Social skills training with socially maladjusted children: Examining changes.

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Social Skills Training with Socially Maladjusted Children:
Examining Changes

by

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M.A. University of Windsor, 1932

A Dissertation
Submitted to the Faculty of Graduate Studies through the
Department of Psychology in Partial Fulfillment
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ABSTRACT

The purpose of the present study was to examine changes that occur when seriously maladjusted children are provided with a social skills training program, which is based on cognitive-social learning theory. Sixteen children involved in a milieu mental health treatment program were assigned to either social skill training, or to an activity control condition, designed to impart nonsocial skills, but which paralleled closely the experimental condition. Parents, teachers, and case managers completed a battery of behaviour rating measures, before the 15-session training program, immediately after treatment, and two months after treatment. Direct observation measures of pre- and post-treatment social behaviour were also obtained. Children were administered a battery of social cognitive and affective measures at each of the three measurement periods.

Children provided with a social skills training program increased in their free-play frequency of prosocially assertive, questioning and leading behaviours, while negative behaviour decreased. Measures of response generalization showed that social skills trained children decreased in aggressive and disruptive behaviours, and behaviours suggestive of disturbed peer relations. These children also increased in their level of self-efficacy for conflict situations. All changes were maintained over the
follow-up period. Control condition children showed few behavioural changes, and no changes in cognitive and affective elements.

The pattern of changes noted in the present study were interpreted as providing support for the cognitive social learning model of social skills training. It was concluded that the particular training program employed was effective in improving the social competence of seriously maladjusted children. Further research is needed regarding the processes (e.g., changes in cognitive and affective elements) which contribute to behavioural changes.
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CHAPTER I

INTRODUCTION

In recent years there has been tremendous growth in the development of social skills training programs. The utility of these educational interventions in improving children's social functioning has been demonstrated with children able to function within the regular classroom (e.g., Ladd, 1981). There is also some evidence for the effectiveness of training for children enrolled in behaviour adjustment classes within the school system (McGinnis & Goldstein, 1984). However, little research has examined the applicability of group social skills training programs to elementary-aged children displaying social adjustment problems of such severity as to require treatment at a children's mental health centre.

Also, although evidence is accumulating concerning the effectiveness of social skills training, little attention has been paid to the processes involved in producing changes in social functioning. For instance, it is not currently understood how social skills training affects children's beliefs concerning their social relations.

The goal of the present study was to examine changes that occur with social skills training. Two areas of change were studied. One area concerns the behavioural effects of a social skills training program which has been specifically designed to
meet the needs of children involved in a milieu treatment program. Such study is of import to the determination of treatment programs that will be efficient in terms of the practicalities of the clinic situation, and effective in light of the special characteristics of such a population. The second area of change examined concerned cognitive and affective elements that may contribute to effective social functioning. Examination of such elements is of import both to conceptual advance regarding the nature of therapeutic change, and to the further delineation of the most important components of social skills training programs. In order to further explicate the rationale for the present study, the following sections examine the theoretical bases for social skills training, describe social skills training procedures as exemplified in two current programs, and review pertinent literature regarding the effectiveness of such programs. With this basis, theoretical and empirical issues currently requiring attention are discussed.

Social Competence and Social Skills

It appears that a child's ability to act in a competent manner in social situations becomes an increasingly important aspect of general adjustment throughout childhood. As the child becomes older, ever greater demands are made on him to behave in a socially appropriate manner. Preadolescents spend increasing amounts of time with their peers, without adult direction, and peer groups can be quite demanding in their insistence on
conformity to group standards of behaviour. Further, the ability to interact with peers effectively contributes to development in such areas as moral reasoning, altruistic behaviour, and self-concept (Fine, 1981; Hartup, 1970; Hartup, 1978; Hartup, 1983). Conversely, difficulties with peer relations during childhood are associated with later social adjustment problems, such as juvenile delinquency (Roff, Sells & Golden, 1972), and emotional problems in adulthood (Cowen, Pederson, Babigian, Izzo & Trost, 1973). Thus the development of interventions which are effective in ameliorating or preventing social incompetence is an important area of child-clinical research.

