self- and social-confidence, it may also be that they are simply uncomfortable to be with because their social awkwardness transcends to others in their company. For a youngster already experiencing

the turmoil of the transition into adolescence (Hetherington & Parke, 1979), this added social discomfort may be more highly aversive than dealing with an aggressive peer who may be loud and disruptive but whose other attributes (such as humor, self-confidence, etc.) perhaps render him/her a more comfortable partner. Most importantly, this rejection for the sensitive-isolated youngster comes at a time in the preadolescent's social development when the peer group and concomitant sense of belonging assume ever greater importance. As suggested earlier, a tendency to internalize the lack of social success, may ultimately render social rejection more devastating for the sensitive-isolated preadolescent than for the aggressive-disruptive youngster.

Interestingly, despite their limited social success when interacting with the regular peer group, the sensitive-isolated targets repeatedly demonstrated an ability to perform behaviors in role-play situations during social skills training that they were described by peers, teachers, and themselves as not able to perform in the classroom or on the playground. Unlike the aggressive-disruptive youngsters who typically seemed at a loss in terms of independently generating alternative solutions to social problems or assuming another's perspective, the sensitive-isolated preadolescents, in a behavioral role-play context, appeared highly adept in assuming any of a variety of social roles (e.g., bully, "snob", leader, shy, aggressive), played even the fine nuances of these roles very realistically, and displayed a relatively extensive social skill repertoire. As such, one might speculate that the sensitive-isolated preadolescents in the current study may have what Gresham (1986) labels a social *performance* deficit, and *not* a self-control social *skill* deficit. Gresham identifies a self-control performance deficit in instances where the child has a particular social skill in his/her repertoire, but does not perform it because of an interfering emotional arousal response. In the case of the sensitive-isolated preadolescent, this interfering emotional arousal response appears to come in the form of social anxiety. Social skills training for the group of shy-withdrawn rejected preadolescents might, then,

be more effective if it focused on helping youngsters to find ways of combating their anxiety rather than attempting to teach them skills that they may already have in their repertoires but be unable to access. Indeed, focusing intervention with these youngsters on skill enhancement without at least paying some attention to the emotional arousal that appears to interfere with their social success, may run the risk of heightening any frustration that they already feel in themselves and further diminishing their already weak self-image.

The Impact of Intervention as a Function of Subject Diagnosis

Different types of social skill problems (for example, self-control skill deficits versus self-control performance deficits), and different diagnoses (for example, aggressive-disruptive versus sensitive-isolated) suggest the need for different types of intervention, and the likelihood of different responses to those interventions. Indeed, during initial group meetings in the current study, when the purpose and process of the intended social skills training sessions was being discussed with individual treatment groups, the sensitive-isolated preadolescents appeared more enthusiastic about the planned intervention and, by their behavior and questions, seemed to take the proposed training more seriously than did the aggressive-disruptive targets. Over the course of the ten-week treatment period, therapists reported that the sensitive-isolated youngsters continued to take the training seriously; individual members rarely missed a session, they were punctual, consistently completed homework tasks, and in general seemed very committed to the process. Sessions tended to run smoothly and on schedule, with the youngsters consistently behaving in what is best described a task-oriented orderly fashion.

The atmosphere in training sessions with aggressive-disruptive targets was very different. They approached the initial information meeting with what seemed a degree of

reservation and skepticism. Once treatment was underway, however, the rejected aggressive youngsters, like their sensitive-isolated counterparts, were highly active participants. Nonetheless, the nature of that participation varied notably as a function of the diagnosis of the trainees. Whereas the sensitive-isolated youngsters willingly participated in the various discussions and related activities that constituted a session, they typically waited to be called upon by a therapist before venturing an idea, raised their hands if volunteering an idea, and demonstrated good turn-taking skills in terms of allowing others to express views, etc. The aggressive-disruptive targets, on the other hand, constantly pushed for opportunities to share ideas and experiences, to participate in role-plays and, in general, to be in the center of attention. Moreover, they tended to take slightly longer settling down in any given meeting than did the sensitive-isolates, they were inclined toward some amount of silliness and "acting out" when engaged in role-plays and/or discussions, and in general required more ongoing structure and limit setting to keep them focused on the task. As a whole, the aggressive-disruptive targets did not seem, on the basis of their behavior, to take the training sessions as seriously or perhaps to invest as much personally as did the sensitive-isolated youngsters. The aggressive-disruptive targets, however, retained an engaging enthusiasm throughout the course of treatment and, as the results reported earlier indicated, benefited significantly from the intervention.

Furthermore, although the behavior of the aggressive targets *suggested* a somewhat less committed investment on their part to the treatment, that is not to say that that perception was accurate. The seeming absence of a personal investment from these youngsters may, in reality, have been a pretence or defensive ploy used by the youngsters to guard against any potential loss of self-image. Finally, the attitudes with which the sensitive-isolated and the aggressive-disruptive targets approached treatment may have been less a measure of their investment in the intervention than it was simply a reflection of how these two groups of youngsters approach most situations; seriously and orderly in the case

of the sensitive-isolated group, and loud and exuberantly in the case of the aggressive-disruptive group.

Previous research (e.g., Boivin & Begin, 1989; Rubin et al., 1989; Strauss, 1988) has suggested that withdrawn children tend to underestimate their own social competence, whereas aggressive youngsters display distorted social perceptions in which they describe themselves as more highly competent than their peers would indicate. The differences found among the social self-perception scores reported by the two diagnostic groups (i.e., the sensitive-isolated targets, and the aggressive-disruptive targets) would certainly corroborate the possibility of such a notion. Prior to and following social skills intervention, the aggressive-disruptives reported significantly higher social self-perceptions than the sensitive-isolated youngsters. Further, the social self-perception scores of the aggressive-disruptive youngsters approached those reported by the average peer group, even though the average peer group received significantly higher likeability ratings from the peer group than did the aggressive-disruptive targets.

Researchers investigating the role of self-perception in peer relations (e.g., Boivin & Begin, 1989; Rubin et al., 1989; Strauss, 1988) have gone on to suggest that socially rejected anxious/withdrawn children internalize their lack of popularity which leads to further deterioration of their self-image. Rejected *aggressive* children, on the other hand, are thought to attribute their peer relationship difficulties not to themselves but to external sources. In view of Younger and Boyko's (1987) conclusion that social isolation becomes a more salient criterion in determining social status and peer acceptance as children approach adolescence, it seems reasonable to conclude that the sensitive-isolated targets in the current study are particularly vulnerable, and may be at risk for developing internalizing disorders. That they might have come to the social skills training sessions "hurting more" than the aggressive-disruptive targets, and that they may consequently have appeared more invested in, or responsive to, getting help, is therefore perhaps not highly surprising.

Further, if it is indeed the case that sensitive-isolated youngsters can be assessed as having self-control *performance* deficits rather than self-control skill deficits, and therefore be said to already possess within their existing social repertoires the skills necessary for social success, then their investment in finding a way to access those skills might be quite great. There is perhaps less to risk emotionally in requesting help to access a set of existing skills (i.e., the possible case of the sensitive-isolated targets) than in requiring help to develop skills which the rest of the peer group already seems to have in place (i.e., the possible case of the aggressive-disruptive targets). Unlike the aggressive-disruptive youngsters who appear to have a single *readily-accessible* problem solving strategy (albeit, a negative one that typically involves aggressive behavior) in which they have perhaps invested a certain amount of their own self-definition, the sensitive-isolated youngsters appear at a loss (when interacting in naturally occurring social situations) of how to access skills that they clearly and spontaneously demonstrated in the context of the training group. Again, that the sensitive-isolated targets appeared to approach treatment more openly and with a seemingly greater personal investment is thus perhaps not highly surprising.

Interestingly, the overt differences in how the the aggressive and the withdrawn (sensitive-isolated) targets approached and undertook treatment did not appear to accurately or consistently predict ultimate response to, or benefit from, treatment. Immediately following intervention, the social self-perceptions of both the aggressive and the withdrawn targets saw significant improvement. At follow-up, however, the long-term benefit of intervention was significantly more profound with the aggressive than with the withdrawn youngsters. A highly similar pattern was recorded in terms of peer-rated likeability.

Subjective observations of the target groups indicated that it was the sensitive-isolated youngsters who expressed greatest disappointment when the ten-week social skills training period was completed. Interestingly, over the course of the intervention, the sensitive-isolated youngsters, more than their aggressive-disruptive counterparts, were

observed to form social hierarchies within the training group. In virtually all the treatment groups that involved sensitive-isolated targets, one or two members seemed to take on what appeared to be leadership roles, and the others readily acquiesced. This was not observed with the aggressive-disruptive targets; with this group all members continually vied for leadership.

Studies of social skills training that are often cited in the literature as emblematic of this sort of intervention (e.g., Gresham & Nagle, 1980; La Greca & Santogrossi, 1980; Oden & Asher, 1977) vary broadly with regard to which children are targeted as subjects, what skills are trained, and whether or not changes in behavior or in social status are demonstrated. That these studies have reported mixed results does not seem to be overly surprising. Results concerning the impact of social skills training with the socially rejected youngsters identified in the current study indicated that outcome varies as a function of the diagnostic makeup of the group (i.e., rejected aggressive-disruptive versus rejected non-aggressive/sensitive-isolated), the specificity of the treatment implemented, the outcome variable being measured, and the *time* of the posttreatment measurement (that is, immediately following intervention versus one year follow-up) (see Table 7). As such, hypotheses predicting that one diagnostic group would display greater overall benefit than the other, or that one type of treatment specificity condition (that is, diagnosis-specific versus crossover) would consistently prove more effective were not unequivocally supported.

Significant gains were observed in the likeability ratings and in the social self-perceptions of both the sensitive-isolated and the aggressive-disruptive youngsters immediately following intervention (for the moment, not considering the specificity of the training but rather combining across the diagnosis-specific and crossover treatments). The importance of these improvements is underscored when they are juxtaposed against the pattern of scores simultaneously displayed by the self-selected control groups on these two

Table 7

Summary of Social Skills Training Results (collapsed data)

Treatment Specificity by Diagnosis Combination	Peer Ratings			Self-Ratings
	Likeability	Aggression	Withdrawal/ Social Isolation	Social Self Concept
1. Pre-treatment to Post-treatment				
Aggressive-Disruptive Targets				
Diagnosis-Specific Treatment	+	pT	NS	+
Crossover Treatment	+	NS	NS	NS
Undifferentiated by specificity	+	pT	NS	+
Self-selected controls	NS	nT	NS	NS
Sensitive-Isolated Targets				
Diagnosis-Specific Treatment	+	NS	+	+
Crossover Treatment	NS	NS	NS	+
Undifferentiated by specificity	+	NS	+	+
Self-selected controls	NS	NS	NS	NS
2. Post-treatment to Follow-up				
Aggressive-Disruptive Targets				
Diagnosis-Specific Treatment	NS	NS	NS	NS
Crossover Treatment	NS	NS	NS	NS
Undifferentiated by specificity	NS	pT	NS	NS
Self-selected controls	NS	nT	NS	NS
Sensitive-Isolated Targets				
Diagnosis-Specific Treatment	NS	NS	NS	NS
Crossover Treatment	NS	NS	NS	NS
Undifferentiated by specificity	NS	NS	NS	NS
Self-selected controls	NS	NS	NS	NS
3. Pre-treatment to Follow-up				
Aggressive-Disruptive Targets				
Diagnosis-Specific Treatment	+	+	NS	+
Crossover Treatment	NS	NS	NS	NS
Undifferentiated by specificity	+	+	NS	+
Self-selected controls	NS	-	NS	nT
Sensitive-Isolated Targets				
Diagnosis-specific Treatment	NS	NS	+	NS
Crossover Treatment	NS	NS	NS	pT
Undifferentiated by specificity	pT	NS	pT	pT
Self-selected controls	-	NS	NS	-

NOTE: "Improvement" is depicted for: higher peer-rated likeability, lower peer-rated aggression and social isolation, and higher social self-perception scores. Bonferroni adjusted p levels have been used to test for significance.

LEGEND: + = significant improvement ($p < .01$).
 pT = trend ($p < .05$) in predicted direction (i.e., toward improvement).
 NS = no significant change.
 - = significant deterioration ($p < .01$).
 nT = trend ($p < .05$) in negative direction (i.e., toward deterioration).

variables. The significance of comparisons between target and self-selected control youngsters are discussed in the following paragraphs. In general, however, research findings showed social skills training to be superior to no treatment (and waitlist control) in terms of improving the social self-perceptions and the peer ratings of likeability of socially rejected preadolescents.

The posttreatment *likeability ratings* given to the target youngsters (both the sensitive-isolates and the aggressive-disruptives) by their peers indicated significantly improved social acceptance immediately following social skills intervention (independent of treatment specificity). At one-year follow-up, improvements seen at posttreatment were effectively maintained in the case of the aggressive-disruptive targets, but had begun to diminish in the case of the sensitive-isolated preadolescents. Speculation that the posttreatment improvements observed in the peer-rated likeability scores of both the sensitive-isolated and the aggressive-disruptive targets could be attributed to the intervention administered rather than to some other confounding factor was supported by findings involving the self-selected controls (and also the waitlist controls). While the likeability ratings of target youngsters who had participated in social skills training improved over the course of the study, the likeability ratings of the self-selected controls (poorly accepted youngsters, both sensitive-isolates and aggressive-disruptives, who chose not to participate in the social skills training sessions) actually diminished steadily between the first second and third measurement times. Similarly, comparisons of the immediate and waitlist treatment phases showed that following the first treatment phase (i.e., the point in time when the immediate treatment but not the waitlist control targets had received social skills training), the likeability ratings of targets in the immediate treatment phase had improved significantly while those of the waitlist control targets had not changed.

The *social self-perceptions* reported by targets (both the sensitive-isolates and the aggressive-disruptives) also improved significantly following intervention (independent of

specificity). Again, the posttreatment improvements were effectively maintained at one-year follow-up in the case of the aggressive-disruptives, but showed signs of reversal by follow-up in the case of the sensitive-isolates. By contrast, the social self-perceptions of the self-selected controls (sensitive-isolated and aggressive-disruptive targets who chose not to participate in the social skills training programs) showed no improvement. Instead, they actually showed a significant decrease across the course of the study. That the social self-perceptions of the target youngsters improved following treatment while those of the matched group of self-selected controls did not, lends support to the positive impact of social skills training; it suggests that the improvement was a function of the intervention and not some external confounding factor. That improvement was a function of social skills training was also provided by comparisons of the immediate and waitlist control treatment phases, which showed improvement in social self-perception to follow treatment, not to precede it or to occur in its absence (refer also to Figure 3 in the Results chapter).

Together, the findings discussed above indicate that social skills training appears to be an effective treatment strategy for bolstering the self-concept and social acceptance of both aggressive and non-aggressive rejected preadolescents. It appears that at least some dimensions of what constitutes social competence can be positively impacted by direct intervention. Unfortunately, as noted above, while posttreatment improvements in the target youngsters' social self-perceptions and peer-ratings of likeability were effectively maintained one year later in the case of the aggressive-disruptive preadolescents, the posttreatment gains observed with the sensitive-isolated youngsters were more short-lived and had begun to diminish somewhat by follow-up. Nonetheless, in the case of both groups of disliked preadolescents (i.e., the aggressive-disruptives and the sensitive-isolates), treatment was followed, at least in the short term, by significant improvements in social self-concept and peer-rated likeability.

A somewhat similar pattern was observed regarding the general effectiveness of social skills training (diagnosis-specific and crossover combined) in reducing both the *aggressive* behavior of the aggressive-disruptive youngsters, and the *socially isolated/withdrawn* behavior of the sensitive-isolated youngsters. In the short term (that is, immediately following intervention) both diagnostic groups received fewer negative behavior nominations from their peers than they had at pretreatment; in the case of the sensitive-isolated targets the reduction in peer-rated shy/withdrawn behavior was highly significant, and in the case of the aggressive-disruptive youngsters the reduction in peer-rated aggressive behavior approached significance. However, whereas the aggressive behavior nominations received by members of the aggressive-disruptive group continued to diminish between posttreatment and follow-up, further behavioral improvement in the case of the sensitive-isolated youngsters (indicated by sensitive-isolated targets receiving fewer withdrawn behavior nominations) was negligible.

In the long-term, at one year follow-up, social skills intervention (treatment specificity not considered) appeared more effective in reducing the peer-perceived aggressive behavior of the majority of aggressive-disruptive targets, and maintaining and building on that improvement, than it was in reducing the peer-perceived shy/withdrawn behavior of the majority of sensitive-isolated youngsters, and/or providing this group of socially rejected preadolescents with the skills needed to produce ongoing change once training was completed. Furthermore, the sizeable standard deviations observed in the case of the sensitive-isolated targets at follow-up indicated the presence of considerable variability in the group's peer-perceived shy/withdrawn behavior. In other words, while some sensitive-isolated youngsters appeared to have benefited significantly from the social skills training program implemented, in both the short and long term, others seemed to have benefited significantly in the short term only. It is possible that this latter sub-group did not acquire the skills necessary, in the course of training, to generalize to new social

situations, strategies learned during treatment, and consequently once the regular structure and support of the training group was removed, reverted to pretreatment level shy/withdrawn behaviors (as determined by the percentage of peer nominations of social withdrawal received). Overall, these findings suggest that the sensitive-isolated population identified in course of the current investigation may have been more heterogeneous than initially believed, and certainly more heterogeneous than the aggressive-disruptive population which appears to have responded in a more uniform fashion to the intervention implemented.

In brief, across all outcome measures the *long term* benefits of social skills training (when specificity of treatment was not considered) were more evident with the aggressive-disruptive than with the sensitive-isolated targets. That is, the benefits were more stable with the aggressive-disruptive preadolescents. In the *short term*, however, the two diagnostic groups benefited similarly on the various outcome measures. By contrast, the group of poorly accepted youngsters who chose not to participate in the social skills training component of the study (that is, the self-selected controls) demonstrated an overall deterioration (albeit not always significant) on the majority of the outcome measures.

While results from the self-selected controls must be interpreted with caution given the small number of subjects in this group, their data provide an interesting comparison. By follow-up, neither the peer-reported likeability nor the social self-perceptions of the aggressive-disruptive self-selected controls had improved; rather, both variables for this group of subjects showed a slight deterioration across the course of the study. In addition, the proportion of aggression nominations received by the aggressive-disruptive self-selected controls from their peers had increased significantly by follow-up. A similar pattern was observed in the case of the sensitive-isolated self-selected controls. By follow-up, both their social self-perceptions and their peer-rated likeability registered declines that approached significance. Unlike the aggressive-disruptive self-selected controls, however,

whose peer-reported aggressive behaviors increased significantly across the course of the study, peer nominations of social isolation/withdrawal received by the sensitive-isolated self-selected controls remained relatively stable over the two year investigation, showing neither improvement nor deterioration.

Comparison of the profiles (i.e., peer-rated likeability, peer-rated aggression, peer-rated social withdrawal, and social self-perception) of the target and the self-selected control groups, and of the immediate and the waitlist treatment groups, provides support for a social skills training model of intervention which posits that treatment is superior to no treatment and to waitlist control treatment in terms of improving the social skills of socially rejected preadolescents. The benefits of treatment in improving the rejected youngster's social self-perception, his/her peer-rating of likeability, and his/her percentage of peer-nominations of aggression or withdrawal, coupled with the lack of similar improvements in the absence of treatment, suggests that one does not want to leave social skills development to chance if direct instruction can be effective.

Rogosch and Newcomb (1989) concluded that rejected children who are actively disliked and have few or no friends, experience particular difficulty in acquiring new social behaviors if left to their own devices. Lacking a regular peer group with which to interact, rejected-disliked youngsters are thought to have limited opportunity to observe, practice and learn what constitutes appropriate social behavior with age-mates (Rogosch & Newcomb, 1989). Further, Rogosch and Newcomb (1989) suggest that these youngsters have distinctly negative social reputations which are maintained by peers, and which work to thwart efforts the disliked youngster may make at implementing an alternative and appropriate behavior. By so disregarding efforts made by the rejected child to change, further inappropriate behavior is encouraged. Data from the current investigation which indicated that the social skills of the self-selected controls deteriorated over the course of the study, while those of the waitlist controls remained stable until treatment was implemented

(after which significant improvement was reported) lend credence to the conclusions put forth by Rogosch and Newcomb (1989), and present supportive evidence for the argument that social skills training *can* benefit socially rejected youngsters who might otherwise experience further decline in their peer relations.

The greater long-term success of social skills training (i.e., treatment specificity not considered) with the aggressive-disruptive youngsters than with the sensitive-isolated youngsters may be a direct function of the greater suitability of the treatment provided, in alleviating a *skill deficit* as opposed to a *performance deficit*. As suggested earlier, aggressive-disruptive targets seem to experience self-control *skill* deficits, whereas sensitive-isolated targets seem to experience self-control *performance* deficits. If the treatment programs implemented in the present study were not well equipped to intervene with the target youngsters' underlying emotional states, and if these emotional states were the necessary level of intervention (as might be the case with sensitive-isolated targets) then the actual source of these youngsters' social difficulty or deficit was perhaps not adequately addressed. The symptom may have been banded instead. Long-term, stable improvement could hardly have been expected in such instances. By contrast, treatment that successfully addresses origins of a problem (for example, by teaching a missing skill) might be expected to yield stronger, more long-term, stable benefits.

In terms of the current study, it is speculated that teaching specific skills to the aggressive-disruptive targets, through direct intervention, enabled this group of youngsters to expand their social repertoires to include concrete skills that prior to treatment were simply not there. It was anticipated that the therapist-perceived lesser personal investment or commitment of the aggressive-disruptive targets to the treatment program might attenuate their response to social skills training. This, however, was not the case. An informal, subjective analysis suggested that the initial commitment of the aggressive-disruptive targets to treatment was similar to what was anticipated. More specifically, at the start they

appeared more highly committed to the social problem solving style that had been described as characteristic of them (that is, an aggressive response), than they were to learning new problem solving strategies. Posttreatment improvements observed on each of the dependent variables, however, suggest that the aggressive-disruptive youngsters must have made efforts to generalize to the "outside world" the alternative strategies that were modelled and practiced during the ten week training period. It is speculated that skill and problem-solving rehearsal completed during the training sessions helped these youngsters overcome the difficulties inherent in maintaining self-control *in vivo*, although this took time to achieve. Although superficially a bit silly during the training sessions, the aggressive-disruptives appeared to have learned some skills that were eventually of benefit to them — like seeds casually scattered which later take root. One might speculate that the peer and/or adult sanctions for overt aggressive behavior during preadolescence may be more severe than in early childhood. This may facilitate both the correction of the aggressive-disruptive youngster's interfering cognitive factors (that is, poor self-control in real life situations) and the generalization of training.