However, in order to develop such interventions, one must examine the nature of social competence, and the means by which children may manifest difficulties in their social functioning. Although determining the components of social competence is certainly a complex matter, such complexity may be reduced by considering social competence as involving socially skillful behaviour. In turn, a pragmatic and comprehensive definition of social skills may include:

- Children's ability to organize cognitions and behaviours into an integrated course of action directed toward culturally acceptable social or interpersonal goals. Also included in this definition is the propensity to continuously assess and modify goal-directed behaviour so as to maximize the likelihood of reaching one's goals.
As is implied by this definition, socially skillful behaviour involves a number of components. The nature of social skills may be further understood by examining the process by which such skills normally develop. In this regard, cognitive social learning theory provides a useful means of conceptualizing normative social development. According to this theory (Bandura, 1977a, 1977b), skill acquisition involves a continuous reciprocal interaction of personal and environmental determinants. Through informative experiences, such as observing others or being exposed to verbal instruction, children form a concept of a skill. This cognitive representation may then be used as a guide for performance of the skill. Through experiencing the outcomes of his behaviour, the child may modify his concept or his behaviour. Also, the experience of positive consequences for the behaviour may provide motivation for application of the skill concept. Also contributing to motivation is the perception of a discrepancy between new concepts and current performance. From this brief analysis of skill acquisition, it may be deduced that deficits in social skills may arise from several sources, such as inadequate learning, lack of opportunity to practise skills, inadequate response from the environment, and lack of appropriate models or instruction.

If social competence can be seen as socially skillful behaviour, then deficits in a child's repertoire of social skills
may be an important contributor to a child's difficulties with peer relations. Thus, research has examined whether, in fact, children manifesting problems in their peer relations are deficient in particular social skills. Past literature concerning the social skills deficit hypothesis has identified three major realms in which such deficits may occur: deficits in social knowledge, in behavioural competencies, and in self-feedback abilities (Ladd & Mize, 1983). For instance, children may possess social knowledge or concepts which are deficient or inaccurate. Selman (1980) has presented evidence that children with severe interpersonal problems (i.e., attending a school for children with emotional problems), as well as rejected children in regular classrooms, are below their age mates in their level of understanding of such issues as friendship formation, peer group relations, and conflict resolution. More specifically, evidence indicates that elementary-aged children displaying peer problems (as indicated by measures of sociometric status) may lack knowledge of appropriate goals for social interaction (Renshaw & Asher, 1983). The child may be unaware that in his peer group, the goal 'to win at all costs' is considered inappropriate, and thus he may act in ways that alienate his playmates. Children with problematic peer relations may also have a narrower range of strategies available for reaching a social goal, may have less well-differentiated strategies, or may have fewer appropriate strategies available than their more socially successful peers.
(Gottman, Gonso, & Rasmussen, 1975; Ladd & Oden, 1979; Puttalaz & Gottman, 1981). For instance, the child's strategies for making friends may be missing components important to a successful outcome. Further, some children experiencing peer difficulties may be lacking in knowledge of the context in which specific strategies may be appropriately applied. Ladd and Oden (1979) found that unpopular children's strategies for helping other children were often unique and inappropriate to the situation.

The second major realm of possible deficits concerns actual behavioural abilities. Some children may possess a normative store of information regarding the social realm, but be lacking in behavioural competence. A number of studies have found that children differing in their sociometric status also differ in various elements of their social behaviour (Asher, Oden, & Gottman, 1977; Hartup, 1970). There is also some empirical evidence that some children with emotional difficulties may be lacking in behavioural competence even though they appear to have a normative knowledge base. For example, Selman, Jaquette, & Lavin (1977), found that children receiving day treatment for neurotic disturbances were able to demonstrate a normative level of social understanding in an interview situation. Yet these same children were considered to exhibit primary interpersonal problems.

The third realm of deficits involves deficiencies in the ability to give oneself feedback about interpersonal events.
Research regarding this issue is scant; however, it does appear that some children experiencing peer problems may be lacking in the ability to monitor their own behaviour and its effects on others (Asher & Renshaw, 1981). Recent research has suggested that children with peer problems are more likely than popular children to attribute social failure to their own incompetence, rather than other factors. Children who make such inferences appear less likely to adapt their behaviour in ways which will enhance the likelihood of interpersonal success (Goetz & Dweck, 1980).

Although past research has not always clearly differentiated the particular locus of social skills deficits (knowledge, behaviour, or feedback abilities), the accumulated evidence does indicate that deficits in social skills are associated with difficulties in peer relations. However, it has been recognized that when studies examine correlates of popularity in the same group in which popularity measures are collected, it is not possible to determine whether behavioural differences associated with sociometric status are the cause or consequence of such status (Moore, 1967). Importantly, recent research provides more direct evidence that a child's behaviour interaction style may cause his peer status. The methodology which allows more confidence in inferring causality involves bringing children into a new group, observing their behaviour, and then collecting a measure of their sociometric status. For instance, Putallaz
(1983) found that children's method of entry into an unfamiliar group predicted their sociometric status in another group (their class) four months later. Dodge (1983) examined the development of peer status in an initially unfamiliar group. The behavioural patterns of second-grade boys during the initial sessions significantly predicted social status acquired by the eighth session. Coie and Kupersmidt (1983) brought together fourth-grade boys who had been identified as popular, rejected, neglected or average in sociometric status. Whether boys were interacting with familiar or unfamiliar peers, their sociometric status after three play sessions was highly correlated with their school-based status. Behavioural observation indicated distinctive patterns of interaction for the sociometric status types.

Thus, several forms of investigation have supported the hypothesis that deficits in social skills contribute to interpersonal difficulties. Such support has been obtained from situations allowing children to express their social knowledge in situations independent of their peer group, and in situations employing naturalistic observation. The three studies reported involving behaviour in new groups are particularly persuasive in their evidence that deficits in social skills are causally related to social competence. Another area of support for this hypothesis is research which indicates that training in social skills results in improvements in social functioning. Examples of such research will be described in a subsequent section.
However, an important issue concerns which social skills are most pertinent to social competence during the elementary years. Although a comprehensive data base concerning this issue has not yet developed, evidence from a number of areas is pertinent to this question. For example, children's knowledge concerning social skills has been assessed by interviewing children individually, and thus providing them with an opportunity to express their knowledge in a context independent of their peer group and the stress which may be incumbent to that situation. The results of such studies suggest that popular children have greater knowledge of how to make friends, of appropriate ways of giving help, and of prosocial, rather than negative, means of entering social situations (Asher & Renshaw, 1981; Gottman et al, 1975; Ladd & Oden, 1979). When presented with a hypothetical situation, unpopular children are more likely to suggest aggressive strategies as a means of handling conflict, and their strategies for initiating and maintaining relationships are more likely than popular children's strategies to be vague or to appeal to authority figures (Asher & Renshaw, 1981). A recent study (Renshaw & Asher, 1983) indicated that low status older children (Grade 5 and 6) are particularly likely to generate strategies which involve avoiding potential rejection, and are unlikely to suggest positive, outgoing strategies. In contrast, popular older children are likely to suggest a positive, outgoing strategy in such a situation, as well as suggesting avoidance strategies.
Another means of delineating which social skills are important to interpersonal effectiveness involves determining the ways in which peers perceive groups of children differing in sociometric status. For instance, children who are socially preferred are more likely to be seen by peers as cooperative, supportive, and leaders. Rejected children in this age group (Grade 3 to 8), are unlikely to be seen as cooperative and leaders, and are likely to be viewed as disrupting the group, fighting, and seeking help (Coie, Dodge, & Coppotelli, 1982).