Although the effects of treatment, in terms of reducing the overall proportion of aggression nominations received by the aggressive-disruptive targets from their peers, were not seen immediately following intervention, a significant improvement was seen by one-year follow-up. Further, despite this peer-reported behavioral change not obtaining *statistical* significance immediately following treatment, a positive trend was observed in the overall mean aggression scores of the aggressive-disruptive targets between pretreatment and posttreatment (i.e., peer-nominated aggression showed a decline approaching significance). In addition, immediately following treatment, both the likeability ratings and the self-perception scores of the aggressive-disruptive youngsters displayed a significant increase. It seems that while they may typically externalize the source of their peer-related difficulties, many of the aggressive-disruptive subjects appeared

ultimately willing to take responsibility at some level and to make efforts to create change, when provided with the necessary tools (i.e., alternative problem solving strategies, alternative skills). The changes which they eventually implemented outside of the treatment group appear to have been observed and accepted by peers as sincere, and thus responded to by those peers with increased perceptions of likeability. The same did not seem to hold true for the sensitive-isolated targets. Interestingly, although immediately following treatment (specificity not considered) peers rated the sensitive-isolates as behaving in a significantly less socially withdrawn manner, and responded, it would appear, by giving them higher likeability ratings, these improvements were relatively ephemeral. Although the average peer-rated likeability scores and the average peer-rated social withdrawal scores reported at follow-up for the sensitive-isolated targets were not significantly changed from the improvements reported at posttreatment, the observed standard deviations had increased notably, probably rendering the overall pretreatment to follow-up improvements nonsignificant. It would seem that between posttreatment and follow-up a portion of the sensitive-isolated target population maintained the benefits gained during treatment, another portion perhaps built on those benefits, while a third portion lost the benefits of training once treatment was completed. Again, these results suggest that the sensitive-isolated population identified in the current study was more heterogeneous than anticipated.

Another argument suggests that although the sensitive-isolated preadolescents were rated by peers as behaving in a markedly less shy/withdrawn manner immediately following treatment, there may still have been intrinsic aspects about their style of interaction that peers found unacceptable. As noted earlier, it is possible that the treatments provided in course of this study did not specifically address the true source of the sensitive-isolated preadolescents' social deficits; that is, the possible anxiety that may be hindering their ability to access social skills that already exist within their social repertoires. This underlying anxiety (self-control performance deficit) was perhaps dealt with in too

perfunctory a manner; the treatment programs provided may have focused too heavily on alleviating specific *skill* deficits at the expense of placing too little emphasis on the problem underlying those seeming overt deficits.

In short, the treatment programs provided may have erroneously focused their energies on alleviating the symptom rather than the source of the sensitive-isolated preadolescent's social difficulties. Thus, while intervention may have provided the sensitive-isolated targets with a superficial self-confidence that enabled at least some of them to risk actually implementing skills from within their social repertoires, it may well not have been sufficient to promote the internalization of a new self-concept. In the absence of that internalization process, it is quite possible that the heightened self-confidence (i.e., improved social self-perception) reported at posttreatment would gradually dissipate, as was the case in the current study. Further, if treatment alleviated the *symptom* rather than the source of the sensitive-isolated targets' social difficulties, it seems reasonable to assume that although peers may have rated them as significantly less withdrawn at posttreatment than at pretreatment, there may well have remained subtle awkward nuances in their (i.e., the sensitive-isolated targets') social presentation that peers readily perceived and rated negatively. As implied by Younger and Boyko's (1987) findings, such awkwardness appears to become highly salient as youngsters approach adolescence.

One might also speculate that improvements which actually did occur in the social behavior of the sensitive-isolated targets were noticed primarily by a small group of potential friends. Increased likeability ratings and reductions in peer-perceived shy/withdrawn behavior may thus have come about essentially as a result of significantly improved ratings received from a small group of peers, rather than from slightly improved ratings from the entire group of classmates. If indeed the sensitive-isolates had small circles of potential friends that were ready to accept them, it seems reasonable to assume

that the degree of change needed to elicit this "awaiting" acceptance was sufficiently small that peers not included in the group of potential friends would not necessarily have noticed the improvements. In the likely event, then, that groups of youngsters who had been together for most of their elementary school years would no longer be in the same classroom in junior high school, the sensitive-isolates would in effect have lost their newly found support group at follow-up. Indeed, if changes demonstrated immediately following treatment were noticed primarily by a small circle of potential friends who responded to the change, however small it may have been, by significantly increasing their likeability ratings of individual sensitive-isolates, then it seems reasonable to assume that at follow-up, in the absence of the newly acquired support group, likeability ratings might well revert to their pretreatment levels. This might be especially true if the degree of change that actually occurred in the case of the sensitive-isolates at the grade six level following treatment was negligible and not highly reflective (in terms of the perspective of the larger peer group) of the increased likeability ratings attributed them by a select and small number of potential friends.

The Importance of Treatment Specificity

The differences found between the two groups of socially rejected preadolescents (aggressive-disruptives and sensitive-isolates), both in terms of the nature of their social difficulties and their response to treatment, has important implications for intervention programs. As predicted, the diagnosis-specific and crossover treatments in the current investigation had different effects on the outcome measures of social adjustment used. Again, the results were not as unequivocal as hypothesized. Rather, they depended on the diagnosis of the group undergoing treatment, the outcome variable being measured, and, to a degree, the time of measurement (that is, immediately following intervention versus one-

year follow-up). The findings are summarized in the following paragraphs and presented in Table 7.

The social self-perceptions of aggressive-disruptive targets who received diagnosis-specific treatment improved significantly immediately following intervention, continued to strengthen over the year, and by one-year follow-up approached levels similar to those reported by the average peer and leader groups. Immediately following diagnosis-specific treatment, the aggressive-disruptive targets also received significantly higher likeability ratings from peers. As with the social self-perceptions, the improved peer-reported likeability ratings for the aggressive-disruptive subjects continued to strengthen over time, and were effectively maintained at follow-up one year later. Finally, diagnosis-specific social skills training produced stable (albeit, not statistically significant until follow-up) behavioral improvements, as rated by peers, with the aggressive-disruptive youngsters. More specifically, immediately following diagnosis-specific intervention, the aggressive behavior nominations received by the aggressive-disruptive targets decreased to a level that approached significance. The initial decline in the peer-rated aggression of the aggressive-disruptive targets who had received diagnosis-specific treatment, however, continued over the course of the study. By one-year follow-up the proportion of aggression nominations that the aggressive-disruptive targets received from peers was significantly lower than that which they had received at pretreatment. Given the extensive literature on the stability of childhood aggression and its relation to long-term maladjustment, these findings must not be minimized.

By contrast, crossover treatment had virtually no effect on the social self-perceptions of the aggressive-disruptive targets. As well, while they (i.e., the aggressive-disruptives in crossover treatment) received significantly higher likeability ratings from peers immediately following intervention, the improvement was not stable over time, and by one-year follow-up had dissipated to a level that was not significantly different from the

peer-reported likeability ratings that they had received prior to intervention. Finally, while the aggressive-disruptive youngsters received slightly fewer aggression nominations from peers following crossover treatment than they had received prior to treatment, the improvement did not attain statistical significance in either the short or long term.

A different pattern of results emerged in the case of the sensitive-isolated targets. The social self-perceptions of these youngsters in both the diagnosis-specific *and* the crossover treatment conditions improved significantly immediately following intervention. In neither case, however, were the improvements seen at posttreatment effectively maintained at one year follow-up. Diagnosis-specific treatment was also successful in significantly enhancing the sensitive-isolates' peer-rated likeability immediately following intervention, whereas crossover treatment was not. As with the improvements seen in the sensitive-isolates' social self-perceptions, however, the improved likeability ratings of the sensitive-isolated diagnosis-specific group were short term and not effectively maintained by follow-up. Finally, diagnosis-specific social skills training produced significant short- and long-term improvements in the peer-rated withdrawn behavior of the sensitive-isolated youngsters. More specifically, from pretreatment to posttreatment to one-year follow-up, the social isolation/withdrawn nominations received from peers by the group of sensitive-isolated targets who underwent diagnosis-specific intervention declined steadily and significantly. The significant reduction in peer-reported withdrawal that was observed immediately following diagnosis-specific intervention was not only maintained but enhanced by one year follow-up. By contrast, sensitive-isolated youngsters who received the crossover treatment condition failed to show improvement, according to peer informants, in terms of their socially isolated, withdrawn behavior patterns.

That the posttreatment social self-perceptions of the sensitive-isolated targets became more positive, regardless of the specificity of the treatment received (diagnosis-specific versus crossover), can perhaps be understood best in the context of the

attributional style of the sensitive-isolated youngsters. It is speculated that the opportunity of participating in a structured group of peers who could provide the sense of belonging and social success that was perhaps otherwise missing from the day to day experiences of sensitive-isolated preadolescents, was in itself reinforcing for these targets. As such, the *content* of a given session may have been much less critical than the actual act of belonging to, and participating in, a social group in which the parameters of expected social behavior were clearly and consistently outlined. If the subsequent experience of social success, resulting from positive interactions within the training group, was then internalized by the sensitive-isolated youngsters so that they came to attribute the experiences of social success to internal sources, it seems reasonable to conclude that their self-image and social self-perception might well have been enhanced. Furthermore, this enhancement of social self-perception might well have occurred independent of the specificity of an intervention (i.e., the goodness of fit between the target youngsters' social deficits and the content of the training program).

More specifically, if sensitive-isolated preadolescents have within their existing social repertoires many of the skills necessary for development of successful peer relationships but are unable to perform these skills because of interfering emotional states such as anxiety, then it is possible that the opportunity of finally demonstrating and practising those skills (albeit, via behavioral role play) provided an experience that was within itself, regardless of the content of the surrounding treatment package, successful in enhancing self-confidence and eliciting a sense of personal accomplishment. The subsequent finding that the significantly improved post-intervention social self-perceptions of the sensitive-isolated targets began to diminish soon after treatment stopped, lends credence to the notion that it was the group experience itself, rather than the content of individual training sessions, that was the critical factor in enhancing the social self-perceptions of these youngsters. That is, with the immediate and positive impact of the

treatment group removed, the sensitive-isolated youngsters perhaps no longer had a social forum in which they felt comfortable and socially at ease. If the treatment group served primarily as that to the sensitive-isolated youngsters, that is, as a forum in which to use skills that anxiety inhibited in other settings, without providing the sensitive-isolated trainees with the tools needed to combat that anxiety, then it seems reasonable to conclude that with treatment sessions completed, anxiety would again inhibit successful social interaction. Based on previous research conclusions that rejected non-aggressive youngsters are internalizers, this renewed failure to experience social success might well be re-internalized, resulting in the youngster again viewing him/herself as socially incompetent.

The most interesting finding, however, was perhaps that following diagnosis-specific treatment, the sensitive-isolated targets were rated as significantly less withdrawn by their peers. Along with the decrease in peer-rated withdrawal, the sensitive-isolated youngsters experienced a significant increase, immediately following diagnosis-specific intervention, in their peer-rated likeability. Yet, while the posttreatment decline in peer-rated withdrawal was effectively maintained at one-year follow-up, the improved likeability ratings which the sensitive-isolated preadolescents received at posttreatment, had begun to diminish by follow-up, and were again approaching pretreatment levels. This was at first surprising.

One explanation may be that even though following diagnosis-specific intervention the sensitive-isolated targets were rated by peers as less withdrawn than prior to treatment, elements of their earlier style remained. If as other researchers (e.g., Hodgens & McCoy, 1989; Younger & Boyko, 1987) have suggested, shy/withdrawn behavior becomes notably more prominent and salient as a determinant of negative peer status as children approach adolescence, then it is possible that the existence of withdrawn elements, albeit notably diminished from pretreatment levels, would readily reassert themselves as salient peer

status determinants, and once again be reflected in low likeability ratings. Thus, when measurements of likeability were taken immediately after treatment, peers perhaps responded primarily to what they perceived as a notable improvement in the withdrawn behavior of the sensitive-isolated targets; focusing on the gross improvement in withdrawal it is possible that they overlooked the finer nuances of that behavioral style still present in the target groups' repertoire, and viewed the sensitive-isolated targets as significantly more likeable. With the passage of time, however, it is possible that the aforementioned finer nuances of the withdrawn behavior repertoire became visible, and their aversiveness again reflected in lower likeability ratings. One might speculate that when the "newness" wore off of the sensitive-isolated youngsters' peer-perceived behavior, points of previous irritation resurfaced.

A second explanation suggests simply that certain aspects of what is believed to constitute social competence may be more amenable to the effects of direct intervention than other aspects. Peer nominations of withdrawal, for example, which appear most sensitive to specific friendships and negative relationships may be more strongly effected by social skills training than peer ratings of likeability which tap an individual youngster's overall reputation in the peer group. More specifically, changes in behavior (i.e., less/more withdrawal, less/more aggression, and less/more leadership) noticed by a small group of peers can result in significant improvements in a youngster's social status, when that status is measured by peer nominations. Conversely, improved likeability ratings, in particular long term improvements, seem to require either drastically improved ratings from a small number of peers, or at least slight increases from a large number of peers.

In the case of sensitive-isolated targets in the current investigation, it is possible that the significant improvements in their peer-identified withdrawal which were reported immediately after diagnosis-specific treatment reflected the impressions of a small number of potential friends. These improvements may thus have been relatively stable across time.

In view of the argument presented above, these potential friends may have been ready to overlook the finer nuances of withdrawal remaining, and in effect, given sensitive-isolated youngsters the benefit of the doubt when nominating peers for withdrawal, aggression, and leadership roles. The improved likeability ratings, on the other hand, may have reflected the response of the general peer population, and as such ultimately have been less stable. That is, while a small group of potential friends may be willing to extend the benefit of the doubt when elements of formerly aversive behavior reappear, the general peer population might well be less accommodating in that regard. The lower likeability ratings recorded at follow-up may reflect that lack of accommodation.

Since preadolescents might be rejected by peers because of either aggressive or withdrawn behavior, and because the rejected aggressive preadolescents differ from their rejected non-aggressive counterparts (i.e., the sensitive-isolated targets) in terms of peer-rated likeability and social self-perception, the package approach to social skills training may indeed be inadequate (Tiffen & Spence, 1986). No single social skills treatment has yet emerged that seems capable of equally addressing the needs of all socially rejected youngsters. Therefore, more detailed assessment and classification of such children, and the subsequent development of social skills programs designed to meet the specific needs of particular diagnostic groups may well be necessary.

The results of the current study emphasize the importance of mapping treatment onto the specific skill deficits of the intended training participants. As noted above, Tiffen and Spence (1986) speculated that the "package approach" to social skills training in which the same set of skills are taught to all participants may be highly inadequate. Conclusions based on results gathered from the current study validate that speculation. Diagnosis-specific intervention proved consistently more effective than crossover treatment in benefiting the aggressive-disruptive preadolescents, in both the short and the long term, on each of the three dependent measures used (peer-rated likeability, peer-rated aggression,

and social self-perception). In the case of the sensitive-isolated targets, the results were somewhat less straightforward but nonetheless showed diagnosis-specific intervention to be consistently more effective than crossover treatment, at least in the short term. More specifically, in the case of the sensitive-isolated subjects, diagnosis-specific treatment was significantly more effective than the crossover condition in improving peer-rated likeability (immediately following intervention), and peer-rated withdrawal (immediately following intervention and at follow-up). Both diagnosis-specific and crossover treatment resulted in significantly improved social self-perceptions with the sensitive-isolated subjects immediately following treatment. The improvements, however, were not stable and by follow-up the social self-perceptions of the sensitive-isolated targets, both in diagnosis-specific treatment and in crossover treatment, showed signs of decline.

In terms of the present study the specific components of each diagnosis-specific intervention were developed on the basis of previous research and clinical experience, and included only those skills in which teachers had rated the youngsters as deficient compared to their classmates. The relative benefits of each component, however, have yet to be empirically established. In addition, examination of the standard deviations of the scores obtained by the rejected children in the current study indicate considerable heterogeneity within the two diagnostic populations and suggest the possibility of additional diagnostic subgroups within each. Statistically significant changes that were demonstrated by the treated groups may still be masking clinically meaningful subtypes who did not improve because they continued to receive inappropriate intervention. As Hodgens and McCoy (1989) suggest, researchers assessing the determinants of rejected peer status will have to emphasize divergent etiologies and learning histories among the socially rejected populations if intervention is to be more consistently effective.

The Importance of a Developmental Perspective

Schneider (1989) suggested that, among other factors, the effectiveness of social skills intervention is a function of the trainee's age, and that the interventions themselves can be grouped by major training technique. He suggested that modeling procedures, which require less cognitive mediation, appear most effective with preschoolers, while more complex training packages are more effective with older children. Certainly in the case of the current study, while modeling was used by the therapists to illustrate certain problem solving strategies, the techniques which seemed to elicit greatest enthusiasm from the preadolescent trainees (both the aggressive-disruptives and the sensitive-isolates) included the more complex strategies such as group discussions, behavioral role play, and feedback.

For the preadolescent, the opportunity of sharing experiences, and realizing that others in the peer group had undergone similar anxieties, difficulties, and concerns was perhaps more crucial than that would have been for younger children. As Schneider (1989) proposes, the influence an adult has over children changes as the child grows older. While young children may seem ready to take the advice of a familiar and caring adult, developmental research has shown that older children rely much more on their peer group for social information and problem-solving strategies, and are less responsive to adults in these areas (Hetherington & Parke, 1979). To this end, there may also be important developmental changes in what skills should be taught; an aspect that is often overlooked. Assisting children in forming more intensive friendships as they get older, rather than focusing on general skill development that is aimed at increasing overall acceptance in the peer group may be more important. Further, having preadolescents be part of the decision-making process in terms of deciding which skills should be addressed in the course of treatment may prove beneficial. Whereas young children seem to require well-structured,

predetermined programs if the treatment is to be effective, preadolescents may profit more highly from a program that acknowledges their movement into adulthood, and as such invites them to be active participants at all levels of the intervention.

The results of the present study contrast sharply with those reported from intervention studies conducted with younger subjects, which generally indicated that withdrawn youngsters respond better to intervention than their aggressive counterparts. The incongruence of the results of the present study with those presented in previous research attest the importance of considering the subjects' age when interpreting the results of social skills intervention. There is evidence that the determinants of peer status among early adolescents are more differentiated and less overt than those found among younger subjects. For example, Coie et al. (1982) reported that active misconduct was less likely to be associated with negative peer status for older students (grades six to nine) than it was for elementary school students. Also, "acting shy" did not emerge as a significant predictor of peer status until early adolescence. Consequently, what is significant to peers in determining social acceptability appears to change as children approach adolescence.

That intervention studies conducted with younger subjects have typically found withdrawn children to benefit more from social skills training than their aggressive counterparts may indicate that at younger ages, compared to preadolescence, socially isolated behavior is not as highly aversive to peers as is aggressive behavior to begin with. Indeed, studies involving preschool and kindergarten age withdrawn subjects have not consistently stated whether their withdrawn targets were actually disliked by peers or simply overlooked. In addition, although social skills training may be more successful with young withdrawn than with young aggressive subjects, some of the findings reported in the literature regarding the improved social interaction skills of those shy youngsters may also have resulted from the simple passage of time. Numerous researchers (e.g., Asher &

Parker, 1989) have discussed the seemingly unstable nature of shy/withdrawn behavior when it is measured in young children.

The naturally-occurring developmental changes that children undergo as they cross their life span must also be considered when relying on peer ratings as the measure of success. Developmental literature (e.g., Bukowski, Newcomb & Hoza, 1987; Feldman & Dodge, 1987; Hetherington & Parke, 1979; Ladd, 1988; Rogosch & Newcomb, 1989) and clinical experience suggest that very young children are essentially behaviorists. In terms of peer relations, they are perhaps more ready to reason that "if he acts nice then he is nice". As such, young children are perhaps more receptive than their older counterparts to acknowledging change in a peer's behavior. That is, young children may be more willing than older children to change their perceptions (including likeability) of a peer when that peer's behavior changes. By contrast, older children, especially as they approach adolescence, seem notably less receptive to behavioral change in their peers. That is, although a behavioral change in a rejected youngster may be acknowledged by a preadolescent, it does not seem to be so automatically reflected in a new perception (i.e., likeability rating) of that individual.

Rogosch and Newcomb (1989) have reported that socially rejected youngsters can be readily distinguished from average children by the negative reputations maintained about them by their peers, even in view of efforts made by those rejected individuals to implement changes in their behavior. Perhaps older children adopt the perspective of a cognitive rather than a behavioral theorist, and consequently base their perceptions of others more on generalizations from past behavior or inferences about personality types than on individual instances of immediately observable behavior. Thus, it is possible that peer status is related to more subtle patterns of behavior and social perception for early adolescents than it is for their younger counterparts.

In brief, developmental factors may influence the importance of various target skills, the effects of different treatment techniques, and the role of peer partners in social skill training programs. Previous developmental research suggests that while the friendships of young children are based on common activities and prosocial behaviors, interpersonal communication becomes more important to friendships during preadolescence as children develop a selected few intensive friendships based on intimacy, loyalty, and trust (Bierman, 1986). Unfortunately, while early adolescence is a period when social skill development and peer relationships seem to assume a new kind of importance, few skills-training interventions have yet been developed to target this age group.

Limits of the Present Study

There are a number of limitations to the present study which must be considered when interpreting the results. Firstly, the investigation may not have provided a definitive test of the benefits of diagnosis-specific intervention versus crossover treatment. Each of the target skills could be assessed in much greater detail. Given that the observation scores were skewed, and that the standard deviations were large, it seems likely that the two diagnostic groups identified are still too global, and that the skill deficits diagnosed as characteristic of them, may not be sufficiently differentiated. The results are encouraging, however, and as such the benefits attributed to diagnosis-specific intervention should not be minimized.

Secondly, it is important to remember that the subjects were not taken from clinical populations. Rather, they were poorly accepted children who were nonetheless managing to function within the regular classroom. As such, the results can be generalized only to similar populations. The effects of diagnosis-specific versus crossover intervention, and the response of clinically diagnosed aggressive preadolescents, and of clinically diagnosed

shy-isolated preadolescents, to social skills training could potentially be quite different from those reported in the current study.

Thirdly, the study would have been strengthened by including no-treatment and placebo (attention) control groups matched in number, sex, diagnosis, peer-rated likeability, social skill deficit, and social self-perception, with the two diagnostic groups. Although extended placebo conditions are very difficult to conduct, there may be something intrinsically positive about interaction from an adult who is truly interested in the youngster. To that end, an attention placebo group might provide valuable insight into what sort of intervention different youngsters respond to. More specifically, it would seem helpful to differentiate between the types of benefits resulting from an actual intervention program and those (if any) observed as a function of informal but sincere adult attention. Of particular interest might be a target group of shy-withdrawn youngsters in an attention control condition. Future research projects would benefit by drawing comparisons across time with these groups.

Future studies attempting to replicate or advance the results reported here might also benefit by incorporating blind teacher ratings of the target children's social skills *following* treatment. The current investigation used teacher ratings only to identify the specific skill deficits characteristic of the two diagnostic groups in order to develop training programs. Post-intervention teacher ratings were not collected. Follow-up teacher ratings at the grade six level were not possible because the teachers were no longer blind as to which youngsters had participated in the treatment groups. However, consideration should perhaps have been given to collecting ratings from the the homeroom teachers at the junior high school level as they had no knowledge of which of their students had participated in the study the previous year, and as they were blind to any particular child's previous diagnosis. Although somewhat difficult to access in the rotary-timetable junior high

school, the addition of follow-up blind teacher ratings would likely provide useful information.

Finally, specific evaluation of same-sex versus opposite-sex peer functioning within individuals would appear particularly relevant when studying early adolescence during which heterosexual contacts gain increasing importance. Determinations of peer status among adolescents should consider the contributions of opposite-sex nominations and ratings. The pathways to peer rejection most likely have points of divergence for males and females, but at the present time these difference are not well understood. While the current study separates findings by sex as a subsidiary analysis (see Appendix N), the major analyses were conducted with target subjects collapsed across sex. A much larger population of disliked youngsters would have been required to responsibly conduct analyses on males and females independently. However, future research would benefit from such an investigation when targets include preadolescents and adolescents.

Future Directions

As social groups and cliques begin to form during preadolescence, it may become more difficult for children of low sociometric status to improve their peer acceptance. Therefore, the need to include average and popular peers in social skill programs so as to modify their attitudes toward target children may be greater at this age than for younger children. Further, the incorporation of peer partners in social skills training programs may be a key to providing entry for target children into existing social networks.

Bierman (1986) notes that in addition to deficient behavioral repertoires, the existence of inadequate social knowledge, poor problem solving abilities, poor impulse control, asocial goals, inadequate self-monitoring abilities, and low self-efficacy work to reduce the interpersonal effectiveness of some children. Very different treatment strategies

may be needed to target these various factors. For example, instructions and modeling are designed to build cognitive representations of various social skills, whereas behavioral rehearsal, shaping, and contingent reinforcement focus on expanding children's behavioral repertoires. Future researchers need to place heavier emphasis on the assessment of individual children's social difficulties if treatment is to be meaningful and effective. As Hodgens and Coy (1989) have suggested, researchers assessing the determinants of rejected peer status must focus on the divergent etiologies and learning histories of individual rejected youngsters.

As noted above, a final important area for future research is assessment of the contribution of sex differences among these identified groups. The pathways to peer rejection most likely have points of divergence for males and females, but at present these differences are not well understood. Including assessment of nonphysical forms of aggression and aversive behaviors may, for example, be necessary when studying rejected females. In general, specific evaluation of same-sex versus opposite-sex peer functioning within individuals would appear particularly relevant when studying early adolescence, during which heterosexual contacts gain increasing importance. Similarly, determinations of peer status among adolescents should consider the contributions of opposite-sex nominations and ratings. Very little research attention has been paid to this area.

Finally, more information is needed on rejected nonaggressive individuals. At present, there is insufficient information to speculate on possible determining factors in explaining the extreme social isolation that can be observed. Fruitful areas for investigation might include general psychopathology, physical attributes, and peer assessment. The question remains whether the aggressive-nonaggressive distinction employed with these socially rejected youngsters can be replicated in different settings or with samples of children of differing ages. If the distinction holds, then programs designed to alter rejected peer status will have to take into account those children or adolescents who are not only

actively rejected by their peers but also isolated from them. Research needs to elucidate whether social skills training can effectively treat both specific response or skill deficits and interfering emotional states such as social anxiety. In short, more research is needed concerning the efficacy of training particular types of social skills at different developmental levels, involving different social skill and social competency deficits.

Research investigating the social development of young children and adolescents has provided strong evidence suggesting the negative short-term and long-term consequences of peer relation difficulties in early life. Work, however, has only begun, and current studies clearly indicate that while previous investigations into the at-risk hypothesis have provided critical information, future research needs to approach the task with new rationales and new assessment, data collection, and intervention strategies. Understanding what constitutes good social skills, learning how to help youngsters effectively implement those skills in order to maximize social success, and generating more helpful explanations of how poor peer relationships during childhood relate with later social maladjustment, now more than ever provide researchers with a demanding challenge that involves the co-ordination of empirical investigation, theoretical construction, clinical application, and ongoing program evaluation.

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Appendix A

DATA POOL REFERENCE LISTING
FOR PREVIOUS STUDIES OF SOCIAL SKILLS TRAINING
WITH AGGRESSIVE AND WITHDRAWN CHILDREN

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Appendix B

INFORMATION LETTER AND
PARENTAL CONSENT FORM #1
(SCREENING)

UNIVERSITÉ D'OTTAWA



UNIVERSITY OF OTTAWA

Dear Parent,

A number of faculty and students with the Department of Psychology are currently interested in learning more about how children initiate and maintain friendships, how they deal with interpersonal problems, and how socially competent they feel themselves to be.

You may have observed that some children seem much more adept and successful in interpersonal relations than others. 5% to 15% of elementary school children are less successful and often do not develop the social skills they need for a satisfying and healthy life. Moreover, such children do not all benefit from formal social skills training. We hope to determine what characterizes those who consistently **do** benefit from skills training, and to find out **why** they benefit.

We are presently screening a large number of grade six children in the region to discover which ones are experiencing such problems, prior to offering them social skills training. We ask that you permit your son or daughter to take part in this initial screening. This is **not** a request to authorize training; we do not yet know who needs it.

Screening consists of filling out three forms that record how your child sees classmates and him or herself. All participating children will do this three times in grade six and twice in grade seven in the classroom during regular hours. Names will not be associated with their forms and all data will be held in confidence. Only overall **group** results will be reported to school authorities. The study will be conducted in accordance with the University of Ottawa's ethical research standards.

Please complete the attached permission form and have your child return it to his or her home room teacher. If you have any questions do not hesitate to call Helen Bienert at 613-564-2249 or Dr. Barry Schneider at 613-564-2463. We would be happy to speak with you and grateful for your consent.

Sincerely,

Dr. Barry Schneider

Helen Bienert



CONSENT FORM

I hereby do ____ / do not ____ give permission for my son or daughter to participate in the study being done in the Carleton Roman Catholic School Board by *Helen Bienert, M.A.* and *Dr. Barry Schneider, Ph.D.* of the University of Ottawa entitled *The Differential Effects of Social Skills Training on the Social Competence of Neglected and Rejected Preadolescents*. I understand that the study has two components; a screening process to identify children at risk, and subsequent skills training sessions designed to assist identified children in developing new behavioral patterns. I also understand that my consent to the screening process in no way commits my child to participate in the training session, although skill training will be made available if he or she is identified in the screening process. Finally, I understand that all study data will be confidential and that I can withdraw my child from participation at any time.

Name of child:

Sex:

Date of Birth:

signature of parent or guardian

date

Appendix C

INFORMATION LETTER
AND PARENTAL CONSENT FORM #2
(SOCIAL SKILLS TRAINING)



Dear Parent,

This letter is a follow-up to our recent telephone conversation.

A short time ago you gave written permission for your child to participate in the screening phase of a study being conducted in the Carleton Roman Catholic School District by Helen Bienert and Dr. Barry Schneider of the Department of Psychology.

The screening phase is now over and we are about to begin the second stage of the study, in which we are conducting social skills discussion groups in the various schools. We would like _____ to participate in one of these groups. The group to which your child has been randomly assigned will meet for nine sessions approximately one hour long once weekly from _____ to _____, on _____, beginning _____. Groups will meet **at the school**. Two instructors will make extensive use of audio-taping to conduct the sessions. Discussion groups will be quite small (about five) to allow each youngster ample opportunity to participate.

By signing the enclosed consent form you agree to allow your child to participate in the group discussion portion of this study, and to be audio-taped in course of that training. All tapes and other records resulting from training will be held in confidence and only general **group** conclusions will be reported to school authorities. The study will be conducted in accordance with the University of Ottawa's ethical research standards.

Please complete the attached permission form and return it in the enclosed prepaid envelope at your earliest convenience. If you have any questions do not hesitate to call Helen Bienert at 613-564-2249 or Dr. Barry Schneider at 613-564-2463. We would be happy to speak with you and remain grateful for your previous consent.

Sincerely,

Dr. Barry Schneider
Psychologist

Helen Bienert



CONSENT FORM

I hereby do ___ / do not ___ give permission for my son or daughter to participate in the study being done in the Carleton Roman Catholic School Board by *Helen Bienert, M.A.* and *Dr. Barry Schneider, Ph.D.* of the University of Ottawa entitled *The Differential Effects of Social Skills Training on the Social Competence of Neglected and Rejected Preadolescents*. I understand that the training series will be 9 weeks long, beginning _____ and ending _____. I also understand that my child's group will meet once weekly from _____ to _____ at _____. Finally, I understand that all study data will be confidential and that my child can withdraw from participation at any time.

Name of child:

Sex:

Date of Birth:

signature of parent or guardian

date

Appendix D

INFORMATION LETTER
AND PARENTAL CONSENT FORM #3
(JUNIOR HIGH SCHOOL FOLLOW-UP)



Dear Parent,

A number of faculty and students with the Department of Psychology are currently interested in learning more about how children initiate and maintain friendships, how they deal with interpersonal problems, and how socially competent they feel themselves to be.

Last year we screened a large number of grade six children in the region to learn more about what 11- to 13-year-olds think about interpersonal relations — how they handle interpersonal problems, what they do/don't like in others, what they see as important friendship-making skills, and how they view their own social competence. From each participating class we subsequently chose between 5 and 8 children with whom we worked more intensively in small groups. This enabled us to elicit more specific ideas from the children, while also providing us with a vehicle by which to teach the children alternative problem-solving and friendship-making strategies. We are presently in the process of conducting the final follow-up portion of the project to see how the children are functioning in their 'new' environment. To accomplish this we are approaching all the grade seven classes in which one or more of last year's participants are enrolled, and we are asking all the students in these classes to participate in a follow-up screening process.

Screening consists of your child completing three questionnaires, on one occasion during regular school hours, that deal with his or her social perceptions of others and of him or herself (e.g. who is a good leader, who is very shy, etc.). Names will not be associated with questionnaires and all data will be held in confidence. Only overall **group** results will be reported to school authorities. The project will be conducted in accordance with the University of Ottawa's ethical research standards.

Please complete the attached consent form and have your child return it to his or her homeroom teacher. This is the **final** component of the project. If you have any questions do not hesitate to call Helen Bienert at 613-564-2463. I would be happy to speak with you and would be grateful for your consent.

Sincerely,

Dr. Barry Schneider
Psychologist

Helen Bienert



CONSENT FORM

I hereby do ___ / do not ___ give permission for my son or daughter to participate in the project on Friendship and Interpersonal/Social Skills being conducted in the Carleton Roman Catholic School Board by *Helen Bienert, M.A.* and *Dr. Barry Schneider, Ph.D.* of the University of Ottawa.

I understand that my child's participation will be limited to the completion of three questionnaires during regular school hours on one occasion in the present school year. The questions will deal with my child's perception and understanding of interpersonal and social skills. I also understand that even if my child was not involved in this project last year in elementary school, I will be informed of any significant findings concerning him or her that the screening might reveal. Finally, I understand that all data will be confidential and that only group results will be reported.

Name of child: _____

Sex: _____

Date of Birth: _____

signature of parent or guardian

date

Appendix E

THE TEACHER SKILL CHECKLIST

Teacher Skill Checklist

Student: _____ Class: _____

Date: _____ Teacher: _____

DIRECTIONS: listed below you will find a number of skills that children are more or less proficient in using. This checklist will help you record how well each child uses the various skills. For each child, rate his/her use of each skill, based on your observations of his/her behavior in various situations.

- Circle 1 if the child is **almost never** good at using the skill.
- Circle 2 if the child is **seldom** good at using the skill.
- Circle 3 if the child is **sometimes** good at using the skill.
- Circle 4 if the child is **often good** at using the skill.
- Circle 5 if the child is **almost always** good at using the skill.

Please rate the child on all skills listed. If you know of a situation in which the child has particular difficulty in using the skill well, please note it briefly in the space marked "Problem Situation".

	almost never	seldom	sometimes	often	almost always	Problem Situation
1. Listening: Does the student appear to listen when someone is speaking and make an effort to understand what is said?	1	2	3	4	5	_____
2. Asking for help: Does the student decide when he/she needs assistance and ask for help in a pleasant manner?	1	2	3	4	5	_____
3. Saying Thank You: Does the student tell others he/she appreciates help given, favors, etc.?	1	2	3	4	5	_____
4. Bringing Materials to Class: Does the student remember the books and materials he/she needs for class?	1	2	3	4	5	_____
5. Following Instructions: Does the student understand instructions and follow them?	1	2	3	4	5	_____
6. Completing Assignments: Does the student complete assignments at his/her independent academic level?	1	2	3	4	5	_____
7. Contributing to Decisions: Does the student participate in class discussions in accordance with the classroom rules?	1	2	3	4	5	_____
8. Offering Help to an Adult: Does the student offer to help you at appropriate times and in an appropriate manner?	1	2	3	4	5	_____
9. Asking a Question: Does the student know how and when to ask a question of another person?	1	2	3	4	5	_____
10. Ignoring Distractions: Does the student ignore classroom distractions?	1	2	3	4	5	_____
11. Making Corrections: Does the student make the necessary corrections on assignments without getting overly frustrated?	1	2	3	4	5	_____
12. Deciding on Something to Do: Does the student find something to do when he/she has free time?	1	2	3	4	5	_____
13. Setting a Goal: Does the student set realistic goals for him/herself and take the necessary steps to meet these goals?	1	2	3	4	5	_____
14. Introducing Yourself: Does the student introduce him/herself to people he/she doesn't know in an appropriate way?	1	2	3	4	5	_____
15. Beginning a Conversation: Does the student know how and when to begin a conversation with another person?	1	2	3	4	5	_____
16. Ending a Conversation: Does the student end a conversation when it's necessary and in an appropriate way?	1	2	3	4	5	_____

	almost never	seldom	sometimes	often	almost always	Problem Situation
17. Joining In: Does the student know and practice acceptable ways of joining an ongoing activity or group?	1	2	3	4	5	_____
18. Playing a Game: Does the student play games with classmates fairly?	1	2	3	4	5	_____
19. Asking a Favor: Does the student know how to ask a favor of another person in a pleasant manner?	1	2	3	4	5	_____
20. Offering Help to a Classmate: Can the student recognize when someone needs or wants assistance and offer this help?	1	2	3	4	5	_____
21. Giving a Compliment: Does the student tell others that he/she likes something about them or something they have done?	1	2	3	4	5	_____
22. Accepting a Compliment: Does the student accept these comments given by adults or peers in a friendly way?	1	2	3	4	5	_____
23. Suggesting an Activity: Does the student suggest appropriate activities to others?	1	2	3	4	5	_____
24. Sharing: Is the student agreeable to sharing things with others, and if not, does he/she offer reasons why he/she can't in an acceptable manner?	1	2	3	4	5	_____
25. Apologizing: Does the student tell others he/she is sorry for doing something in a sincere manner?	1	2	3	4	5	_____
26. Knowing Your Feelings: Does the student identify feelings he/she is experiencing?	1	2	3	4	5	_____
27. Expressing Your Feelings: Does the student express his/her feelings in acceptable ways?	1	2	3	4	5	_____
28. Recognizing Another's Feelings: Does the student try to figure out how others are feeling in acceptable ways?	1	2	3	4	5	_____
29. Showing Understanding of Another's Feelings: Does the student show understanding of others' feelings in acceptable ways?	1	2	3	4	5	_____
30. Expressing Concern for Another: Does the student express concern for others in acceptable ways?	1	2	3	4	5	_____
31. Dealing with Your Anger: Does the student use acceptable ways to express his/her anger?	1	2	3	4	5	_____
32. Dealing with Another's Anger: Does the student try to understand another's anger without getting angry him/herself?	1	2	3	4	5	_____
33. Expressing Affection: Does the student let others know he/she cares about them in an acceptable manner?	1	2	3	4	5	_____
34. Dealing with Fear: Does the student know why he/she is afraid and practice strategies to reduce this fear?	1	2	3	4	5	_____
35. Rewarding Yourself: Does the student say and do nice things for him/herself when a reward is deserved?	1	2	3	4	5	_____
36. Using Self-control: Does the student know and practice strategies to control his/her temper or excitement?	1	2	3	4	5	_____
37. Asking Permission: Does the student know when and how to ask if he/she may do something?	1	2	3	4	5	_____
38. Responding to Teasing: Does the student deal with being teased in ways that allow him/her to remain in control?	1	2	3	4	5	_____
39. Avoiding Trouble: Does the student stay away from situations that may get him/her into trouble?	1	2	3	4	5	_____

	almost never	seldom	sometimes	often	almost always	Problem Situation
40. Staying Out of Fights: Does the student know of and practice socially appropriate ways of handling potential fights?	1	2	3	4	5	_____
41. Problem Solving: When a problem occurs, does the student think of alternatives and choose an alternative, then evaluate how well this solved the problem?	1	2	3	4	5	_____
42. Accepting Consequences: Does the student accept the consequences for his/her behavior without becoming defensive or upset?	1	2	3	4	5	_____
43. Dealing with an Accusation: Does the student know of and practice ways to deal with being accused of something?	1	2	3	4	5	_____
44. Negotiating: Is the student willing to give and take in order to reach a compromise?	1	2	3	4	5	_____
45. Dealing with Boredom: Does the student select acceptable activities when he/she is bored?	1	2	3	4	5	_____
46. Deciding What Caused a Problem: Does the student assess what caused a problem and accept the responsibility if appropriate?	1	2	3	4	5	_____
47. Making a Complaint: Does the student know how to say that he/she disagrees in acceptable ways?	1	2	3	4	5	_____
48. Answering a Complaint: Is the student willing to arrive at a fair solution to someone's justified complaint?	1	2	3	4	5	_____
49. Dealing with Losing: Does the student accept losing at a game or activity without becoming upset or angry?	1	2	3	4	5	_____
50. Showing Sportsmanship: Does the student express a sincere compliment to others about how they played the game?	1	2	3	4	5	_____
51. Dealing with Being Left Out: Does the student deal with being left out of an activity without losing control?	1	2	3	4	5	_____
52. Dealing with Embarrassment: Does the student know of things to do that help him/her feel less embarrassed or self-conscious?	1	2	3	4	5	_____
53. Reacting to Failure: Does the student figure out the reason(s) for his/her failure, and how he/she can be more successful the next time?	1	2	3	4	5	_____
54. Accepting No: Does the student accept being told no without becoming unduly upset or angry?	1	2	3	4	5	_____
55. Saying No: Does the student say no in acceptable ways to things he/she doesn't want to do or to things that may get him/her into trouble?	1	2	3	4	5	_____
56. Relaxing: Is the student able to relax when tense or upset?	1	2	3	4	5	_____
57. Dealing with Group Pressure: Does the student decide what he/she wants to do when others pressure him/her to do something else?	1	2	3	4	5	_____
58. Dealing with Wanting Something That Isn't Mine: Does the student refrain from taking things that don't belong to him/her?	1	2	3	4	5	_____
59. Making a Decision: Does the student make thoughtful choices?	1	2	3	4	5	_____
60. Being Honest: Is the student honest when confronted with a negative situation?	1	2	3	4	5	_____

Appendix F
TEACHER SKILL CHECKLIST
DATA SUMMARY

Table F-1

Teacher Skill Checklist Data Summary:
Average Teacher Ratings per Item for Average Peers and Target Youngsters