Research concerning the behavioural correlates of sociometric status also provides data concerning social skills deficits and effectiveness in peer relations. Such research has consistently suggested that children who are popular with their peers participate in peer activities, communicate in an effective manner, and are friendly, co-operative, helpful and supportive toward peers (Asher et al, 1977; Hartup, 1970). Putallaz and Gottman’s (1981) analogue study of young elementary children in dyadic interaction is representative of recent work. The research indicated that unpopular children differed from popular children in their style of handling disagreements. The unpopular children were ‘contrary’ or ‘bossy’, in that, in the face of disagreement, they would issue a command which specifically prohibited a course of action. Popular children would usually cite a general rule as the basis for their disagreements, and also provide an acceptable alternative action for the other child. This study also found
that unpopular children had more difficulty entering a play group than popular children. Detailed analysis revealed that unpopular children tended to call the group’s attention to themselves by such means as asking irrelevant questions, or saying something about themselves. The use of these strategies resulted in a high probability of the group ignoring the child. Popular children, rather than attempting to direct attention to themselves, acted so as to integrate themselves into the ongoing conversation. By using strategies such as contributing relevant comments about the game being played, they increased the probability of acceptance into the group. Thus, an important social skill in entry situations may involve the ability to determine the group’s frame of reference (for example, by asking relevant questions), and then demonstrating their sharing of this frame of reference (for example, by agreeing with group members).

The research previously cited regarding children’s behaviour in new groups also provides evidence concerning the particular social skills pertinent to social competence. The importance of group-entry skills has received further support: the Putallaz (1983) study found a significant correlation between the proportion of relevant comments children make and later sociometric status. Skills involved in maintaining relationships and conforming to group norms also appear important. Children who become popular engage in cooperative play and social conversation more than do rejected children, assert themselves in nonaggressive
ways when in a familiar situation, and are less possessive in unfamiliar groups. Children who become rejected are more possessive, more verbally and physically aggressive, and are more likely to violate rules (Coie & Kupersmidt, 1983; Dodge, 1983).

The social skills which contribute to social effectiveness are undoubtedly numerous. However, it may be possible to identify certain skills which are important across a wide age range and a wide range of social contexts. The literature discussed suggests that important social skills for elementary aged children may include a) entry skills, such as determining a group's frame of reference and making relevant comments; b) relationship maintenance skills, such as helpfulness and participation in ongoing activities; and c) conflict resolution skills, such as handling disagreements.

Social Skills Training

In the previous section, it was demonstrated that problems in peer relations may be related to deficits in social skills. It would appear plausible, then, that remediation of such deficits should enhance social functioning. Such has typically been the rationale for social skills training interventions. However, interventions based on the deficit hypothesis have varied greatly in their focus, their procedures for promoting change, and the theoretical justifications for their approaches. Recently, Ladd and Mize (1983) have presented a model of social skills training which incorporates previous theory and research within a unified
theoretical framework. Working from a cognitive-social learning explanation of skill acquisition and behaviour change, Ladd and Mize (1983) identified three basic social skills training objectives: a) enhancing skill concepts, b) promoting skillful performance, and c) fostering skill maintenance and generalization. It will be demonstrated that these three training objectives address all three of the realms of skill deficits previously discussed: social knowledge, behavioural competencies, and self-feedback abilities.

Concerning the first objective, it appears that enabling the child to form cognitive representations of skill-related information serves to provide him with a guide for future enactment of the behaviour, and with a strategy for achieving specific social goals (Denney, 1973; Patterson, Massad & Cosgrove, 1978). Ladd and Mize (1983), in discussing children’s social skill concept acquisition, stress that some children may require specific instruction regarding the functional utility of a social skill, and the critical attributes of the concept. Drawing on the work of Klausmeier and colleagues (Klausmeier, 1976; Klausmeier & Goodwin, 1975), Ladd and Mize (1983) suggest that a basic goal of concept teaching is to enable the child to reach the highest level of understanding of which he is capable. Concepts attained at higher levels of abstraction are more consistent with consensual understanding (validity), understood in terms of their functions (usability), and more useful for organizing, representing, and
acting upon experience (power and generalizability). Higher order concept acquisition can be promoted through the following sequence of strategies: 1) establishing an intent to learn the skill concept, 2) defining the skill concept in terms of its attributes, 3) generating exemplars, 4) promoting rehearsal and recall of the skill concept, and 5) refining and generalizing the concept (Ladd & Mize, 1983).