Rating Scale Item	Average Rating		
	Average Peers n = 39	Sensitive-Isolated Targets n = 40	Aggressive-Disruptive Targets n = 38
FRIENDSHIP-MAKING SKILLS			
<i>Introducing Yourself</i>	5.0	2.0 ***	3.0
<i>Beginning a Conversation</i>	5.0	2.4 ***	4.6
<i>Ending a Conversation</i>	5.0	3.8	4.6
<i>Joining In</i>	5.0	1.8 ***	4.0
<i>Playing a Game</i>	4.8	4.0	3.0
<i>Asking a Favor</i>	5.0	3.0	3.8
<i>Offering Help to a Classmate</i>	4.5	3.6	3.0
<i>Giving a Compliment</i>	4.0	3.8	3.0
<i>Accepting a Compliment</i>	4.0	3.8	3.2
<i>Suggesting an Activity</i>	5.0	3.1	4.0
<i>Sharing</i>	3.8	3.5	3.0
<i>Apologizing</i>	4.0	4.6	3.0
SKILLS FOR DEALING WITH FEELINGS AND TAKING ANOTHER'S PERSPECTIVE			
<i>Knowing Your Feelings</i>	4.0	3.0	3.0
<i>Expressing Your Feelings</i>	5.0	3.4	2.8
<i>Recognizing Another's Feelings</i>	4.6	3.8	1.6 ***
<i>Showing Understanding of Another's Feelings</i>	4.6	3.6	2.0 ***
<i>Expressing Concern for Another</i>	4.8	3.6	2.0 ***
<i>Dealing with Your Anger</i>	3.8	4.0	1.3 ***
<i>Dealing with Another's Anger</i>	4.0	3.6	2.0 ***
<i>Expressing Affection</i>	4.2	2.0 *	2.0 *
<i>Dealing with Fear</i>	4.0	2.0 ***	3.6
<i>Rewarding Yourself</i>	4.6	2.0 ***	4.0
SKILL ALTERNATIVES FOR DEALING WITH AGGRESSION			
<i>Using Self-control</i>	4.2	3.9	1.8 ***
<i>Asking Permission</i>	5.0	5.0	3.6
<i>Responding to Teasing</i>	3.6	3.8	1.8 ***
<i>Avoiding Trouble</i>	4.0	5.0	3.2
<i>Staying Out of Fights</i>	3.9	3.6	1.6 ***
<i>Problem Solving</i>	4.8	1.9 ***	2.8
<i>Accepting Consequences</i>	4.2	3.8	2.5 ***
<i>Dealing with an Accusation</i>	2.6	3.0	2.6
<i>Negotiating</i>	4.0	3.6	2.8
SKILLS FOR DEALING WITH STRESS			
<i>Dealing with Boredom</i>	4.0	4.1	3.4
<i>Deciding What Caused a Problem</i>	3.9	3.0	2.9
<i>Making a Complaint</i>	4.5	2.2 ***	3.8
<i>Answering a Complaint</i>	4.2	3.3	2.2 ***
<i>Dealing with Losing</i>	3.9	3.8	3.0
<i>Showing Sportsmanship</i>	5.0	3.8	3.0
<i>Dealing with Being Left Out</i>	3.2	3.9	2.9
<i>Dealing with Embarrassment</i>	4.8	2.5 ***	4.8
<i>Reacting to Failure</i>	4.6	3.0 **	2.8 **
<i>Accepting No</i>	4.0	4.1	2.9

Rating Scale Item	Average Rating		
	Average Peers n = 39	Sensitive-Isolated Targets n = 40	Aggressive-Disruptive Targets n = 38
SKILLS FOR DEALING WITH STRESS (CONTINUED)			
Saying No	4.8	3.2	2.6
<i>Relaxing</i>	4.3	2.8 ***	3.9
<i>Dealing with Group Pressure</i>	4.0	2.3 ***	4.9
Dealing with Wanting Something That Is Not Mine	4.8	4.7	3.8
Making a Decision	4.9	3.6	3.1
Being Honest	3.7	4.2	3.1

NOTE: Ratings ranged from 1 (almost never) to 5 (almost always). Italicized items identify those skills on which teachers rated target children as most deficient. They form the basis of the two social skills training programs developed for this study. Scores in the Sensitive-Isolated subjects' column which are followed by three asterisks (***) identify skills composing the diagnosis-specific social skills training program that was designed for the sensitive-isolated targets. Similarly, scores in the Aggressive-Disruptive subjects' column which are followed by three asterisks (***) mark the skills composing the diagnosis-specific social skills training program developed for the aggressive-disruptive targets.

* This item was not included in either training program. Although it met the low rating criterion, it failed to distinguish between the two target groups.

** This item was included as a preventive measure in both training programs to help children appreciate that not all post training social interactions will necessarily be successful.

NOTE: The thirteen items on the Teacher Skill Checklist which deal with classroom survival skills are not reported here as it was decided they dealt with issues distinct from peer-rated social skill competence.

Appendix G

THE PEER RATING
OF LIKEABILITY SCALE

Appendix H

THE MINNESOTA
REVISED CLASS PLAY

1.

Who is a good leader?

2.

Who gets into lots of fights?

3.

Who would rather play alone than with others?

4.

Who has good ideas for things to do?

5.

Who loses his or her temper easily?

6.

Who shows off a lot?

7.

Who is someone you can trust?

8.

Who interrupts when others are speaking?

9.

Who has many friends?

10.

Who will wait his or her turn?

11.

Whose feelings get hurt easily?

12.

Who is it that everyone listens to?

13.

Who plays fair?

14.

Who has trouble making friends?

15.

Who acts like a little kid?

16.

Who has a good sense of humor?

17.

Who can't get others to listen?

18.

Who is very shy?

19.

Who is polite?

20.

Who makes new friends easily?

21.

Who is too bossy?

22.

Who is often left out?

23.

Who helps others when they need it?

24.

Who is usually sad?

25.

Who is it that everyone likes to be with?

26.

Who can get things going?

27.

Who teases other children too much?

28.

Who is usually happy?

29.

Who picks on other kids?

30.

Who likes to play with others rather than alone?

Appendix I

THE PERCEIVED COMPETENCE
SCALE FOR CHILDREN

What I Am Like

	REALLY TRUE for me	SORT OF TRUE for me	SAMPLE SENTENCES	REALLY TRUE for me	SORT OF TRUE for me	
a.	[]	[]	Some kids would rather play outdoors in their spare time	BUT	Other kids would rather watch T.V.	[] []
b.	[]	[]	Some kids never worry about anything.	BUT	Other kids sometimes worry about certain things.	[] []
1.	[]	[]	Some kids feel that they are very good at their school work.	BUT	Other kids worry about whether they can do the school work assigned to them.	[] []
2.	[]	[]	Some kids find it hard to make friends.	BUT	For other kids it's pretty easy.	[] []
3.	[]	[]	Some kids do very well at all kinds of sports.	BUT	Other kids don't feel that they are very good when it comes to sports.	[] []
4.	[]	[]	Some kids feel that there are alot of things about themselves that they would change if they could.	BUT	Other kids would like to stay pretty much the same.	[] []
5.	[]	[]	Some kids feel that they are just as smart as other kids their age.	BUT	Other kids aren't so sure and wonder if they are as smart.	[] []
6.	[]	[]	Some kids have alot of friends.	BUT	Other kids don't have very many friends.	[] []
7.	[]	[]	Some kids wish they could be alot better at sports.	BUT	Other kids feel they are good enough.	[] []
8.	[]	[]	Some kids are pretty sure of themselves.	BUT	Other kids are not very sure of themselves.	[] []
9.	[]	[]	Some kids are pretty slow in finishing their school work.	BUT	Other kids can do their school work quickly.	[] []
10.	[]	[]	Some kids don't think they are a very important member of their class.	BUT	Other kids think they are pretty important to their classmates.	[] []
11.	[]	[]	Some kids think they could do well at just about any new outdoor activity they haven't tried before.	BUT	Other kids are afraid they might not do well at outdoor things they haven't ever tried.	[] []

	REALLY TRUE for me	SORT OF TRUE for me			REALLY TRUE for me	SORT OF TRUE for me
12.	[]	[]	Some kids feel good about the way they act.	BUT	Other kids wish they acted differently.	[] []
13.	[]	[]	Some kids often forget what they learn.	BUT	Other kids can remember things easily.	[] []
14.	[]	[]	Some kids are always doing things with alot of kids. .	BUT	Other kids usually do things by themselves.	[] []
15.	[]	[]	Some kids feel that they are better than others their age at sports.	BUT	Other kids don't feel they can play as well.	[] []
16.	[]	[]	Some kids think that maybe they are not a very good person.	BUT	Other kids are pretty sure that they are a good person.	[] []
17.	[]	[]	Some kids like school because they do well in class.	BUT	Other kids don't like school because they aren't doing very well.	[] []
18.	[]	[]	Some kids wish that more kids liked them.	BUT	Other kids feel that most kids do like them.	[] []
19.	[]	[]	In sports and games some kids usually watch instead of play.	BUT	Other kids usually play rather than watch.	[] []
20.	[]	[]	Some kids are very happy being the way they are.	BUT	Other kids wish they were different.	[] []
21.	[]	[]	Some kids wish it was easier to understand what they read.	BUT	Other kids don't have any trouble understanding what they read.	[] []
22.	[]	[]	Some kids are popular with others their age.	BUT	Other kids are not very popular.	[] []
23.	[]	[]	Some kids don't do well at new outdoor games.	BUT	Other kids are good at new games right away.	[] []
24.	[]	[]	Some kids aren't very happy with the way they do alot of things.	BUT	Other kids think the way they do things is fine.	[] []
25.	[]	[]	Some kids have trouble figuring out the answers in school.	BUT	Other kids almost always can figure out the answers.	[] []
26.	[]	[]	Some kids are really easy to like.	BUT	Other kids are kind of hard to like.	[] []
27.	[]	[]	Some kids are among the last to be chosen for games.	BUT	Other kids are usually picked first.	[] []
28.	[]	[]	Some kids are usually sure that what they are doing is the right thing.	BUT	Other kids aren't so sure whether or not they are doing the right thing.	[] []

Appendix J

ABRIDGED SOCIAL SKILLS
TRAINING MANUALS

Although the study used different social skill training packages for aggressive-disruptive and sensitive-isolated youngsters, the packages differed only in content and not in method or basic format. Each package consisted of ten sessions scheduled to last approximately one hour. A group of between five and eight same-diagnosis preadolescents and (usually) two adult leaders participated in each training session. Groups met in a free classroom at lunchtime or at the end of the school day. Meetings were closed to non-participants, both other students and school staff.

An eleventh introductory session preceded the beginning of training. Although it served as a vehicle to communicate the purpose of the group and gave its members a chance to get acquainted, this introductory session was primarily intended to establish how the group would operate and to provide an opportunity for participants to negotiate amongst themselves a set of rules to govern their behavior in the group. Thus, rules were not laid down by the adult leaders but were instead established by dialogue between them and the trainees. Because the introductory session was not tailored to the type of social deficit and had no instructional content, it is not discussed in this appendix. The closing session (a wrap-up party), which followed completion of the ten training sessions, is however discussed because it had a small instructional component in which leaders pointed out to the group members that attempts to implement the skills rehearsed in the training sessions would not all or always be met with immediate success or acceptance by peers in the real world. Techniques to help the youngsters avoid "thinking errors" (i.e., errors in which one sets unrealistic expectations of oneself) were discussed and practised. The same instructional module was offered in both the aggressive-disruptive training sequence and in the sensitive-isolated training sequence.

In general, group leaders were instructed to serve as guides rather than teachers. They ensured that all the important points on a subject (i.e., as presented in detail in the manual) were aired before discussion passed on to other topics. Their second role was to

act as coaches, suggesting the steps for exercise of a social skill or providing scenarios for role plays when none were forthcoming from trainees. Adult leaders were furnished in advance with a script for each session, typically ten pages long. Each script contained the essential concepts to be communicated in the session as well as a number of suitable scenarios for modelling and for role-plays. Like dramatic scripts, the scenarios for modelling specified actual dialogue. Pre-planning the scenarios ensured that a good exemplar of a particular social skill was always available. Moreover, it was intended to remove the burden of having to invent good examples on the spot from the leaders and permitted them to focus instead on interaction with and among the trainees.

At all stages, leaders engaged in positive reinforcement rather than criticism and looked for opportunities to identify and praise attempts to employ promoted skills, whether in role plays or in a trainee's own social interactions. Leaders were expected to be sensitive to the group's absolute need for a non-critical and supportive atmosphere. A subordinate group management mechanism was the conduct of a token economy through which the (negotiated) rules governing members' behavior in the group were enforced. Trainees were bankrolled with ten tokens at the beginning of each session and tokens could be added to or taken away from this sum as the session progressed for pre-specified pro-group and anti-group behaviors. The net number of tokens earned each session by individual participants was tallied, and a running total recorded. Trainees were informed that after the last session they could exchange their tokens for gifts of varying costs depending on the number of tokens earned. Trainees were aware of the token-to-cash-value "exchange rate".

Sessions all followed the same general nine-step format. The previous session's homework was first reviewed. Trainees' reports on their homework were shared with the group at large and could be commented on by all. The success or failure of these skill-exercise events often set an initial tone and impetus for the session. Discussions about the homework assignments focused on how a specific skill exercise was implemented, the

situation surrounding that implementation, its perceived degree of success or failure, any associated emotions, and alternative solutions if the the skill applied did not result in the positive outcome the individual youngster had hoped for or expected. Whether youngsters experienced success or failure in terms of the homework exercise, completion of the assignments and any efforts made toward implementing new skills were highly reinforced. Following review of the homework exercise, leaders presented an overview of the skill which was to be the topic of the current session. A set of steps involved in exercising the skill was then developed by the trainees with the assistance and guidance of the leaders. This usually resulted in a free discussion of the aspects of the skill and why it might be important. While the steps involved in carrying out a skill were developed by the trainees, leaders came to the session with a prepared set of skill steps (presented in the manual to insure uniformity between groups). Suggestions made by trainees were then incorporated into the schema presented by the leaders at points and in a manner agreeable to all.

A small number of the same behavioral elements were used repeatedly as steps to exercise one skill or another. These elements served as a kind of psychological vocabulary, building-blocks to be combined in an order appropriate to the particular skill task. As such they deserve itemization. Throughout the sessions trainees were repeatedly reminded: 1) that they were in control of the situation (or at least of their own actions), 2) that they should be aware of their options, 3) that they should think before acting, 3) that more than one action was usually available to them, 5) that they should pick the action with the best anticipated outcome. Trainees were also reminded 6) that they should state truths to themselves (self-statements), 7) to try repeatedly, 8) to identify with or at least understand the other person, 9) to believe in themselves, 10) to stay calm, 11) to think clearly and realistically.

Once agreed upon, a sequence of these and other steps were charted on the blackboard and remained there for the rest of the session. From there, leaders, role-players

and audience (i.e., trainees not participating in a current role-play) could refer to them at any time. Exercise of the day's skill by executing the steps was made concrete to the trainees through modelling displays which the leaders performed for their audience of preadolescents. At least two modelling displays were presented so that the youngsters could abstract their common elements before playing roles themselves. These short skits usually included both successful and unsuccessful attempts at the skill; the audience was asked to comment on the social situation modelled (i.e., its degree of relevance to problems encountered with siblings and/or peers, the appropriateness of the problem-solving strategies displayed, alternative techniques that could have been employed, etc.), to identify which skill steps (from the list developed earlier in the session and displayed on the blackboard) had been implemented and/or omitted, and to identify the problem-action-consequence sequence for both the successful and unsuccessful problem-solving strategies displayed. The content, presentation and significance of each modelling was discussed as soon as it finished and sometimes changes and additions were made to the skill steps as a result.

After two modelling displays, there was a shift to youngsters playing roles. Leaders suggested appropriate situations for role-plays from their scripts if none were volunteered by group members, and occasionally prepared scripts were brought for the trainees. Prepared scripts presented a problem situation and the initial dialogue exchange, but then left it to the trainees to improvise their own problem-solving strategies and accompanying dialogue. Trainees were reminded that the objective of the skit was to use the day's skill rather than demonstrate their dramatic prowess. A typical role-play lasted 2 or 3 minutes (modelling displays were usually a little shorter). Modelling demonstrations and role-plays were all audio-recorded, and child actors unfailingly wanted to hear a replay of their performance as soon as it ended.

The tape recorded approximations of the role plays were re-played in the context of

an evaluation period that occurred as soon as a given role-play was finished (leaders' modelling displays were similarly evaluated). In brief, immediate feedback was delivered to the role-players. This feedback was initiated and guided by the group leaders who asked both the players and their audience to give their reactions, thoughts and feelings, to the different aspects of the skit—how well it followed or failed to follow the steps of the skill, what alternative actions might have been taken, and how each actor and the onlookers felt about events in the skit. These volunteered judgments were used as key didactic elements by the leaders, who reinforced their validity, commented on them, built questions from them, and drew conclusions out of them.

An essential part of role-play evaluation was trainees' judging the likelihood of the scenario occurring in the real world. A skit which was found to be unrealistic was immediately edited under the direction of the group members. This was done because one objective of the training was to provide trainees with behavioral templates that they might actually be able to use directly in situations they were likely to encounter. The unchanging homework assignment:—"to practice the skill at least once during the week and to report to the group on your experience"—was intended to carry practical application one step further by moving use of the skill out of the classroom and into everyday life.

Although skits acted by leaders and by trainees were the primary instructional vehicle, they were not the only one. Skill steps were also exemplified or practiced using pre-recorded audiotapes, structured adversarial debates, and games in a game-show format (votes on actions) and using very simple costume (for example, people wore their 'buttons'). Each session ended with a leader summarizing what had been discussed. The summary restated why the particular skill introduced in the session was important and briefly reiterated the steps involved in mastering it. The goal here was to provide the clearest possible restatement of the session's key concepts, one that young group members would remember the next day.

The session's forty-five minutes of structured work were followed by a ten or fifteen minute activity period. Activities were held in the meeting room and were always interactive and co-operative in nature (e.g., group games, charades, group poster and banner making, etc.). Though this period was 'free time' and therefore less organized, the group rules (and the token rewards and penalties that accompanied them) were still in effect, and it was understood by all that trainees were to attempt to use the skill of the day (and of other days) in their interactions.

When the training program ended, trainees received a packet of sheets to take home that summarized the skills and skill steps to which they had been exposed during the sessions. These summaries (of the skill steps) used the same wording as had been used in the sessions; it was hoped that they would be seen as the trainee's own notes rather than an educational material based on someone else's experience (the notion that they might also serve as a memento of a generally-satisfying shared experience was not absent). The take-home sheets were handed out at the last session, when tokens were redeemed (it was ensured that everyone got a prize). Parents were later mailed a short typed report on the progress of the group, to which a paragraph summarizing their own child's performance was added .

**AGGRESSIVE-DISRUPTIVE SEQUENCE
SESSION #1**

Recognizing Others' Feelings

OBJECTIVE: to show that being aware of, and sensitive to, how someone else feels can help us decide more easily what might be the best way of handling a situation — especially a potentially problematic one.

to show that being aware of how someone else feels, and that by realizing that how another person feels might be different than how we feel, can help us realize that there is usually more than one way to look at a situation.

to discuss and practise the clues that one might use when attempting to discover how someone else feels (e.g., body posture, voice tone, etc.).

SKILL STEPS:

- 1) *watch* the person (their face, their posture, the tone of their voice and the way they're saying what they're saying). Are all these things sending the same message?
- 2) *name* the feeling to yourself. Do you understand why the person might feel that way?
- 3) *decide* whether to approach the person to *check out* how he or she is feeling (for example, if the person seems to be feeling extremely angry, you may want to wait a while and allow the person to calm down before approaching; on the other hand, if he/she seems to be feeling sad or hurt, approaching to see if you can help or simply be a friend, is often highly appropriate).

SITUATIONS:

(Skill Modelling): a classmate receives bad exam results.

(Skill Modelling): a younger sibling needs a favor.

(Role Play): you are late for an appointment with someone.

(Role Play): a good friend is not invited to a classmate's party to which you are invited.

CONCLUSION: recognizing how someone is feeling is important for two reasons: it helps us deal with problem situations, and it is an excellent way of beginning to understand other people's feelings and thereby avoid aggravating a potentially problematic situation. A good way to recognize another's feelings is to look for special clues (such as body posture, tone and loudness of voice, etc.).

**AGGRESSIVE-DISRUPTIVE SEQUENCE
SESSION #2**

Showing Understanding of Others' Feelings

OBJECTIVE: to build on the skill presented in the previous session by showing that recognizing how someone else feels is but a first important step. After recognizing how the person feels, it is important to show understanding for that feeling.

to show that there are many appropriate ways of showing understanding; *sometimes* the best thing to do once you understand how the person feels is to respect his/her desire to be alone.

SKILL STEPS:

- 1) *name* what you think the other person is feeling (it helps to imagine that you are the other person).
- 2) *think* about what you can do towards someone who is feeling that way. There are many things; a few are: a) ask the other person if he or she feels the way you think they do; b) ask if you can help; c) offer to talk now or later, whenever the other person wants to.
- 3) *act out* your best choice.

SITUATIONS:

- (SM): an unpopular classmate approaches a group and is rebuffed.
- (SM): a friend feels he/she is a failure because of a poorer-than-expected report card.
- (RP) your brother comes back from a talk with your parents and now won't talk.
- (RP) your mom or dad is slamming doors and muttering to him or herself.

CONCLUSION: showing others that you understand how they feel is extremely helpful in building and cementing friendships. Putting yourself in someone else's shoes is sometimes a good way of seeing things from their perspective, which then helps you understand how the other person might feel. When you're on the receiving end, it makes bad things more tolerable.

AGGRESSIVE-DISRUPTIVE SEQUENCE
SESSION #3
Expressing Concern for Another

OBJECTIVE: to build on the skills presented in the previous two sessions, by showing that recognizing how, and understanding why, someone else feels as he/she does, lays important groundwork for the next step — expressing concern for the person.

to show that there are many appropriate ways of expressing concern; to show that one almost always has alternatives to choose from; to show that there is no absolutely right or absolutely wrong way to express concern.

SKILL STEPS:

- 1) *decide* if the other person is really having a problem or is unhappy.
- 2) *think* about your options: a) ask if you can help, show that you really mean your offer; b) do something nice for the person; c) tell someone appropriate about your worries about the person; d) leave the person alone for a while; e) ask the person to join in an activity with you; f) share something with the person.
- 3) *act out* your best choice.
- 4) if that doesn't work, *try another* solution.

SITUATIONS:

- (SM): a classmate gets a bad report card and fears his/her parents will be disappointed.
 (SM): a friend is crying because she did not make the basketball team.
 (RP): the teacher hands back assignments and your best friend starts to cry.
 (RP): after the school bully makes fun of a classmate, the classmate goes away by him/herself.

CONCLUSION: showing concern is composed of two parts. The first is expressing an understanding of the other person's thoughts and feelings; the second is telling the person that you sympathize and support them in those thoughts and feelings. Not knowing how or when to express concern can result in hurt feelings, but not being sincere when expressing concern can be equally harmful. Being sincere in social interactions is crucial if we want others to trust and respect us. Being sincere also shows respect for the other person.

**AGGRESSIVE-DISRUPTIVE SEQUENCE
SESSION #4**

Dealing with Your Anger

OBJECTIVE: to show that what makes one person angry does not necessarily make someone else angry; to show that while sometimes others seem to do things to purposely make us angry, other times they do it unintentionally by not realizing that what they are doing is making us angry; to show that there are many different ways of dealing with feelings of anger — some better than others.

to show that feeling angry is not usually a problem — rather, it is how one deals with that feeling of anger that can result in hurt feelings and other problems.

SKILL STEPS:

- 1) *stop—cool off* (try counting to ten; take a deep breath).
- 2) *think* about your options: a) decide why exactly you are angry; b) tell the other person why you are angry; c) walk away for a little while; d) do something to relax (three deep breaths, consider if your feeling is justified, think about why the other person did/said what he/she did that made you angry); e) use self-statements: "I'm not going to do something I'll regret", "I'll be okay so long as I stay in control", "I'm not going to let their problem become mine by getting angry".
- 3) *act out* your best choice.
- 4) if one choice does not work, don't give up but *try another*.

SITUATIONS:

- (SM): you see two of your classmates whispering and laughing and you assume that they're talking about you.
- (SM) a friend promises to go somewhere with you, then doesn't show up.
- (RP): a friend talks behind your back and you find out.
- (RP): your parents won't let you have a friend over.
- (RP): you lose a game with your brother or sister.
- (RP): you aren't allowed to go to a party that everyone else is going to.

CONCLUSION: it's okay to feel angry every now and then, but it's equally important to know how to handle the angry feelings. If you don't deal with angry feelings in a positive way you can end up with bigger problems than before. Sometimes, using the skills that we discussed before (i.e., recognizing feelings, expressing concern for those feelings) are helpful — using those skills will help you understand why you yourself are angry, and why the other person might have done/said whatever it was that made you angry.

**AGGRESSIVE-DISRUPTIVE SEQUENCE
SESSION #5**

Dealing with Another's Anger

OBJECTIVE: to build on the skills introduced last week by reiterating that what makes one person angry does not necessarily make someone else angry; to show that although one's own behavior does not usually make oneself angry, it might well be making someone else angry; to show that just like others can do things on purpose or by accident to make us angry, so too can we do things that make others angry.

to show that there are many different ways of dealing with someone else's anger — some better than others; to show that option depends partly on deciding why the other person is angry and if it is justified.

to reiterate that feeling angry is not usually a problem — other people have as much right to feel angry as we do, but it is important to know how to deal with an angry person, otherwise problems can explode.

SKILL STEPS:

- 1) *find* out *why* the other person is angry.
- 2) *stay calm*. Look calm. Don't be defensive.
- 3) *listen* to what the other person has to say; look at him while he/she is speaking, and try not to interrupt.
- 4) try to *understand* the other person: their point of view, their feelings etc.
- 5) *judge* whether their anger is *fair*. If it is fair and you are responsible, apologize. If it is not fair, explain your side in a calm but firm way.
- 6) If none of this resolves the situation, *walk away* and let it cool off for a while.
- 7) throughout, *state your goal* in this encounter to yourself, think of your *options*, carry out the *best* one and *keep trying* alternatives.

SITUATIONS:

- (SM): your team loses as basketball, the captain is angry, and you didn't play very well.
- (SM): your friend is angry at you because by talking to him/her during class, he/she got into trouble with the teacher.
- (RP): your parents are mad because you haven't cleaned up your room.
- (RP): a friend is angry because you didn't choose him or her for your team.

CONCLUSION: people usually have a reason why they're angry. The reason may seem good or bad to you, but the first thing to do is find out what the reason is for the other person feeling angry. Anger is catchy and it's important not to get angry yourself when dealing with angry people. You can be in control of what happens next.

**AGGRESSIVE-DISRUPTIVE SEQUENCE
SESSION #6**

Using Self-Control

OBJECTIVE: to show that a basic step in dealing with anger (both one's own feelings and those of another) is to practise self-control; to show that self-control is the basic part of "keeping your cool" and of preventing problems from turning into a crisis.

to show that self-control puts you in control; to show that before trying to handle a problematic situation you have to be in control of your own feelings otherwise you could make an already bad situation get worse, and somebody (including you yourself) could get hurt – emotionally or physically.

SKILL STEPS:

- 1) *stop and cool off.* Count to ten, take deep breaths, be aware of your own emotional state.
- 2) *think* about how your body feels. Is it giving you danger signals? are you feeling tense? are you feeling really angry? do you feel as if you can't even think? are you ready to explode? Get to know your body and the signals it sends you.
- 3) *think* about your *options*: a) walk away for a while; b) do a relaxation exercise; c) write down how you feel, exactly; d) talk to someone about your feelings. Be sure to choose someone who will understand or try to understand; e) talk to yourself and explore your own feelings; use self-statements like "I have to calm down", "I'm not going to make their problem my problem", "I can do it – I can stay in control"; f) develop a positive plan of action—something you can act out to solve the problem, to keep it from getting worse, and maybe to stop it from happening again.
- 4) *act* out your best choice, and remember to try and look calm; if you can't look calm then it probably means that you aren't quite ready yet – take a bit more time to cool off.
- 5) if one solution doesn't work, *try another.*

SITUATIONS:

- (SM): a friend loses the walkman you lent him/her.
- (SM): you are confronted with a whole evening's homework and had other plans.
- (RP): you can't find your favorite cassette when you want to play it.
- (RP): somebody broadcast a secret you confided to them.
- (RP): a teammate is mad because your team lost the game and he's coming your way.
- (RP): you've had a bad day at school, no single thing, just everything and you're ready to burst or to tear someone's head off.

CONCLUSION: self-control is what you use when you have strong feelings that threaten to take you over. It doesn't matter whether or not the feelings are justified, what's important is mastering them until they diminish and can be examined rationally. Then you can evaluate them and choose what to do. It's ok to feel whatever you feel, but don't let your feelings automatically dictate your actions – act rationally.

**AGGRESSIVE-DISRUPTIVE SEQUENCE
SESSION #7**

Responding to Teasing

OBJECTIVE: to show that one's own participation can escalate a teasing situation; to show that teasers often tease because of the response that they get, and that to the extent that one gives them what they expect, the teasing situation is escalated.

to show youngsters how to critically assess their own and others' behavior, thus challenging them to change their habitual way of responding when being teased.

SKILL STEPS:

- 1) *decide* . . . are you *really* being teased. Is it aimed at you or someone else? Is it mean teasing or just being silly?
- 2) *consider* . . . is the teasing at all true, does it tell you something you might not want to know (but should)? If it is true, does it matter? Should it matter? Can you do anything about it?
- 3) *decide* . . . does the teasing mean I'm not a good person? (*no*). Does it mean I'm not likeable? (*no*).
- 4) *understand* . . . does the *teaser* have a problem? a) does he or she only feel good when putting someone down; b) does the teaser have a problem of their own which they're handling badly; c) does he or she tease because he/she wants attention; d) is he or she trying to be funny.
- 5) *think* . . . *You're in control* at the moment. The teaser has done something and it's up to you to respond. You don't want to make the teaser's problem your problem.
- 6) *stay calm*. Use *self-statements* to help you keep control while it's going on (i.e., "what is he or she really trying to do with this teasing? What's their plan? Where is this going?").
- 7) *think* about all the different *things you could do*: a) ignore the teasing; b) stop doing whatever it is that you're teased about; c) change the subject (whatever everybody is doing); d) laugh if you agree that the teasing is funny; e) tell the teaser how the teasing makes you feel and then ask him or her to stop.
- 8) *choose* the *best* alternative and *do it*.; if it doesn't work, *don't give up, try another*.

SITUATIONS:

- (SM): a new student gets teased regularly by one of his or her classmates.
- (SM): a poor athlete get teased after gym class.
- (RP): the class bully teases a good student.
- (RP): a poor classmate gets teased about her wardrobe.
- (RP): classmates tease a boy and girl who are interested in each other.

CONCLUSION: there are a lot of different ways to respond to teasing. The key to handling it successfully is to keep your cool so you can figure out a positive response; the teaser fails as soon as he/she does not get the response that he/she expects.

**AGGRESSIVE-DISRUPTIVE SEQUENCE
SESSION #8**

Staying out of Fights

OBJECTIVE: to show that there are usually more negative than positive consequences to fighting; to show that you don't necessarily have to resolve conflicts by engaging in and winning fights to be respected; to show that the person who prevents a fight from happening is often more in control than the person who engages in one.

to practise generating realistic alternative solutions to fighting; to show how the skill of self-control introduced in the previous session facilitates generation of alternative solutions; to encourage the use of self-statements in stressful situations.

SKILL STEPS:

- 1) *stop* a moment—cool off. Think about what you're doing or about to do.
- 2) *decide* exactly what the problem is? When and how did it start?
- 3) *ask yourself:* a) Is a fight the best way to handle the problem (will it go away after the fight?); b) what will the consequences of fighting be?; c) if I get into trouble will it really have been worth it?; d) if I hurt someone will it have been worth it?
- 4) *think* about your other options: a) walk away for a while; b) talk to the others involved if you're calm enough to do so; c) tell your side of the issue in a non-threatening way (if possible); d) get the other person's side (make sure you listen); e) see if you each can compromise to solve the problem (you give in a little); f) apologize if you were in the wrong; g) ask someone else for help: teacher, parent, friend, brother or sister.
- 5) *act* out your best choice. If that doesn't work try another solution.
- 6) if you reach an agreement with the other person, do what you agreed to do. Don't necessarily wait for the other person to go first.

SITUATIONS:

- (SM): two people find a concert ticket together and fight over who will get to use it.
 (SM): one of the people painting a poster together gets silly and starts to ruin it by pouring paint on it.
 (RP): you get angry at somebody who is always taunting you by pulling faces at you.
 (RP): your sibling keeps interrupting with trivial remarks when you're telling something important to your parents.
 (RP): someone accuses you of cheating at a game when you weren't.

CONCLUSION: lots of problems can easily end up in fights. Often that is no solution, so it's best to stay calm and figure out what's really behind the confrontation. Before you fight, you have control of the situation. Once you fight, you lose control. Fighting is almost always more trouble than it is really worth.

**AGGRESSIVE-DISRUPTIVE SEQUENCE
SESSION #9**

Accepting Consequences

OBJECTIVE: to help youngsters acknowledge that there is no shame in admitting fault when you have made a mistake; to demonstrate that everyone makes mistakes and that whether the mistake was or was not intentional, it can result in negative consequences for others – when that happens, the other person may justifiably be angry with you.

to show that accepting responsibility for one's actions is a better solution than getting angry, blaming someone or something else for the problem, or pretending either that you don't care or that you weren't responsible.

SKILL STEPS:

- 1) *decide* if you were wrong. It's not shameful or bad to have been wrong.
- 2) *decide* what happened. How did the mistake occur? Could you have avoided it?
- 3) *stay calm* – if you were wrong, tell yourself that you made a mistake and now you will have to accept the consequences. Try not to take it personally. Tell yourself that there is nothing shameful in making a mistake, and that it takes a big person to admit it and to accept the consequences.
- 4) *tell the other person* – "yes I did . . ." (describe what you did). Remember to stay and look calm while you are telling the person what you did. If you admit that you made a mistake, but say it in a tone of voice that sounds insincere or threatening, then the other person might not believe that you are sincere about accepting the consequences.
- 5) *explain to the other person* how the mistake occurred. Don't make excuses but tell what happened and why, in a straightforward way.
- 6) *explain to the other person* how you will try and avoid the mistake from happening again. Remember to do this in a friendly manner.
- 7) *apologize* – be sincere. Remember that there is nothing shameful in apologizing. Apologizing does not mean that you have lost face. It's just the opposite.

SITUATIONS:

- (SM): you promised your friend that you would bring the posters you got in Australia for her/his class presentation. He/she was counting on them and you forgot to bring them.
- (SM): you accidentally promised two friends that you'd do things with them the same day.
- (RP): you lost the money a friend asked you to keep safe for him/her.
- (RP): you got into a fight during recess and the other person felt and broke his/her arm.
- (RP): you broke a walkman that a friend lent you.

CONCLUSION: everyone makes mistakes – there is nothing shameful in it. More important is what you do after you realize you've done something wrong. Accepting the consequences of one's actions and behavior is part of growing up.

**AGGRESSIVE-DISRUPTIVE SEQUENCE
SESSION #10**

Answering a Complaint

OBJECTIVE: to show that while no-one probably likes to receive criticism or complaints, they are often helpful in letting us know that something in our behavior is bothering someone else; to focus on the benefits of responding to criticism positively.

to demonstrate the difference between positive and negative criticism, and different ways of responding to each.

SKILL STEPS:

- 1) *stay calm*—it will help you to think more clearly.
- 2) *listen* to the complaint. Don't be defensive right away. Show the other person you are really listening by paying attention to them.
- 3) make sure you *understand* the complaint. Ask in a friendly way about anything that isn't clear in what the person is saying. Try not to look or sound angry.
- 4) when the person is finished talking *wait* a moment before doing anything (talking back). Take three deep breaths or count to ten. Then *decide* on your own if the complaint is fair (it is fair if you would be making it in the other person's place).
- 5) *think* about your *choices*. If the complaint is *fair* you should apologize to the other person (you would want an apology if you were in the other person's place). If the complaint is based on a *misunderstanding*, explain yourself (sometimes you can hurt somebody without meaning to or realizing it). If the complaint is *unfair*, explain why you feel this. Stay calm, and be firm and friendly.
- 6) *Figure out what to do* now. Sometimes you should do something as a result of a complaint (i.e. fix something broken); sometimes it's just enough to know there was a complaint for the future (hurting someone's feeling by a remark)
- 7) *act* out your *best* choice; if that doesn't work, *try another* solution.

SITUATIONS:

(SM): I accidently damaged a friend's book and now she says I'm careless.

(SM): I borrowed something from a friend without asking because he wasn't around but he caught me and mistrusts me a bit.

(RP): I betrayed a secret that a pretty good friend told me. He found out and now he isn't my friend any more.

(RP): Someone has the habit of tapping their fingernails on the desk when they're preoccupied and it drives their neighbors crazy.

(RP): You get paired with someone in sports who you don't know very well; he/she is much better at the sport than you are and he/she complains about you.

CONCLUSION: it is important to deal with complaints positively. When a complaint seems unfair it's necessary to do some thinking to find out what is really motivating the complainer. You have to make an effort if you want to put an end to the complaint.

**SENSITIVE-ISOLATED SEQUENCE
SESSION #1
Introducing Yourself and Greeting Others**

OBJECTIVE: to explore the importance of first impressions when meeting someone for the first time.

to show that the skills involved in greeting others are not necessarily automatic, but that one can get better at them and more comfortable by practising specific aspects that are involved in greeting people (for example, eye contact).

to explore why some people might be nervous about talking to and meeting new people; why making new friends can be difficult; to normalize these difficulties and/or fears.

SKILL STEPS:

- 1) *decide* if you *want* to get to know the person.
- 2) *decide* if this is a *good time* to approach the person. Are they busy with something? Do they seem to be in a good mood and approachable?
- 3) *if the time* seems appropriate, approach the person.
- 4) *introduce yourself*, remembering to be friendly and keep eye contact.
- 5) *give* the other person an *opportunity to talk*. Listen and show that you are really interested in what they have to say.

SITUATIONS:

- (SM): you think you might like to get to know a new student at school.
 (SM): a person you'd like to be friends with is always busy and surrounded by other people.
 (RP): there is a new student at your school; at recess he/she is standing all by him/herself and seems uncomfortable doing so.
 (RP): you've just started gymnastics at a local club Saturday mornings. When you arrive everyone seems to each other – you don't know anyone there.

CONCLUSION: greeting others and creating good first impressions is important because it is the cornerstone of relationships with other people. As a general rule, if you show interest in others, they'll show interest in you. That's an important first step.

**SENSITIVE-ISOLATED SEQUENCE
SESSION #2**

How to Begin a Conversation

OBJECTIVE: to show that a natural part of getting to know someone is finding things to talk about; to normalize any fears or anxieties that may exist around this issue by assuring youngsters that it's okay to feel nervous about meeting new people and thinking of things to talk about; to show that there are ways of practising how to begin a conversation, and that doing so can often help you feel less nervous.

to encourage positive, helpful interaction among youngsters both within and outside of the sessions; to explore why different people might all act differently in the presence of others.

SKILL STEPS:

- 1) *choose* the person you *want* to talk to.
- 2) *think* of a topic: Winterlude, floor hockey, track and field, a movie you recently saw, a favorite tv show, summer holidays etc.
- 3) *choose* a good time and place to talk (e.g., neither of you is busy, etc.).
- 4) *be friendly* Make eye contact, smile and listen as well as speak.
- 5) *talk about your topic*. Make a comment, ask a question, let the other person reply, show your interest in what they have to say by nodding your head, smiling and saying things like "I see", "uhm hmm", "yes" etc.
- 6) *don't interrupt*; wait for your turn. After the other person has stopped talking, you can ask another question or make another comment. Base what you say in part on what the other person said. Keep to the topic.
- 7) *show* the other person by your manner that you *enjoy* their company.

SITUATIONS:

- (SM): you have trouble getting yourself to say anything when you find yourself in a group, even though everyone seems to like you well enough.
- (SM): you find out that a classmate whom you've wanted to talk to likes football – so do you. You've never talked to that person but you would really like to.
- (RP): there's a group of kids you'd like to get in with but you don't know how to approach them at recess. They seem nice but you find it hard to talk to them.
- (RP): you get moved to a new seat in class and none of your friends are sitting around you. Today you have to work in pairs with the person beside you.

CONCLUSION: knowing how to talk with people and showing an interest in them while also showing that you are interesting is part of relationship building, so it's important to know how to strike up, continue, and end a conversation. A cheerful, self-confident demeanor and a thought-out topic or two are an excellent start.

**SENSITIVE-ISOLATED SEQUENCE
SESSION #3**

Joining an Activity

OBJECTIVE: to explore ways of helping youngsters experiencing ongoing social difficulty, to decide what to do, and how to behave or act in social situations; to show and practise ways of joining ongoing activities.

to normalize anxieties that the youngsters might convey, by reiterating that everyone has areas of strength and areas that are more difficult; to focus on a number of key aspects that can be practised and that often help ease the experience of anxiety that accompanies social situations.

SKILL STEPS:

- 1) *decide* if you *want* to join in. Is what the others are doing something that you want to do?
- 2) *decide* what to *say* to get in on the action. Don't just push your way in; that's a good way to make others mad at you. By the same token, don't just stand there and hope someone will ask you – they might not realize that you want to join.
- 2) *choose a good time* to ask if you can join in (don't do it when everyone's attention is on the game or activity). Good times are: a) when there's a break in the activity; b) before the activity actually starts; c) if it is something that happens regularly, ask if you can join in the next time.
- 3) *ask to join* in a friendly manner. Use good body language (look at the person you're talking to, use a pleasant tone of voice, turn to face the person). Say something like, "would it be okay with you if I played too?".
- 4) Take a *cooperative* attitude toward the activity. Don't ask to take a turn right away, or insist that things should be done the way you think best. Let others get to know you first.

SITUATIONS:

- (SM): you arrive late for an event and it's underway, without you, when you arrive.
- (SM): you get put on the same science project as two other people who you don't know but who know each other. They are planning what sounds like fun.
- (RP): your family moves to a new neighborhood where there are kids your age and you see them playing on the street when you get home from school.
- (RP): there's a volleyball game going on; you'd like to join but nobody's asked you.

CONCLUSION: it's not always easy to ask if you can join an activity, especially if you are a newcomer and the others all know each other. At the same time, to make friends you often have to take the initiative and try to become part of the group. There are appropriate and less appropriate ways to do that. The strategy you choose is important because others use it to help build an impression of you.

**SENSITIVE-ISOLATED SEQUENCE
SESSION #4**

Dealing with Fear and/or Anxiety

OBJECTIVE: to show youngsters that different things make different people feel anxious; to stress that most people are likely afraid of something, and that it is not shameful to feel anxious; to stress that what is important is to become aware of what makes us nervous, and to find ways of either alleviating it or working around it.

to show that anxiety is normal but that it does not have to limit one's opportunities for happiness and/or success; to show that there several key aspects of anxiety that a person can identify and work on to alleviate.

SKILL STEPS:

- 1) *decide if* you are feeling afraid or anxious by checking on your body cues: heart beating really quickly; sweaty palms; shaky hands or knees etc.
- 2) *decide what* you are afraid of (is it a physical threat or a psychological one like being afraid of giving a speech). Try to figure out what is the root of the fear.
- 3) *think* about the *positive choices* you can make: a) *talk* to someone about you fear (sometimes talking really helps, and helps you become clear about just what you are afraid of); b) try a relaxation exercise; c) try positive *self-statements* like "I really CAN do it" or "It'll be worst the first time"; d) try to work the fear down by *attacking* just *what you're afraid of*. If it is speaking in public, try giving your speech to your family or to yourself in a mirror.
- 4) *act* on your *best* choice. Most important, don't give up. *Keep trying* to wear down your fears and they WILL wear down.

SITUATIONS:

- (SM): a bully has threatened to beat you up at recess and the bell is ringing.
- (SM): you are about to start junior high school and feeling nervous about it; in addition, most of your friends are going to a different junior high school.
- (RP): you're home alone at night and it's spooky.
- (RP): there is an exam coming up in a class that you're not doing well in, and you are afraid of failing.
- (RP): you have to give a speech in front of your class and you are afraid of speaking in front of groups of people; you are afraid you'll do something dumb.
- (RP): you are not very good at sports and tomorrow gym class starts; the teacher said that for the first month you'll be learning team sports like basketball.

CONCLUSION: everybody feels anxious about one thing or another. Avoiding things that make you nervous or anxious is only a short term cure; in the long term avoiding things means that you are probably missing out on things that you would perhaps like to do. Confronting something that makes you nervous is a good feeling.