The second objective, enhancing skill performance, involves helping the child attain higher levels of skill mastery. This process involves instituting a series of performance trials in which the child attempts to translate the relevant skill concepts into matching behaviours. Training procedures aimed at enhancing skill proficiency include: a) providing opportunities for guided rehearsal, 2) evaluation of performance by the instructor, and 3) fostering skill refinement and elaboration. When a child is first attempting to master a skill, it is important that he be provided with a context which reduces any factors which may interfere with performance, and which provides a high level of guidance. The trainer's feedback should inform the child of discrepancies between performance standards and current performances, and help him to adapt either his concept or his performance of the skill. Realistic performance standards should be communicated, and these standards should be raised gradually (Ladd & Mize, 1983).

The third goal of social skills training is to foster skill maintenance and generalization. The process of generalization
involves a progression from performing the new skills in a relatively protected context to using the skills in everyday social interaction. Thus, the context of learning and practice is considered to be an important component in skill acquisition. Skill maintenance is promoted in order to help the child self-initiate the trained skills in more naturalistic contexts, persist at using the skills to obtain social goals, and monitor both skill performance and skill-related outcomes. The latter may also involve modifying skills when they consistently fail to produce a desired social outcome. Training procedures which foster skill maintenance and generalization include 1) providing opportunities for self-directed rehearsal, 2) promoting self-initiation of performance, and 3) fostering self-evaluation and skill adjustment (Ladd & Mize, 1983). Concerning the final procedure, teaching children to give themselves informative feedback may be particularly important to independent skill mastery in naturalistic contexts. Also important to maintenance and generalization are procedures which influence the child's affective reactions and inferences concerning performance success and failures. For instance, beliefs of self-efficacy (that is, the conviction that one can successfully perform relevant behaviours), may counter anxiety and increase persistence in skill use. Such beliefs may be enhanced through providing opportunities for skill practice which gradually increase the demands made on the learner, while providing encouragement and ensuring that
successful performances are often experienced (Bandura, 1977a). It may also be useful to help the child interpret feelings of anxiety in social situations as a normal reaction, since such interpretations may reduce the detrimental effect of anxiety on performance (Bandura, 1977a). Training in identifying effort-based and situation-specific reasons for social failure may also be an important aspect of social skills training. It appears that children may be more persistent in their efforts at achieving goals when they have learned to attribute failure to lack of effort rather than incompetence (Dweck, 1975). However, there will be occasions when the use of a skill is consistently ineffective in producing desired outcomes. Therefore, children should also be trained to modify their concepts and performances, on the basis of information they have obtained through monitoring their skills use (Ladd & Mize, 1983).

The Ladd and Mize (1983) model provides a useful framework within which to examine past research concerning social skills training. Such research has employed numerous methods of achieving changes in social functioning, including modelling of behaviours by adults, modelling by child actors in films, shaping of behaviours through operant conditioning procedures, and various procedures suggested in Ladd & Mize's (1983) model. Interventions have also varied in their relative attention to each of the three training goals previously outlined (enhancing skill concepts, promoting skillful behaviour, and fostering skill maintenance and
generalization).

However, concerning the middle childhood period (about eight to twelve years of age), the research suggests that for many children experiencing difficulties in their peer relations, programs focusing only on knowledge enhancement or on knowledge and performance enhancement may be insufficient in achieving long-term change in social functioning across the various social contexts important to children's lives (see Ladd & Mize, 1983 for a review). On the other hand, programs which specifically encompass all three goals are in their infancy. Two such programs, both social learning approaches, will be described in order to clarify the means by which the three goals of social skills training may be operationalized.