**SENSITIVE-ISOLATED SEQUENCE
SESSION #5**

Learning to Relax

OBJECTIVE: to explore with the youngsters, the physical signs of anxiety and nervousness; to show youngsters how to recognize the onset of anxiety by listening to their bodies, and responding with a relaxation strategy to alleviate the full impact of the anxiety.

to teach a deep-breathing, and a visual/auditory imagery relaxation technique; to explore how these strategies work, and to stress that just like other skills, it takes practise to learn how to relax.

SKILL STEPS:

- 1) *decide* if you *need* to relax. Do this by listening to what your body is telling you and by stopping to think about how you feel and why you feel that way.
- 2) *if you do*, try one or more of the following:
 - a) take *three slow and deep breaths*; close your eyes, and for a moment or two just focus on your breathing and how it makes you feel; doing this gives you a sense of your body, and also gives you a minute to gain your composure. When you are composed you will likely feel and do better.
 - b) *tighten* up the muscles in one part of your body. Slowly count to three. Then *relax* that part; let it go limp, like a rag doll. Do this for all the different parts of your body, one after another: your arms, legs, feet, hands shoulders (from your toes to your nose). As you proceed, you'll probably start to feel the positive effect. You will likely feel a sense of control, and you'll gain some composure back
 - c) *imagine* that you are in the most peaceful place that you can think of; imagine every tiny detail of the setting (e.g., the sound of the water on the sand, the shape of the clouds, the bright blue sky, etc). By focusing your attention on something other than your fear, you likely begin to feel better. After awhile, ask yourself how you *feel*. Think about your feelings slowly and deliberately.
- 3) if none of these techniques work, try *distracting yourself* by occupying your mind with another activity. Listen to music, go for a walk, talk to a friend.

SITUATIONS:

- (SM): a big sports competition is coming up; you really want to do well.
- (SM): you have to give a speech in front of the class, and you are nervous.
- (RP): you're starting at a new school and don't know anyone.
- (RP): you end up at the bus stop with the most popular kid in school; you're nervous because you don't know how to talk to him or her, or what to say.

CONCLUSION: anxiety and nervousness are common feelings; everyone has them from time to time. Although they are normal, however, they can get in the way of our performance if we don't find ways of diminishing their effect. Different techniques work for different people, but learning to relax in order to conquer the negative impact of anxiety is a skill that needs to be learned just like any other.

SENSITIVE-ISOLATED SEQUENCE
SESSION #6

Rewarding Yourself

OBJECTIVE: to explore the feelings that are associated with the receipt of praise from an outside source and to then relate the benefits and importance of being rewarded by others to being praised and rewarded by oneself.

to show that while internal praise does not replace external reinforcement, it is important because it's a way of learning to feel good about yourself; to show how a person can congratulate him/herself in a positive (non-boastful) way.

SKILL STEPS:

- 1) *remember* that you *don't* always have to *depend* on others to reward, praise or congratulate you for what you accomplish; if you feel good about it yourself that's the most important thing.
- 2) *decide* whether you did a good job. Did you meet *your goal*? Did you do *your best*, regardless of whether you met your goal or not (remember that your best is your best and not someone else's). Was your goal a *realistic* one? If not, what did you learn? How will you do it next time?
- 3) *if you feel you have earned* a self-reward, *decide what* it will be. It might just be saying to yourself, "hey, I'm okay!" or giving yourself a pat on the back. It might be taking a break from your task and giving yourself a treat like a movie, a pizza or a CD.
- 4) *when you reward* yourself choose an activity that *you* enjoy (and one that won't bother others).
- 5) *reward or congratulate* yourself as *soon after the job* as possible.
- 6) don't go *too far* and let self-rewarding turn into bragging (that's a good way to make others mad at you).

SITUATIONS:

- (SM): you won a science project that your sibling really did most of the work on.
- (SM): the speech you gave to the class is over! And it looks like it wasn't too bad.
- (RP): you're proud of your test grade even though your friend scored higher.
- (RP): after you finish a test you reward yourself by nailing together your project at the back of the classroom while others are still writing.
- (RP): a kid who makes the football team doesn't get as many congratulations as he expects so he tells people how much better than the others he is.
- (RP): although she moved from Ds and Fs to Bs and Cs, her friends commiserated over her report card so she didn't celebrate.

CONCLUSION: life is more than just work, and it's important to feel good about your accomplishments and reward yourself. Remember that you know better than anyone else what was hard (or easy) for yourself; others don't and can't see this as well.

**SENSITIVE-ISOLATED SEQUENCE
SESSION #7**

Problem Solving

OBJECTIVE: to show that the most fundamental step in problem-solving is to arm yourself with as many alternative strategies as possible; to discuss how these strategies can become a natural part of one's repertoire of problem-solving techniques.

to practise consequential thinking in which different alternatives and their likely outcomes are evaluated; to show youngsters how social situations can be effectively evaluated.

SKILL STEPS:

- 1) *stay calm.* (count to ten, or perhaps use the relaxation techniques from last week).
- 2) *decide* what the problem is (often a person isn't really sure unless he/she sits down for a moment and really thinks about it). Why are you *really* upset? *When* did the problem start? *How* did the problem start? Are you prepared to do something and accept the consequences?
- 3) *think* of several *different* possible *solutions*. This is the key step.
- 4) *think* of the *consequences* of each possible solution (i.e. "think before you act"). What will the *other* person or people say, do and feel? How will *you* feel?
- 5) *choose* the best solution, the one with the best or most positive consequences.
- 6) *ask yourself*, "how did that work?". If it *worked well*, congratulate yourself and keep that solution in mind for the next time. If it *didn't work well*, pick *another* one of your alternatives and try it instead.
- 7) remember, "*don't give up!*". Believe in yourself, and try, try again.

SITUATIONS:

- (SM): when a friend doesn't show up as planned you miss going to a movie. You are very angry. Later it turns out that her brother had just broken his ankle.
- (SM): a close friend tells you he/she won't come to your party if you invite another one of your friends that he/she doesn't like.
- (RP): two boys are shooting baskets and one boy is a ball-hog.
- (RP): you forget a previous engagement and make conflicting arrangements that will let someone down.
- (RP): two students at the blackboard start fighting when one writes in the other's space.
- (RP): you don't understand an assignment but are afraid of asking for help because you are afraid that people will laugh at you.

CONCLUSION: problems are a part of everyday life, you can't avoid them. But, what a person can avoid is behaving in such a way that the problem escalates. To avoid that from happening it is important to be armed with a large repertoire of problem-solving strategies; that way, if one doesn't work, you'll have another to go to.

**SENSITIVE-ISOLATED SEQUENCE
SESSION #8**

Making a Complaint

OBJECTIVE: to introduce the concept of registering complaints as a type of problem-solving strategy; to show that registering complaints, if it is done in a positive rather than in a spiteful or mean way, is a basic way of working to make things go better or more smoothly; to practise "positive complaint making".

to convey the notion that often it is only by specifically telling someone something (i.e., making a complaint) that the other person will realize that he/she has done something that bothered you; to stress that improving relations is up to everyone involved.

SKILL STEPS:

- 1) *decide* what the problem is. How do you feel? Did someone say or do something that bothered you? (what? why?).
- 2) *identify* the person you are having trouble with.
- 3) *choose* a good place and time to talk to the person. Wait until the person is not busy. It may be best to wait until the person is alone (other times you MAY want to have someone around). You will have to check out the situation and see which is best.
- 4) *talk* with the person about the problem. Explain the problem and make your complaint clearly. Be positive and friendly. Don't make a complaint when you are upset (be calm; LOOK calm). Tell the person how you feel when he or she does whatever it is that is making the problem (be calm; LOOK calm).
- 5) *give* the other person a chance to respond and tell their side of the story. You may be surprised at how they see things. Listen and be patient while they're speaking.
- 6) *believe in yourself*. If that solution doesn't work, choose another – you may want to get help from an adult or friend to help solve the problem. Don't give up.

SITUATIONS:

- (SM): you have a responsibility (class president) and another student always ends up taking over at meetings.
- (SM): a classmate who asked a good student to work on a school project with her won't do any of the work.
- (RP): a friend always wants to do things his or her way, even if it causes you considerable trouble.
- (RP): your older sibling wants you to do something and takes for granted that you'll do it without even giving you a chance to say yes or no.
- (RP): one of your parents is unfairly angry that you didn't finish all your chores this time even though you usually do.

CONCLUSION: if you're unhappy about something, nothing will change unless you tell the other parties involved about it. If you choose your words well you can usually do this without needing to hurt anyone's feelings.

**SENSITIVE-ISOLATED SEQUENCE
SESSION #9**

Dealing with Embarrassment

OBJECTIVE: to normalize the feeling of embarrassment; different things make different people feel embarrassed, but most people likely feel embarrassed about something.

to explore how embarrassment, if allowed to get out of hand, can limit one's opportunities for happiness and one's life experiences; to practise alternative strategies to deal with embarrassment.

SKILL STEPS:

- 1) *stay calm*. It will help you to think clearly.
- 2) *decide ...* "what *exactly* am I embarrassed about?" What happened to make you feel embarrassed?
- 3) *think* of what you can do to feel less embarrassed. Try to think of more than one thing to do.
- 4) *some possible things* to do are: a) *laugh* at yourself (accept that you made a mistake. Everybody messes up and makes mistakes so you are not alone); b) *explain* how you feel (especially if another person is doing something that embarrasses you. That person might not realize how you feel); c) *ignore* it; d) *forget* it. Say to yourself, "It's over. People will forget that I made a mistake"; e) decide what you might do *next time* to *avoid* the embarrassment, if that's possible (i.e. if you fell asleep in class, make sure you get more sleep next night).
- 5) *act* out your *best* choice of solution.
- 6) *ask yourself* how the solution worked. If it worked well, then congratulate yourself. If it didn't work out so well, try another solution.
- 7) *remember, don't give up*. Believe in yourself.

SITUATIONS:

- (SM): a classmate scores on his own side in a game in front of everybody.
- (SM): you like somebody who's unpopular at school and this person comes up and talks to you in front of everybody.
- (RP): you have told everyone that you are a championship swimmer; but you exaggerated. There's a meet coming up and everyone is counting on you to win.
- (RP): you stayed up really late last night; as a result you fall asleep in class.
- (RP): you're having trouble mastering a sport and someone always imitates your mistakes and awkwardnesses.
- (RP): after you give a series of wrong answers in class you find that someone's taped an "I'm a dummy" note on your back.

CONCLUSION: it's normal to feel embarrassment from time to time, but it's important not to let it get the better of you—embarrassment is one of those things that grows enormously if you give in to it. Embarrassing things will happen, but there are ways of dealing with those situations that give you the courage to try again.

**SENSITIVE-ISOLATED SEQUENCE
SESSION #10**

Dealing with Group Pressure

OBJECTIVE: to explore the rationale behind group pressure and its impact on people's behavior; to discuss the feelings that might be associated both with following the group when it acted in a way you know is wrong, and with not following.

to generate, discuss, and practise different ways of responding to group pressure; to explore the consequences of following the crowd.

SKILL STEPS:

- 1) *listen* to what the others want you to do.
- 2) *think* about *why* they want you to do it. Some bad reasons: a) they want support so they won't look bad; b) they want to gang up on someone and want help; c) they want to be in control; d) they are afraid that what they want is wrong so they want others to go along and thereby fool themselves into thinking that what they're doing is okay. Some good reasons: e) they need help; f) they really believe they are right.
- 3) *think* about what will happen if *you follow the group*. What will the consequences be? Some bad consequences are: a) someone might get hurt (physically or emotionally); b) you might get into trouble. Some consequences are good: a) the group might accomplish its goal with your assistance.
- 4) *think* about what will happen if *you don't go along*. What will the consequences be? Decide how you might deal with them.
- 5) *decide* what you want to do. Choose the action that has the *best consequences* (to follow the group or to resist the group).
- 6) if you decide *not to go along* with the group, *tell them* why you are not. Giving a reason may bring the others in the group to reconsider for themselves.
- 7) if you decide *to go along* with the group, *tell yourself* what reason you have chosen for your decision (don't just fall in). Doing this may help you to think about why you are really going to do what they group is suggesting.
- 8) *believe in yourself*, and in the worth of yourself. Do what you believe is *right*.

SITUATIONS:

- (SM): a friend shoplifts and tries to persuade you to shoplift too because "it's fun".
- (SM): a classmate encourages you to join a group going on a walkathon on Saturday when you usually go to a movie with your brothers.
- (RP): a classmate tries to enlist you to shun somebody; you kind of like the person.
- (RP): some good friends want to get you to smoke and you don't want to.
- (RP): a bunch of kids want you to come to an x-rated movie; you don't want to.
- (RP): some kids are planning to vandalize a neighbor's yard and want you to come.

CONCLUSION: peer pressure is always there and must be dealt with. It's important to take the time to figure out just what *you* want to do, and *why*, before you give in to group pressure or resist it. Remember that you have control of your own actions.

**AGGRESSIVE-DISRUPTIVE AND SENSITIVE-ISOLATED SEQUENCE
CLOSING SESSION**

Reacting to Failure and Rejection

OBJECTIVE: to convey to the youngsters that it is likely unrealistic to expect that every social approach, or every skill that they attempt, or every positive change that they make in their social behavior will be met with immediate acceptance or success.

to explore how people can lay false expectations on themselves and end up unhappy by making what are called "thinking mistakes" (i.e., believing that unless they succeed with everything they do, the very first time they try it, they are a failure).

SKILL STEPS:

- 1) *stay calm* ... it will help you to think clearly.
- 2) *decide* ... Did I really fail? Did I do less well than I expected to?
- 3) try to *think clearly* and to *be honest* with yourself. Check out your beliefs. Are they rational? ("I have to be good at everything I try", "Every time I like somebody they have to like me", "If I don't do well at this it means I'm no good as a person", "If I fail it's because someone's against me").
- 4) *think* about *why you failed*. a) maybe you didn't try hard enough; b) maybe it was just a matter of chance; c) maybe the goal was unrealistic; d) maybe you were too nervous to do your best; e) maybe you misunderstood or missed something.
- 5) *think* about *what to do next time*. a) try harder; b) practice more before; c) relax; d) ask for help before or during; e) set more realistic goals (don't be too hard on yourself; work up gradually); f) avoid making thinking mistakes; g) talk to someone you trust about how you feel.
- 6) *believe in yourself ... don't give up*. If the goal is realistic and you really want it, keep trying. You can't do more than your best, but with proper planning you CAN do your best.

SITUATIONS:

- (SM): a friend is downcast because his/her overtures to others are being rebuffed.
- (SM): someone has come away angry from a situation when they were bugged until they reacted—wrongly.
- (RP): a perfectionist isn't satisfied with 16 out of 20 on a test.
- (RP): you got on the team, but are on the second string; you aren't happy about it.
- (RP): a friend wins at everything but this time didn't get elected to class president.

CONCLUSION: no matter how hard you try there'll always be times when you do not succeed to the level that you had hoped for. The trick is not to let it get to you; remember instead that failing at one thing is just that—failing at one thing. It doesn't change all the successes you've had in the past and will have in the future.

Appendix K
COMPLIANCE AND
CONSISTENCY CHECKLIST

COMPLIANCE AND CONSISTENCY CHECK:

DEGREE OF TX ADHERENCE TO
GUIDELINES AND OF SIMILARITY
OF PROGRAM FORMAT BETWEEN
TREATMENTS

RATER: _____

SCHOOL: _____

Two persons independently review each tape
presented according to the criteria below:

OF TARGETS: _____

• ADMINISTRATIVE ISSUES:

1. Treatment Package Presented	—	SI=1	AD=0	1	0
2. Application	—	B=1	C=0	1	0
3. Number of Sessions Offered	—	10=1	<10=0	1	0
4. Minutes Given per Session	—	50-60=1	<50=0	1	0
5. Number of Topics Addressed across the Session	—	10=1	<10=0	1	0
6. Number of Topics per Session	—	1=1	>1=0	1	0
7. Number of Leaders Present	—	2=1	1=0	1	0
8. Sex of Leaders	—	M+F=1	F+F, F=0	1	0

• SESSION CONTENT

1. Homework Review					
— offered		Y=1	N=0	1	0
— time allowed	<2 min.	Y=1	N=0	1	0
	2 min—5 min	Y=1	N=0	1	0
	>5 min	Y=1	N=0	1	0
2. Topic Introduction					
— skill specifically named (refer to list)		Y=1	N=0	1	0
— skill definition/description provided		Y=1	N=0	1	0
— example(s) of skill use provided		Y=1	N=0	1	0
3. Formulation of Specific Skill STEPS		Y=1	N=0	1	0
4. Visual Presentation of Skill steps (eg chart)		Y=1	N=0	1	0
5. Modelling Technique applied (group leaders)		Y=1	N=0	1	0
— number of scenarios modelled		2=1	1=0	1	0
— modelling makes reference to skill steps noted		Y=1	N=0	1	0
— modelling sequence followed by:					
i) review of HOW skills used		Y=1	N=0	1	0
ii) review of WHEN/WHERE skills used		Y=1	N=0	1	0
iii) review of WHICH skills steps used		Y=1	N=0	1	0
	<i>"how", "when/where" and "which" are key words; must be answered</i>				
6. Role Play Sequences					
— all participants are assigned a role		Y=1	N=0	1	0
— all but one target is assigned a role		Y=1	N=0	1	0
— all but two targets are assigned a role		Y=1	N=0	1	0
— number of role plays in session per child		Y=1	N=0	1	0

7. Organization of Role Plays				
— complete scenarios presented by leaders=1 or children asked to develop scenario=0			1	0
— roles designated by leader=1 or children allowed to choose own role=0			1	0
-- rehearsal time allowed and/or used=1 or notion of rehearsal time not suggested=0			1	0
-- children required to develop own solutions in scenario=1 or problem solutions provided and require only acting out=0			1	0
— coaching technique used by leaders to relate problem solution to skill step chart	Y=1	N=0	1	0
8. Feedback on Role Plays				
— provided by leaders	Y=1	N=0	1	0
— provided by group participants	Y=1	N=0	1	0
— role players critique own role plays	Y=1	N=0	1	0
— feedback from leaders makes specific reference to:				
i) which skill steps were used	Y=1	N=0	1	0
ii) how skill steps were used	Y=1	N=0	1	0
— alternative solutions suggested	Y=1	N=0	1	0
9. Reinforcement				
— efforts acknowledged (verbally) by leaders	Y=1	N=0	1	0
— encouragement provided by leaders	Y=1	N=0	1	0
— token economy implemented	Y=1	N=0	1	0
10. Homework				
— homework task specifically given	Y=1	N=0	1	0
— homework task mentions "practise" concept	Y=1	N=0	1	0
— homework task refers to topic of session	Y=1	N=0	1	0
11. Free Play				
— time allocated at end of session for group activity	Y=1	N=0	1	0
— group activity in some type of structured rule-guided game	Y=1	N=0	1	0
— time allocated		>10 min. ≤10 min.	1	0

• STYLE

1. Subject Participation

per 3 randomly selected 3 minute segments per session

— #leader utterances = #subject utterances ± 2	Y=1	N=0	1	0
— #leader utterances > #subject utterances	Y=1	N=0	1	0
— #leader utterances < #subject utterances	Y=1	N=0	1	0
— subject utterances are responses to leader queries	Y=1	N=0	1	0
— subject utterances are spontaneous and/o elaborations of requested response	Y=1	N=0	1	0
— responses to queries > spontaneous utterances ± 2	Y=1	N=0	1	0
— spontaneous utterances > responses to queries ± 2	Y=1	N=0	1	0
— responses to queries = spontaneous utterances ± 1	Y=1	N=0	1	0
2. Didactic versus One-way Teaching				
— formulation of skill steps:				
i) leaders structure session by presenting steps ie do not <i>request</i> input from subjects	Y=1	N=0	1	0

ii) leaders structure session by introducing topic and directing direction of input from subjects but <i>actively elicit</i> input (ask for comments etc)	Y=1	N=0	1	0
iii) leaders conclude this segment of session by recapping subjects' input (purpose being to achieve consistency of input)	Y=1	N=0	1	0
iv) leaders provide examples to illustrate	Y=1	N=0	1	0
v) leaders <i>invite</i> examples from subjects <i>must be an active invitation, not simply an acceptance of an example offered by a subject</i>	Y=1	N=0	1	0
— #of invitations = #provided examples	Y=1	N=0	1	0
— #of invitations < #provided examples	Y=1	N=0	1	0
— #of invitations > #provided examples	Y=1	N=0	1	0
— modelling segment				
i) critique consists of leader PLUS subject input	Y=1	N=0	1	0
ii) critique consists of only subject input	Y=1	N=0	1	0
iii) critique consists of only leader input	Y=1	N=0	1	0
— role play segment				
i) leaders actively encourage <i>all</i> subjects to participate (assign roles, specifically ask who is going to play particular roles)	Y=1	N=0	1	0
ii) response from subjects is 100% participation	Y=1	N=0	1	0
iii) nonparticipants are encouraged to try a role play in next session but are specifically reassured that it is OK to not participate today	Y=1	N=0	1	0
iv) subjects specifically coached before beginning role play to use skill steps in solving problem presented	Y=1	N=0	1	0
v) subjects specifically reminded that the focus is to successfully problem-solve not necessarily to act well	Y=1	N=0	1	0
vi) subjects reminded to make role plays as realistic as possible	Y=1	N=0	1	0
vii) in critiquing role play, are subjects' negative comments accepted (eg "that wouldn't work in real life") and discussed	Y=1	N=0	1	0
— do subjects offer negative comments as noted in vii) above?	Y=1	N=0	1	0
viii) are subjects encouraged to critique role play?	Y=1	N=0	1	0
— do subjects participate in process actively?	Y=1	N=0	1	0
ix) are alternative solutions generated?	Y=1	N=0	1	0
— in the generation of such alternative solutions, do leaders actively indicate that there are ALTERNATIVE solutions (ie that they are not meant to replace solutions generalized in role play; they are simply other strategies that could be used)	Y=1	N=0	1	0
— do subjects participate in generation of alternative solutions?	Y=1	N=0	1	0
— are they invited to do so?	Y=1	N=0	1	0

2. Structure

— do leaders appear to have session under control? (although encouraging participation, do they direct flow of conversation, ensure everyone has a turn, discipline if necessary etc)	Y=1	N=0	1	0
— do the children seem to enjoy the group? <i>judge by laughter, presence, participation, responsiveness to questions, requests for attention</i>	Y=1	N=0	1	0
— both leaders play equally active role in session	Y=1	N=0	1	0
— per session, only one leader plays dominant role	Y=1	N=0	1	0
— flexibility observe:				
i) time allowed to discuss specific problems a child may bring; if not sufficient time in group meeting, leader indicates that the issue will be addressed at some future time that is agreeable to all or not applicable	Y=1	N=0	1	0
— rapport established between leaders and subjects <i>judge by ease of conversations, readiness of leaders to acknowledge subjects, subject readiness to volunteer comments, laughter</i>	Y=1	N=0	1	0

APPENDIX L
POWER ANALYSIS

The power resulting from the statistical analyses employed in this study was evaluated using three independent statistical power analyses (Cohen, 1969). Each demonstrated a satisfactory level of power for the analytic method it assessed. The analyses and their results follow.