An approach termed 'coaching' (Ladd, 1981; Oden & Asher, 1977) encompasses the goals and many of the strategies outlined by Ladd and Mize (1983). However, the emphasis of this approach is on directly instructing the child on particular social concepts. The trainer introduces a concept, such as 'giving support', and helps the child to explore the meaning of the concept. The child is prompted to suggest exemplars (e.g., praising effort) and non-exemplars (e.g., teasing) of the concept. Further, the trainer often makes explicit the connection between the concept and a social goal ('giving support is one way to keep friends'). The child is then given the opportunity to practise the concept in the context of playing a game with another child. Ladd (1981)
further refined the coaching method by introducing several procedures aimed to enhance both behavioural performance, and maintenance and generalization of the taught skills. Thus, during the game-playing, the trainer prompts the child to use the relevant skills, and provides reinforcement for such use. Subsequent to the game, the trainer helps the child to evaluate his performance, and the effect of his behaviour on the other child. The child is also aided to explore the reasons for any difficulties, and to make attributions for failure which will be adaptive in relation to future performance.

An approach with a somewhat different emphasis is that of Goldstein and his associates (e.g., Goldstein, Sprafkin, Gershaw & Klein, 1980; McGinnis & Goldstein, 1984), who have devised and tested a training method termed "Structured Learning". This approach focuses on the modeling of the specific steps comprising social strategies, and the provision of informative and evaluative feedback for children's efforts at role-playing the strategies. The strength of this approach lies in its detailed task analysis of the particular sequence of behaviour comprising a social skill. The enhancement of general concepts is not explicitly addressed in the Goldstein program. For instance, discussion of the relation between a skill and a social goal is not a formal part of the curriculum. However, the child is taught to verbalize the steps comprising each skill. Some efforts are made towards improving the individual's feedback abilities. Children are asked to
evaluate their role play performance. They are also required to complete homework assignments, which involve trying out the skill in the natural environment, and rating their performance.

Evaluations of both of these programs have shown promise in relation to the goal of enhancing children's social functioning. In an early evaluation, the coaching procedure was employed by Gottman, Gonso, and Schuler (1976) to train two unpopular third-grade children in three social skills. The trained children improved significantly on a play measure of sociometric status (an operationalization of social competence), while an attention-control group showed no such improvement in status. Oden and Asher (1977), employing a larger sample (eleven children per condition), found that a coaching program with third- and fourth-grade socially isolated children resulted in an increase on a play sociometric measure, and follow-up one year later indicated continued progress on the play sociometric measure. Children in a peer-pairing condition (game playing only) and an individual game-playing condition, did not show such progress. However, behavioural observations during the play sessions did not indicate any changes in social behaviour for either the coaching or the peer-pairing condition.

Changes in behaviour were found in several later studies. Gresham and Nagle (1980) found that socially isolated third- and fourth-grade children, provided with a coaching treatment, initiated and received less negative peer interaction, and
received more positive interaction from peers, than did a control group. The trained children also increased on a play-with sociometric measure. A study employing Ladd’s (1981) refinements of the coaching procedure indicated that the coached children decreased in their nonsocial behaviour and increased the frequency of skill use for two of the three taught skills. These changes were maintained at a one-month follow-up, while neither the attention-control group nor a nontreatment control group showed behavioural changes. The coached children also showed significant gain in sociometric status at posttest and at a one-month follow up. An attention-control group also made posttest sociometric gains but these gains were not maintained over the follow-up period.

Csapo (1983), arguing that most coaching research has included children who were only mildly withdrawn, went to special efforts to locate as subjects those children in the school system who were most severely withdrawn. The coaching program was successful in increasing the social interaction of third grade children to an average level, although it required approximately four times as many sessions as Ladd (1981) conducted to achieve this result. Also, children in the coaching group, in contrast to those in attention control and non-treatment groups, declined in their level of social withdrawal, as measured by the Social Withdrawal subscale of the Walker Problem Behaviour Identification Checklist (Walker, 1983).
Coaching has also been employed with older elementary-aged children. LaGreca and Santogrossi (1980), working with unpopular children in Grades 3 to 5, and Bierman and Furman (1984), working with unaccepted fifth and sixth graders, both found significant gains in children's social skills, as evidenced in analogue situations and in observations taken during the regular schoolday. However, these studies also suggested that the effect of coaching on sociometric status may be less strong for older children. La Greca and Santogrossi (1980) found that neither group coaching treatment nor attention-placebo treatment affected sociometric status. Bierman and Furman (1984) found that peer acceptance was increased by the opportunity to participate in a group working on superordinate goals, whether or not the group also received coaching. However, sociometric gains were not maintained at follow-up six weeks later. Individual coaching did not result in increases in peer acceptance. The results of these studies suggest that the structure of the peer group is more stable in older childhood, and thus it is more difficult to influence the sociometric status of its members.