The target sample of $N = 78$ poorly accepted preadolescents was composed of two ($= K$) subgroups, each of which had been ascertained to deviate from class leaders and average peers in a significant way (by way of the dependent variables of interest). All members of the two subgroups of peer-rejected preadolescents (i.e., rejected aggressive-disruptive and rejected non-aggressive/sensitive-isolated) participated in social skills training programs. After ten such treatment sessions, and again after one year, subjects were reassessed on the pretreatment inventory of measures. Resulting data was analyzed using a .05 criterion of significance to determine whether the hypothesis of differential benefit of social skills training due to diagnosis (i.e., aggressive-disruptive versus sensitive-isolated) was supported. On the basis of previous research findings (refer to the discussion of BESDs presented in the Introductory chapter of the dissertation), a relatively large effect size was expected for this hypothesis. An f of .33 was set to test for power, with the expectation that approximately 10 percent of the variance recorded on the dependent variables across time by repeated measures analysis of variance would be a function of diagnosis (independent of treatment specificity). That is,

if $h^2 = .10$, then $f = .33$ (Cohen, 1969, pg. 276)

then if $f = .33$, $\alpha = .05$, $u = k-1 = 2 - 1 = 1$, and $n = 39$

the Power of the F test is .81 (Cohen, 1969, pg. 304)

To investigate the benefit of treatment designed to address the social deficits assessed as specific to a subgroup of socially rejected youngsters, over a treatment that addresses more general deficits, members of the target sample of $N = 78$ poorly accepted

adolescents (i.e., 38 aggressive-disruptives and 40 sensitive-isolates) were randomly assigned, after blocking by diagnosis, to either a diagnosis-specific treatment condition or to a crossover treatment condition (i.e., the training program designed to address the social deficits identified as specific to the other diagnosis). This assignment procedure produced four treatment groups: aggressive-disruptive targets in diagnosis-specific treatment, aggressive-disruptive targets in crossover treatment, sensitive-isolated targets in diagnosis-specific treatment, and sensitive-isolated targets in crossover treatment). Resulting data was analyzed using a .05 criterion of significance to determine whether the hypothesis of a significant diagnosis X treatment specificity interaction was supported. Again, a medium to large effect size was expected. An f of .33 was set to test for power, with the expectation that 10 percent of the variance recorded on the dependent variables across time by repeated measures analysis of variance would be a function of the diagnosis by treatment specificity interaction. That is,

if $h^2 = .10$, then $f = .33$ (Cohen, 1969, pg. 276)

then if $f = .33$, $\alpha = .05$, $u = k-1 = 4 - 1 = 3$, and $n = 19$

the Power of the F test is .63 (Cohen, 1969, pg. 310)

The study further hypothesized that poorly accepted youngsters who receive diagnosis-specific social skills training would benefit more than those who receive another type of training, regardless of the recipient's diagnosis (i.e., aggressive-disruptive versus sensitive-isolated). That is, the study predicted that diagnosis-specific social skills training is stronger than crossover training in its own right, and is not dependent on a particular diagnostic group of rejected youngsters to demonstrate its greater value. This hypothesis would need to meet the same power specifications as those outlined for the first hypothesis (i.e., that concerning the function of diagnosis independent of treatment specificity) in order to be accepted. Thus, resulting data was analyzed using a .05 criterion of

significance. Again, an f of .33 was set to test for power, with the expectation that approximately 10 percent of the variance recorded on the dependent variables across time by repeated measures analysis of variance would be a function of treatment specificity (independent of diagnosis). That is,

if $h^2 = .10$, then $f = .33$ (Cohen, 1969, pg. 276)

then if $f = .33$, $\alpha = .05$, $u = k-1 = 2 - 1 = 1$, and $n = 39$

the Power of the F test is .81 (Cohen, 1969, pg. 304)

While the power values yielded by these analyses are not exceptionally high, they seem sufficiently strong to validate the sample size used. This is particularly important because school board and time constraints make it impossible to simply 'scale up' the study by increasing the overall N to strengthen power. Identifying and obtaining consent from 78 target subjects for the type of study undertaken herein effectively exhausted the school board's available population and tested the time constraints imposed by the study itself.

Appendix M

SUMMARY OF
THREE-WAY REPEATED MEASURES
PROFILE ANALYSIS
(UNCOLLAPSED DATA)

Results from the three-way repeated measures model, reported here, are based on the uncollapsed data (see Figure 2 in the Results section) and incorporate scores from each of four measurement times (i.e., Time A, Time B, Time C, and Time D) and/or three treatment segments (i.e., # one: Time A to Time B; # two: Time B to Time C; and # three: Time C to Time D). In short, the 3-way model incorporates the independent variable Treatment Phase, whereas the 2-way model reported in the main text collapses across that variable. The benefit of the three-way (uncollapsed) model, presented in this Appendix (M), is its use of unmanipulated data. As such, it permits further analysis of the stability and pattern of treatment effects by providing separate analyses for each of the two treatment phases, albeit with smaller cell sizes. By so doing, it also provides data from a three-month follow-up (in addition to the one-year follow-up) for approximately one-half of the targets. In essence, the results of the 3-way model presented here, mirror those of the 2-way model presented in the main body of the Results section, except that they (i.e., the 3-way results) present an additional comparison of wait-list treatment versus immediate treatment.

Main and interaction effects that were significant at a $p < .05$ level were explored further with univariate ANOVAs, Tukey (HSD) post hoc comparisons, and paired t -tests. Bonferroni modifications applied to correct for alpha slippage (because the number of planned comparisons often exceeded the degrees of freedom associated with the between groups mean square) resulted in an adjusted significance level of $p < .01$ to be used when evaluating post hoc planned or unplanned pairwise comparisons. The accompanying tables, as well as Figures 2 and 3 presented in the Results chapter of the dissertation, should be referred to for greater detail concerning issues such as the measurement points (i.e., time A, B, C, and D), the time of treatment implementation with the immediate versus the wait-list phases, and the consequent pattern of change (i.e., point of improvement) reported by the immediate versus the wait-list treatment phases.

Summary of 3-Way Analysis

Results of the 3-way analysis substantiated those revealed by the 2-way analysis reported in the Results section. Overall, the aggressive-disruptive targets seemed to benefit more from social skills intervention than the sensitive-isolated targets; the benefits of social skills intervention, however, were seen with both diagnostic groups in terms of the dependent measures used (i.e., peer-rated likeability, peer-rated aggression, peer-rated social withdrawal, and social self-perception). The superiority of social skills treatment over no treatment (i.e., the wait-list treatment phase) was strongly supported by the results of the 3-way repeated measures analysis (refer also to Figure 3 in Results chapter of main text). Improvements in peer-rated likeability, peer-rated aggression, peer-rated social-withdrawal, and social self-perception did not occur spontaneously; rather, they were recorded following social skills treatment. As such, improvements were recorded with targets from the immediate treatment phase before they were recorded with targets from the wait-list treatment phase. However, once both phases had undergone social skills intervention, the independent variable 'treatment phase' no longer accounted for significant variation between or within groups. Little improvement was recorded on any dependent variable by any treatment phase / treatment specificity / diagnosis combination beyond that recorded immediately following treatment. That is, posttreatment improvements occasionally showed signs of regressing to pretreatment levels (once treatment was completed), and often were effectively maintained to follow-up, but rarely showed *further* improvement.

Following on the finding that aggressive-disruptive targets appeared to benefit more from social skills training than their sensitive-isolated counterparts, the 3-way results showed that the aggressive-disruptive targets were more successful than the sensitive-isolates in maintaining posttreatment improvements to follow-up (short- and long-term).

Finally, results of the 3-way analysis, like the 2-way results reported in the main text, provided support for hypotheses espousing the superiority of diagnosis-specific social skills training over crossover treatment in improving the peer-rated likeability of socially rejected preadolescents, decreasing their peer-nominated aggression and social withdrawal, and increasing their social self-perception. While some exceptions to this general pattern were found, the conclusions drawn above serve as a general review of the most salient findings. Summary tables accompanying this discussion provide additional information.

Table M-1
Summary of Repeated Measures Profile Analysis: Main Effects for the Three-Way Model (uncollapsed data)

Dependent Variable by Profile Test	Repeated Measures Tests Multivariate Level			Repeated Measures Tests Between Subjects Effects			Univariate Tests of Within Subject Effects			
	Effect	L	df	F (p)	Source	df	F (p)	Source	df	F (p)
Peer-rated Likeability	Time	.7550	3,68	7.35 (.000)**	Time	3	6.89 (.001)**	Time	3	6.89 (.001)**
	Time	.9020	3,68	2.46 (.063)*		3	4.16 (.025)**		3	4.16 (.025)**
	Time	.9496	3,68	1.20 (.315)		3	1.87 (.160)		3	1.87 (.160)
	Time	.7332	3,68	8.25 (.000)**		3	8.43 (.000)**		3	8.43 (.000)**
Peer-rated Likeability	Time x TP	.7785	3,68	6.45 (.001)**	Time x TP	3	3.69 (.021)**	Time x TP	3	3.69 (.021)**
	Time x DG x TS x TP	.8930	3,68	2.72 (.051)**	Time x DG x TS x TP	3	4.55 (.008)**	Time x DG x TS x TP	3	4.55 (.008)**
	Time x DG	.8362	3,68	4.44 (.007)**	Time x DG x TS	3	2.96 (.047)**	Time x DG x TS	3	2.96 (.047)**
	Time x TS	.9013	3,68	2.48 (.060)*	Time x DG	3	7.16 (.002)**	Time x DG	3	7.16 (.002)**
Peer-rated Aggression	Time x TS	.8805	3,68	3.08 (.033)**	Time x TS	3	2.75 (.062)*	Time x TS	3	2.75 (.062)*
	Time x DG x TS	.8694	3,68	3.41 (.022)**	Time x DG x TS	3	3.48 (.036)**	Time x DG x TS	3	3.48 (.036)**
	Time x TP	.8690	3,68	2.83 (.045)**	Time x TS x TP	3	5.05 (.009)**	Time x TS x TP	3	5.05 (.009)**
	Time x TS x TP	.8890	3,68	2.83 (.045)**	Time x DG x TS x TP	3	3.78 (.027)**	Time x DG x TS x TP	3	3.78 (.027)**
Social Self-Perception	Time x TP	.7427	3,68	7.85 (.001)**	Time x TP	3	5.53 (.002)**	Time x TP	3	5.53 (.002)**
	Time x DG x TP	.8278	3,68	4.71 (.005)**	Time x DG x TP	3	2.92 (.044)**	Time x DG x TP	3	2.92 (.044)**
Peer-rated Likeability	FLATNESS TEST				LEVELS TEST (only significant interactions are presented)					
					DG	1	10.78 (.002)**	DG	1	10.78 (.002)**
Peer-rated Aggression	PARALLELISM TEST (only significant interactions are presented)				LEVELS TEST (only significant interactions are presented)					
					TS	1	3.55 (.057)*	DG	1	48.86 (.000)**
Peer-rated Social Withdrawal					DG	1	48.86 (.000)**	TS x TP	1	3.98 (.049)**
					TS x TP	1	3.98 (.049)**	DG	1	59.62 (.000)**
Social Self-Perception					DG	1	59.62 (.000)**	DG	1	20.91 (.000)**
					DG	1	20.91 (.000)**			

LEGEND: L = Wilks' Lambda
 p† = Greenhouse-Geisser adjusted p levels
 ** = significant at p < .05
 * = trend, p < .06
 DG = diagnosis
 TS = treatment-specificity
 TP = treatment phase

Table M-2

Summary of Social Skills Training Results:
Three-Way Repeated Measures Analysis (uncollapsed data)
and Follow-Up t-tests of Between-Time Difference Scores

Treatment Phase by Diagnosis and Treatment Specificity Combinations	Peer Nomination			Self-Ratings
	Likeability	Aggression	Social Withdrawal	Social Self-Concept
1. Time A to Time B				
Targets from the Immediate Treatment Phase				
AD in D-S	+	pT	NS	+
AD in C-O	NS	NS	NS	NS
SI in D-S	+	NS	+	+
SI in C-O	NS	NS	NS	pT
Targets from the Waitlist Treatment Phase				
AD in D-S	NS	NS	NS	NS
AD in C-O	NS	NS	NS	NS
SI in D-S	NS	NS	NS	NS
SI in C-O	nT	NS	NS	NS
2. Time B to Time C				
Targets from the Immediate Treatment Phase				
AD in D-S	NS	NS	NS	NS
AD in C-O	NS	NS	NS	NS
SI in D-S	NS	NS	nT	NS
SI in C-O	NS	NS	NS	NS
Targets from the Waitlist Treatment Phase ¹				
AD in D-S	+	pT	NS	+
AD in C-O	+	NS	NS	NS
SI in D-S	pT	NS	+	+
SI in C-O	pT	NS	NS	pT
3. Time A to Time C				
Targets from the Immediate Treatment Phase				
AD in D-S	+	pT	NS	+
AD in C-O	NS	NS	NS	NS
SI in D-S	NS	NS	+	NS
SI in C-O	NS	NS	NS	NS
Targets from the Waitlist Treatment Phase				
AD in D-S	+	pT	NS	pT
AD in C-O	pT	NS	NS	NS
SI in D-S	pT	NS	pT	+
SI in C-O	NS	NS	NS	NS
4. Time B to Time D				
Targets from the Immediate Treatment Phase				
AD in D-S	NS	NS	NS	NS
AD in C-O	NS	NS	NS	NS
SI in D-S	NS	NS	NS	NS
SI in C-O	NS	NS	NS	NS
Targets from the Waitlist Treatment Phase				
AD in D-S	+	pT	NS	+
AD in C-O	pT	NS	NS	NS
SI in D-S	+	NS	+	pT
SI in C-O	NS	nT	NS	NS

Treatment Phase by Diagnosis and Treatment Specificity Combinations	Peer Nomination			Self-Ratings
	Likeability	Aggression	Social Withdrawal	Social Self-Concept
5. Time C to Time D				
Targets from the Immediate Treatment Phase				
AD in D-S	pT	NS	NS	NS
AD in C-O	NS	pT	NS	NS
SI in D-S	NS	+	NS	NS
SI in C-O	NS	NS	NS	NS
Targets from the Waitlist Treatment Phase				
AD in D-S	NS	NS	NS	NS
AD in C-O	NS	NS	NS	NS
SI in D-S	NS	NS	pT	NS
SI in C-O	NS	nT	nT	—
6. Time A to Time D				
Targets from the Immediate Treatment Phase				
AD in D-S	+	+	NS	+
AD in C-O	NS	NS	NS	NS
SI in D-S	NS	NS	pT	NS
SI in C-O	NS	NS	NS	NS
Targets from the Waitlist Treatment Phase				
AD in D-S	+	pT	NS	+
AD in C-O	pT	pT	NS	pT
SI in D-S	pT	NS	+	pT
SI in C-O	NS	nT	NS	NS

NOTE: "Improvement" is depicted for higher peer-rated likeability, lower peer-rated aggression and social withdrawal, and higher social self-perception.

NOTE: Refer to Figures 2 and 3 in Results chapter for a diagrammatic view of treatment implementation from times A to D.

NOTE: ¹During this time segment the waitlist phase targets received treatment; the immediate treatment phase targets had received their treatment during time segment #1 (between Time A and B). Each treatment phase only received one ten-week intervention program. Thus, after time segment two (Time B to C), both treatment phases had received the offered intervention. However, the "immediate treatment" and "waitlist treatment" variable names have been retained throughout the table to illustrate any group differences between targets that appear to exist as a function of the phase in which they received treatment.

LEGEND: + = significant improvement, $p < .01$ (based on Bonferroni adjustment)
 pT = positive trend, $p < .07$ (trend toward improvement based on Bonferroni adjustment)
 nT = negative trend, $p < .07$ (trend toward deterioration based on Bonferroni adjustment)
 — = significant deterioration, $p < .01$ (based on Bonferroni adjustment)
 AD = Aggressive-Disruptive target D-S = Diagnosis-Specific Treatment
 SI = Sensitive-Isolated target C-O = Crossover Treatment

Appendix N

SUBSIDIARY ANALYSIS
INVESTIGATING FINDINGS BY SEX
(COLLAPSED DATA)

Major analyses used in the current study were conducted on target data independent of sex. While the sex variable is of interest in the study of social skills with a preadolescent population, a period in social development when cross-sex friendships assume a new role (Hetherington & Parke, 1979), small cell sizes prompted a collapsing of the data across that variable for all analyses presented in the main text. However, a subsidiary analysis, that separates findings on the sex variable, was subsequently applied. The results of that analysis are discussed briefly here as an appendix, and summarized in the accompanying tables.

In brief, a series of ANOVAs and follow-up Tukey tests (conducted on the collapsed data set ; that is, collapsed across treatment phase) found evidence of a significant sex effect in peer-rated aggression both at pretreatment, $p < .01$, and at follow-up, $p < .01$. Tukey post hoc tests showed that in both instances, the male targets received significantly more peer nominations of aggression than did the female targets. Moreover, the male aggressive-disruptive targets were shown to be rated by peers as more aggressive than the aggressive-disruptive females, and by the same token, the male *sensitive-isolated* targets were rated by peers as more aggressive than the *sensitive-isolated* females. In the case of the sensitive-isolated targets, however, the peer-rated aggression scores of both the males and the females were very low (i.e., similar to those recorded for the average peer group). No other significant sex effect was found on any dependent variable at either pretreatment, posttreatment, or follow-up.

Examination of the pretreatment to posttreatment, posttreatment to follow-up, and pretreatment to follow-up difference scores in peer-rated aggression for the male and female targets, showed that both sexes benefited from social skills intervention. Immediately following treatment, during the pretreatment to posttreatment time segment, the aggressive-disruptive female targets recorded a significant decrease in peer-rated aggression, $p < .01$, and the male aggressive-disruptive targets recorded a decrease that approached significance,

$p < .05$. During the posttreatment to follow-up time segment, however, the aggressive-disruptive males recorded an additional decrease in peer-rated aggression that once again approached significance, $p < .05$. The combination of a nearly significant decrease in the two adjacent time segments (i.e., pretreatment to posttreatment, and posttreatment to follow-up) resulted in an overall *significant* decrease, $p < .01$, between pretreatment and follow-up. By contrast, while the significant decrease in peer-rated aggression recorded with the aggressive-disruptive female targets at posttreatment was maintained at follow-up, it was *not improved upon*. Moreover, the aggressive-disruptive female sample displayed a much larger standard deviation than the aggressive-disruptive male sample, which diminished the overall significance of any improvements displayed by the female sex group. Ultimately, the overall (i.e., pretreatment to follow-up) difference score in peer-rated aggression recorded for the female aggressive-disruptive targets indicated a decrease that approached ($p < .05$) but did not attain a Bonferroni adjusted level of significance.

Although the ANOVAs conducted on the data failed to reveal a significant diagnosis by treatment specificity by sex interaction, examination of the results of a series of *t*-tests conducted on between group difference scores indicated that sex did interact, to a degree, with diagnosis and treatment specificity, to produce between sex differences in terms of response to treatment. Following diagnosis-specific treatment, the peer-rated likeability and social self-perception of the aggressive-disruptive male targets, and the peer-rated aggression of aggressive-disruptive females, recorded the most significant improvements. Improvements approaching significance during time segment one (pre- to posttreatment) were recorded for the peer-rated likeability and the social self-perception of withdrawn female targets, in the peer-rated social withdrawal and social self-perception of withdrawn male targets, and in the peer-rated aggression of aggressive-disruptive males. Crossover treatment did not produce significant improvements on any of the dependent variables for any of the sex by treatment specificity by diagnosis combinations.

During time segment two (posttreatment to follow-up) only the social self-perceptions of the aggressive-disruptive males in diagnosis-specific treatment showed significant improvement. A number of trends, however, were also recorded for other groups (refer to the accompanying tables).

Examination of the *overall*, long-term difference scores (i.e., pretreatment to follow-up) showed that following diagnosis-specific treatment, the peer-rated likeability, the peer-rated aggression, and the social self-perception of the aggressive-disruptive males improved significantly. On the same variables, the aggressive-disruptive females reported improvements approaching significance. The male and the female sensitive-isolated targets from diagnosis-specific intervention reported overall improvement only on peer-rated social withdrawal. Crossover treatment did not produce significant pretreatment to follow-up improvements for any treatment by sex by diagnosis combination on any dependent variable.

In brief, the results of this subsidiary analysis show that with data separated on the sex variable, diagnosis-specific treatment was found to be significantly superior to crossover treatment. It was also found that aggressive-disruptive targets responded more positively to treatment than did the sensitive-isolated targets, and that in particular, aggressive-disruptive males responded more positively than aggressive-disruptive females, both of whom responded more positively than the sensitive-isolated males and females. Compared to one another, the sensitive-isolated males and the sensitive-isolated females responded similarly to one another.