To summarize, the data regarding coaching interventions is quite consistent in indicating that coaching in social skills is an effective means of increasing children's social competence, most often operationalized as sociometric status. Further, studies which provided evidence of concurrent behavioural change (Gresham & Nagle, 1980; Ladd, 1981) support the hypothesis that it
is the provision of training in specific social skills which mediated the changes in sociometric status.

Research concerning the Structured Learning approach has shown it to be effective in teaching prosocial strategies to a wide variety of client groups (see Goldstein et al, 1980 for a review). However the transfer and maintenance of trained skills has often been limited. For example, Structured Learning was found to be effective in teaching empathic skills to adolescent boys, as compared to a no-treatment control group, but no significant generalization effects were found (Berlin, 1977). Similar results were found when negotiation skills were taught to preadolescents (D. Fleming, 1977), and when assertive behaviours were taught to mentally retarded children (L. R. Fleming, 1977). However, the Structured Learning approach for use with elementary school children has recently been revised (McGinnis & Goldstein, 1984), and now includes a greater number of procedures specifically aimed at enhancing generalization and maintenance of the taught skills.

Current Issues Concerning Social Skills Training

Although past research supports the utility of social skills training in enhancing social functioning, a number of issues of both practical and theoretical interest need to be addressed. In this section, pertinent issues will be briefly discussed.

Practical issues. The clinician who is considering employing a social skills training program is apt to be interested in data
regarding areas such as: (a) effectiveness with clinical populations (i.e., inpatient or day-treatment clients), (b) methods of enhancing generalization and maintenance of skills, (c) choice of curriculum, and (d) ease of program implementation.

(a) Evidence regarding the effectiveness of either of the discussed programs for elementary-aged clinic populations is scant. It appears that research concerning this question has not been conducted for either the Structured Learning approach (personal communication, E. McGinnis, November 25, 1984) or the coaching approach (personal communication, G. W. Ladd, November 18, 1984). This situation is distressing in that social skills programs have not been shown to be effective for the very populations most in need of such treatment, a point recently highlighted by Hops (1983).

(b) Enhancing the generalization and maintenance of trained skills continues to be a concern, and it is likely that such factors are especially critical in treating children exhibiting maladaptive behaviours to such an extent that they require milieu treatment. The McGinnis and Goldstein book presents many methods for enhancing generalization, but these methods remain untested. The coaching approach has shown some success in promoting use of skills in the natural environment, but generalization of skill use to contexts other than the classroom has not been examined.

(c) The choice of which social skills should be taught is also a concern. The list of social skills which have been covered
in training programs is extensive. In the coaching programs, general skills such as cooperation, as well as specific skills such as asking questions have been taught. The Structured Learning approach provides a list of 60 skills which may be taught to elementary children, clustered into 5 categories. The ability to provide efficient and effective social skills training programs requires that the curriculum of such programs include those skills most pertinent to social competence across various contexts. In the past, the curriculum of programs has often been based on adult intuition concerning the skills important to social effectiveness. As was previously discussed, empirical work concerning this issue has recently received renewed interest. The results of such investigations should be employed in order to develop the most effective social interventions.