Table N-1

Means and Standard Deviations by Sex. Univariate ANOVA Results for Sex and for the Sex x Diagnosis x Treatment Specificity Interaction (collapsed data)

Dependent Variable per Measurement Time	Mean Score				Univariate ANOVA Results by Source				
	Female		Male		Sex		Sex x Diagnosis by TS		
	Mean	SD	Mean	SD	F	p	F	p	
Pretreatment									
Peer-rated Likeability	2.98	(0.56)	2.74	(0.61)	3.30	.07	1	2.22	.14
Peer-rated Aggression	6.15	(6.03)	14.60	(8.43)	6.78	.01	1	0.05	.83
Peer-rated Social Withdrawal	12.13	(4.48)	11.27	(8.10)	0.08	.78	1	0.34	.56
Social Self-Perception	2.56	(0.54)	2.70	(0.75)	0.73	.40	1	0.06	.81
Posttreatment									
Peer-rated Likeability	3.41	(0.71)	3.07	(0.88)	2.66	.11	1	2.74	.10
Peer-rated Aggression	4.93	(5.98)	10.53	(9.64)	6.44	.01	1	0.00	.99
Peer-rated Social Withdrawal	8.13	(5.02)	8.05	(7.40)	0.00	.97	1	0.15	.69
Social Self-Perception	3.12	(0.58)	3.14	(0.78)	0.02	.89	1	1.01	.32
Follow-up									
Peer-rated Likeability	3.33	(0.69)	3.11	(0.74)	1.67	.20	1	1.31	.26
Peer-rated Aggression	4.69	(5.02)	7.35	(7.30)	2.21	.14	1	2.06	.16
Peer-rated Social Withdrawal	6.32	(5.10)	8.76	(12.54)	0.81	.37	1	0.31	.58
Social Self-Perception	2.98	(0.59)	3.11	(0.74)	0.56	.46	1	0.42	.52

NOTE: Standard deviations are in parentheses. p values of .05 or less indicate a significant sex effect.
TS = Treatment Specificity.

Table N-2

Summary of Treatment Effects Across Time by Sex (collapsed data)

Treatment Specificity by Diagnosis and Sex Combinations	N	Peer Ratings			Self-Ratings
		Likeability	Aggression	Withdrawal/ Social Isolation	Social Self Concept
1. Pre-treatment to Post-treatment					
Diagnosis-Specific Treatment					
Aggressive-Disruptive Males	14	+	pT	NS	+
Aggressive-Disruptive Females	11	NS	+	NS	NS
Sensitive-Isolated Males	9	NS	NS	pT	pT
Sensitive-Isolated Females	16	pT	NS	NS	pT
Crossover Treatment					
Aggressive-Disruptive Males	8	NS	NS	NS	NS
Aggressive-Disruptive Females	5	pT	NS	NS	NS
Sensitive-Isolated Males	8	NS	NS	NS	NS
Sensitive-Isolated Females	7	NS	NS	NS	NS
2. Post-treatment to Follow-up					
Diagnosis-Specific Treatment					
Aggressive-Disruptive Males	14	pT	pT	NS	+
Aggressive-Disruptive Females	11	pT	NS	NS	NS
Sensitive-Isolated Males	9	NS	NS	NS	NS
Sensitive-Isolated Females	16	NS	NS	pT	NS
Crossover Treatment					
Aggressive-Disruptive Males	8	NS	NS	NS	NS
Aggressive-Disruptive Females	5	NS	NS	NS	NS
Sensitive-Isolated Males	8	NS	NS	NS	NS
Sensitive-Isolated Females	7	NS	NS	NS	NS
3. Pre-treatment to Follow-up					
Diagnosis-Specific Treatment					
Aggressive-Disruptive Males	14	+	+	NS	+
Aggressive-Disruptive Females	11	pT	pT	NS	pT
Sensitive-Isolated Males	9	NS	NS	+	NS
Sensitive-Isolated Females	16	NS	NS	+	pT
Crossover Treatment					
Aggressive-Disruptive Males	8	NS	NS	NS	NS
Aggressive-Disruptive Females	5	NS	pT	NS	NS
Sensitive-Isolated Males	8	NS	NS	NS	NS
Sensitive-Isolated Females	7	NS	NS	NS	NS

NOTE: "Improvement" is depicted for: higher peer-rated likeability, lower peer-rated aggression and social withdrawal, and higher social self-perception scores. Bonferroni adjusted p levels have been used to test for significance.

LEGEND: + = significant improvement, $p < .01$.
 pT = positive trend, $p < .05$ (i.e., change in predicted direction).
 NS = no significant change.

Appendix O

MULTIVARIATE ANALYSIS
OF THE THREE PEER MEASURES OF SOCIAL STATUS
(COLLAPSED DATA)

A repeated measures profile analysis was conducted as the main statistical procedure in the current investigation. Of primary interest in the present study was the pattern of change observed across time on a series of four dependent variables, following different treatment conditions (i.e., diagnosis-specific and crossover) and involving different target populations (i.e., rejected aggressive preadolescents and rejected non-aggressive preadolescents). The dependent variables selected for the study were regarded as conceptually independent. Moreover, regarding two of the dependent variables, peer-rated aggression and peer-rated social withdrawal, hypotheses were only offered for peer-rated withdrawal in the case of the sensitive-isolated targets, and for peer-rated aggression in the case of the aggressive-disruptive targets; no hypotheses were offered for the reversed combinations (i.e., peer-rated social withdrawal for the aggressive-disruptives, or peer-rated aggression for the sensitive-isolates). The primary interest was to determine the effects of treatment and diagnosis on each variable dependent of the others. Identification of a linear composite of the outcome variables, if indeed such a construct existed, was of secondary interest.

Tabachnick and Fidell (1989, p. 373) recommend that because MANOVAs can be less powerful than other statistical analysis, they are often best avoided unless there is a compelling need to measure several dependent variables as a single construct. Consequently, a repeated measures profile analysis rather than a multivariate analysis was chosen as the primary statistical procedure. However, because group differences can sometimes become more apparent when responses to multiple dependent variables are considered in combination, MANOVA can also improve the chances of discovering what it is that changes as a result of treatment (Huberty & Morris, 1989). On this premise, a MANOVA was conducted as a subsidiary analysis. The results are discussed briefly, and summarized in the accompanying tables in this appendix.

MANOVA was used to ask whether a combination of the three peer-rating measures

of social status (i.e., peer-rated likeability, peer-rated aggression, and peer-rated social-withdrawal) varied as a function of treatment and/or diagnosis. Multivariate results showed that the DV construct varied as a function of diagnosis at pretreatment, $F(3, 72) = 31.53$, $p < .0001$; as a function both of diagnosis, $F(3, 72) = 24.76$, $p < .0001$ and of a diagnosis by treatment specificity interaction, $F(3, 72) = 2.97$, $p < .037$ at posttreatment, and as a function of diagnosis at follow-up, $F(3, 72) = 14.04$, $p < .0001$. In addition, at both posttreatment and at follow-up, multivariate main effects approaching significance were found for treatment specificity, $F(3, 72) = 2.50$, $p < .066$ (posttreatment), and $F(3, 72) = 2.68$, $p < .065$ (follow-up). Tables O-1 and O-2 display the MANOVA main effects at each measurement time, along with the results of follow-up univariate tests that show the main and interaction effects of the independent variables (i.e., diagnosis, treatment specificity, and the diagnosis by treatment specificity interaction) on each component variable of the DV construct.

In essence, MANOVA answered three questions. The first asked if in disregarding diagnosis, does treatment specificity affect the composite score created from the three social status measures? As expected at pretreatment, the independent variable treatment specificity did not effect the composite score; at posttreatment and at follow-up, however, treatment specificity showed an effect approaching significance. The second question asked whether with treatment specificity disregarded, does diagnosis effect the composite score created from the three social status measures? The MANOVA results revealed a significant effect for diagnosis across time. The third, and perhaps most interesting question concerned the test of interaction. It asked whether the effect of treatment on the composite score differed as a function of diagnosis. Not surprisingly, prior to treatment there was no interaction effect. Posttreatment MANOVA results, however, revealed a significant interaction effect, showing that once treatment was implemented, its effect on the composite score differed significantly as a function of diagnosis. Table O-3 provides a summary of the treatment

summary of the treatment effects revealed across time.

A partial correlation coefficient matrix is also presented (see Table O-4). The data indicate the absence of a clear underlying construct or linear composite of the outcome variables. At pretreatment, peer-rated social withdrawal and peer-rated aggression displayed the strongest correlation, $r = .43$ ($p < .000$). At posttreatment and at follow-up the strongest correlations were recorded between peer-rated social withdrawal and peer-rated likeability, $r = -.34$ ($p < .000$), and $r = -.33$ ($p < .000$). In sum, the results displayed by the MANOVA outcome variable partial correlation coefficients matrix, which indicates the relative absence of an underlying construct, suggests that the repeated measures profile analysis was the more appropriate analysis for the available data set. To a degree group differences are accounted for by outcome variable composites, but the more valuable information seems to come from the repeated measures analysis applied to individual dependent variables and using time as the multivariate construct.

Table O-1
Multivariate Analysis of Variance for Diagnosis by Treatment Specificity (collapsed data)

Source of Variance in the Composite Dependent Variable ²	Multivariate Tests			Univariate Tests ¹ : F (p)				
	Wilks' Lambda ³	df	E	(p)	df	Likeability	Aggression	Withdrawal
Pretreatment								
Diagnosis Effect	0.432	3,72	31.53*	(.000)	1	5.22* (.027)	55.18* (.000)	86.75* (.000)
Treatment Specificity Effect	0.940	3,72	1.54	(.212)	1	3.19 (.078)	0.65 (.422)	0.07 (.775)
Diagnosis x Treatment Specificity Effect	0.935	3,72	1.66	(.182)	1	3.70 (.058)	0.35 (.554)	0.00 (.959)
Posttreatment								
Diagnosis Effect	0.492	3,72	24.76*	(.000)	1	8.65* (.004)	26.16* (.000)	46.27* (.000)
Treatment Specificity Effect	0.906	3,72	2.50	(.066)	1	2.91 (.082)	4.78* (.032)	0.01 (.937)
Diagnosis x Treatment Specificity Effect	0.890	3,72	2.97*	(.037)	1	2.32 (.132)	4.57* (.036)	0.69 (.408)
Follow-up								
Diagnosis Effect	0.631	3,72	14.04*	(.000)	1	13.65* (.000)	12.03* (.000)	19.92* (.000)
Treatment Specificity Effect	0.913	3,72	2.68	(.065)	1	3.89 (.063)	3.46 (.067)	2.99 (.088)
Diagnosis x Treatment Specificity Effect	0.934	3,72	1.69	(.177)	1	0.05 (.819)	0.59 (.444)	3.82* (.054)

* significant at $p < .05$
 1 The univariate test results illustrate the contribution of individual dependent variables to the overall significant between-group multivariate effect.
 2 Composite Dependent Variable is a construct composed of peer-rated likeability, peer-rated aggression and peer-rated social withdrawal.
 3 Wilks' Lambda multivariate statistic was used because the assumptions of homogeneity of variance and of normality are violated.

Table O-2

Univariate Follow-up Analysis for Significant Multivariate Effects
(collapsed data)¹

Dependent Variable per Time Measurement	Univariate Results ²				Follow-up Tests of Mean Scores ³
	Source	df	F	p	
Pretreatment					
Peer-rated Likeability	Diagnosis	(1,77) =	5.22	<.03	AD > SI*
Peer-rated Aggression	Diagnosis	(1,77) =	55.18	<.01	AD > SI*
Peer-rated Social Withdrawal	Diagnosis	(1,77) =	86.75	<.01	SI > AD*
Posttreatment					
Peer-rated Likeability	Diagnosis	(1,77) =	8.65	<.01	AD > SI*
	TS	(1,77) =	2.91	<.08	DS > CO (trend)
Peer-rated Aggression	Diagnosis	(1,77) =	26.16	<.01	AD > SI*
	TS	(1,77) =	4.78	<.03	DS < CO*
	Diagnosis x TS	(1,77) =	4.57	<.04	AD-DS < AD-CO* AD-DS > SI-DS* AD-DS > SI-CO* SI > AD*
Peer-rated Social Withdrawal	Diagnosis	(1,77) =	46.27	<.01	SI > AD*
Follow-up					
Peer-rated Likeability	Diagnosis	(1,77) =	13.65	<.01	AD > SI*
	TS	(1,77) =	3.89	<.06	DS > CO (trend)
Peer-rated Aggression	Diagnosis	(1,77) =	12.03	<.01	AD > SI*
	TS	(1,77) =	3.46	<.06	DS < CO (trend)
Peer-rated Social Withdrawal	Diagnosis	(1,77) =	19.92	<.01	SI > AD*
	TS	(1,77) =	2.99	<.09	DS < CO (trend)
	Diagnosis x TS	(1,77) =	3.82	<.05	SI-DS < SI-CO (trend) SI-DS > AD-DS* SI-DS > AD-CO*

LEGEND: TS = Treatment Specificity
AD = Aggressive-Disruptive Targets
SI = Sensitive-Isolated Targets
DS = Diagnosis-Specific Treatment
CO = Crossover Treatment
* = significant difference, $p < .01$ (Tukey test). Bonferroni adjusted significance tests were used.

- 1 Social self-perception was not included in the MANOVA because it was not a criterion variable and it is conceptually independent of the three peer ratings.
- 2 Significant univariate effects are reported only if the corresponding multivariate effect was significant or approached significance.
- 3 Tukey results are reported only if the corresponding univariate effect was significant.

Table O-3

Summary of Multivariate Main and Interaction Effects
on the Composite Dependent Variable (collapsed data)¹

Source of Multivariate Variance	Level of Effect by Time		
	pretreatment to posttreatment	posttreatment to follow-up	pretreatment to follow-up
Diagnosis			
Aggressive-Disruptive	T	NS	+
Sensitive-Isolated	+	NS	T
Treatment Specificity			
Diagnosis	+	T	+
Peer-rated Aggression	NS	NS	NS
Diagnosis by Treatment Specificity			
AD-DS	+	T	+
AD-CO	T	NS	NS
SI-DS	+	NS	T
SI-CO	NS	NS	NS

LEGEND: + = significant effect, $p < .01$.
 T = trend toward significance, $p < .05$
 NS = no significant effect
 AD-DS = aggressive-disruptive targets in diagnosis-specific treatment
 AD-CO = aggressive-disruptive targets in crossover treatment
 SI-DS = sensitive-isolated targets in diagnosis-specific treatment
 SI-CO = sensitive-isolated targets in crossover treatment

NOTE: Bonferroni p levels have been used to test significance.
 The Composite Dependent Variable is a combination of three social status (peer-rating) measures. Social self-perception was not included because it was not a criterion variable and because as a self-rating, it is conceptually independent of the three peer-ratings.

Table O-4

**MANOVA Outcome Variable Partial Correlation
Coefficients Matrix (collapsed data)**

	df	Peer-rated Likeability	Peer-rated Aggression	Peer-rated Social Withdrawal
Pretreatment	73			
Peer-rated Likeability		1.00 (0.00)	-0.26 (0.02)	-0.22 (0.04)
Peer-rated Aggression		-0.26 (0.02)	1.00 (0.00)	0.43 (0.04)
Peer-rated Social Withdrawal		-0.22 (0.04)	0.43 (0.00)	1.00 (0.00)
Posttreatment	73			
Peer-rated Likeability		1.00 (0.00)	-0.06 (0.60)	-0.34 (0.00)
Peer-rated Aggression		-0.06 (0.60)	1.00 (0.00)	0.05 (0.67)
Peer-rated Social Withdrawal		-0.34 (0.00)	0.05 (0.67)	1.00 (0.00)
Follow-up	73			
Peer-rated Likeability		1.00 (0.00)	-0.14 (0.23)	-0.33 (0.00)
Peer-rated Aggression		-0.14 (0.23)	1.00 (0.00)	0.04 (0.75)
Peer-rated Social Withdrawal		-0.33 (0.00)	0.04 (0.75)	1.00 (0.00)

NOTE: probability levels, $\text{prob} > |r|$, are presented in parentheses.

APPENDIX P
EVALUATION OF BASIC ASSUMPTIONS
OF PROFILE ANALYSIS

1. Unequal Sample Size and Missing Data

From the sample of 78 peer-identified socially rejected preadolescents used in the study, 38 could be grouped as Aggressive-Disruptive and 40 could be grouped as Sensitive-Isolated (socially withdrawn). Of the 38 peer-nominated aggressive youngsters, 25 were randomly assigned to a diagnosis-specific treatment condition and 13 to a crossover treatment condition (these treatment conditions are explained in detail in the body of the dissertation). In the same way, 25 of the 40 peer-nominated socially-withdrawn youngsters were randomly assigned to a diagnosis-specific treatment condition and 15 to a crossover treatment condition. No data were missed for any dependent variable for any of the four target/treatment groups described above. Thus, the smallest group ($n=13$) had three times as many cases as dependent variables (4), posing no problem for profile analysis (Tabachnick & Fidell, 1989, p.486). Unequal sample sizes (so long as there are more research units in the smallest groups than there are dependent variables) do not typically provide any special difficulty in profile analysis because each hypothesis is tested as if in a one-way design (Tabachnick & Fidell, 1989, p.440).

2. Multivariate Normality

Profile analysis is as robust to violation of normality as other forms of MANOVA (Tabachnick & Fidell, 1989, p.441). However the combined effect of the smallest group having fewer than 20 subjects and of there being relatively unequal n s suggested that the samples might not be normally distributed. A series of frequency distributions were plotted with the SAS MEANS and UNIVARIATE programs. These distributions showed the cell n s to be significantly skewed in the case of peer-rated aggression, peer-rated social withdrawal and peer-rated likeability. Kurtosis was also tested, and for each of the three dependent variables just listed, showed the distribution having too few cases in the tails. Kurtosis and skewness values for the social self-perception variable approached zero, with the frequency distribution showing a relatively normal curve. Because the frequency

distribution indicated non-normality in the case of three of the dependent variables, transformation of the data was considered. Both square root and logarithmic transformations were conducted. Tabachnick & Fidell (1989, p.84) note that the results of analysis are typically improved substantially when transformations are first applied to non-normal data sets. An exception occurs in the event of most variables being skewed to about the same moderate extent, in which case improvements in analytic results are often marginal. That proved to be the case here. Neither the square root nor the logarithmic transformations did more than convert moderately positively-skewed variables to moderately negatively-skewed ones, or exchange inflated skewness for inflated kurtosis. Because the transformations demonstrated little benefit in terms of normalizing the data sets, a decision was made to conduct all planned analyses using the original (i.e., untransformed) data. The fact that profile analysis is quite robust to violation of normality (Tabachnick & Fidell, 1989, p.441), influenced this decision. A single MANOVA, however, was conducted on the logarithmically-transformed data set. Its outcome is presented alongside the same analysis conducted on the original data set at the conclusion of this appendix to show the minimal benefit that transformation had on the results of analysis (see Table P-1).

3. Homogeneity of Variance-Covariance Matrix

Tabachnick and Fidell (1989, p.471) describe profile analysis as the multivariate approach to repeated measures and report that it is an acceptable alternative to repeated measures ANOVA because multiple dependent variables replace the within-subject independent variable and the assumption of homogeneity of covariance is no longer required (i.e., one is evaluating what happens during adjacent time segments rather than assuming a single main effect for time). Furthermore, when reporting univariate results, the Greenhouse-Geisser adjusted F -scores, which correct for violation of the assumption of homogeneity of covariance, were used. Moreover, the robustness of ANOVA to violation

of the assumption of variance-covariance homogeneity generalizes to profile analysis (Tabachnick & Fidell, 1989, p.441).

4. Multicollinearity and Singularity

These are problems that occur when the variables in a correlation matrix are too highly correlated (Tabachnick & Fidell, 1989, p.87). In the case of multicollinearity, the variables are very highly correlated (.90 and above); with singularity, the variables are perfectly correlated. To that extent they contain redundant information. Tabachnick and Fidell (1989, p.87) suggest that unless doing a factor analysis, it is best not to include variables with a bivariate correlation that exceeds .70 in the same analysis. The correlation matrix presented in Appendix O (see Table 0-4) shows that the assumptions of absent multicollinearity and singularity were not violated.

Table P-1

Comparison of MANOVA Results Conducted on
Original and Transformed Posttreatment Data Sets (collapsed data)

Dependent Variable	Multivariate Results			Significant Univariate Results			
	df	E	(p)	Source	df	E	(p)
1. Logarithmically Transformed Data Set							
Peer-rated Likeability	4,73	4.59(.0023)	Diagnosis	1	10.93(.0015)		
			Treatment Specificity	1	3.41 (trend)*		
Peer-rated Aggression	4,73	16.97(.0001)	Diagnosis	1	54.17(.0001)		
			Sex	1	10.07(.0022)		
			Treatment Specificity	1	3.59 (trend)		
Peer-rated Social Withdrawal	4,73	21.42(.0001)	Diagnosis	1	81.61(.0001)		
Social Self-Perception	4,73	4.74(.0019)	Diagnosis	1	10.15(.0021)		
			Treatment Specificity	1	2.83 (trend)		
2. Original (Untransformed) Data Set							
Peer-rated Likeability	4,73	3.97(.0059)	Diagnosis	1	10.44(.0019)		
Peer-rated Aggression	4,73	9.70(.0001)	Diagnosis	1	22.78(.0001)		
			Sex	1	8.65(.0044)		
			Treatment Specificity	1	3.90(.0521)		
Peer-rated Social Withdrawal	4,73	11.84(.0001)	Diagnosis	1	46.14(.0001)		
Social Self-Perception	4,73	4.41(.0030)	Diagnosis	1	8.32(.0051)		
			Treatment Specificity	1	7.37(.0083)		

NOTE: * denotes the case of an instance of a new significant finding in the analysis performed on the transformed data set that was not revealed in the analysis performed on the original data set.

Both the multivariate and univariate F scores revealed through analysis of the transformed data tended to be stronger than those revealed through analysis of the original (untransformed) data, but there was extremely little difference between the two data sets in the significance level revealed per dependent variable.