(d) An important practical issue concerns the ease with which social skills training programs can be implemented. Such programs will only fulfill their promise if they are easily adaptable for use by personnel of varying sophistication and in various settings. The Structured Learning approach has several merits in this regard. Detailed instructions for implementation of the program are available in commercial form (McGinnis & Goldstein, 1984). Practical issues are covered in depth, including behaviour management, length and frequency of sessions, and specific lesson plans for each skill. Procedures for use of Structured Learning with groups of children are highlighted. The
Structured Learning program could be easily implemented by personnel such as teachers and childcare workers following the training manual.

The coaching program also has several practical merits. The procedures are fairly easily understood, and the training sessions are not lengthy (about forty minutes). However, the coaching program is not commercially available, and therefore is less likely to come to the attention of individuals in applied settings as a viable means of improving social competence. Further, as it is presently outlined, the coaching program has a number of drawbacks. Training is conducted with only two children at a time, which may be difficult and inefficient in terms of staffing resources. Also, practical issues and the specifics of lessons are not dealt with in depth.

Conceptual issues. The primary conceptual issue which needs to be addressed concerns the processes which contribute to changes in social functioning. As previously discussed, the deficit hypothesis of social competence suggests that individuals displaying social difficulties are deficient in certain realms affecting their social skillfulness. For instance, they may be deficient in their knowledge of general interactional concepts. The breadth and accuracy of a child's general social concepts may be related to the utility of the concept as a guide to behaviour across numerous social contexts. Thus, the refinement of general concepts may be an important component contributing to the

Another aspect important to the effectiveness of social skills interventions involves changes in the knowledge of, and the ability to carry out, specific behaviours or behavioural sequences. Children may often be aware of a general concept, but have difficulty translating that concept into specific action. For instance, a child may know that the maintenance of relationships involves co-operation, but he may not know the particular sequence of steps which would be called for in a certain situation. Further, even if he has knowledge of such a sequence of actions, he may not have had the opportunity to practise such a sequence, and thus become proficient in its execution.

Until recently, the bulk of research concerning the factors that are affected by social skills training has concentrated on children's skill knowledge and behaviour. However, it is now recognized that the nature of children's belief systems and cognitive processes, may also be important to effective social functioning, and to the effectiveness of training. Attention to this area of interest has been predicated on the observation that an individual may possess both the knowledge and the behavioural repertoire to act in a socially competent manner, but still not do so. In order to understand this situation, it becomes necessary to view social competence as a continuous interaction among an individual's meaning systems, his overt behaviour, and cognitive
processes, as well as the interaction between these factors and the social environment (Meichenbaum, Butler, & Gruson, 1981).

The concept of belief systems acknowledges that any individual brings to a situation an organization of beliefs which affects the way in which the situation is understood and processed. In this sense, belief systems can be seen as cognitive structures which underlie one's cognitive processes and behaviour in a given situation, and thus provide a motivational basis for behaviour. The role of belief systems in social competence will be further explicated by elaborating on a number of elements of one's belief systems: social goal commitment, strategy evaluation, and self-efficacy. The possible influence of social skills training on such elements will then be discussed.

(a) Belief systems and social competence. In regards to social goal commitment, Taylor and Asher (1984a) have recently proposed that personal goals play a central role in the child's ability to interact competently with others. Although conceptualizations of social competence often embody the notion that such competence involves the ability to achieve interpersonal goals (e.g., Ford, 1982; O'Malley, 1977), previous work has not considered the role that children's goal commitments may play in their social behaviour. It may well be, as Taylor and Asher (1984a) suggest, that social competence involves "the formulation and adoption of personal goals that are appropriate and adaptive to particular social situations" (page 57), as well as the ability
to implement strategies for achieving such goals.

Research has supported the notion that children who are experiencing peer difficulties tend to harbour goals which are maladaptive and which promote dysfunctional behaviour. Renshaw and Asher (1983) examined children’s goals in relation to four hypothetical situations. Fourth to sixth grade popular and unpopular children did not differ on a recognition task, which asked them to rank order four goals in terms of what they would try most to do. This would seem to indicate that even unpopular children are aware of the appropriate goals for various social situations. However, sociometric status was related to children’s spontaneous productions concerning goals. Children who were high in sociometric status provided more goals characterized as friendly and assertive than did low-status children.

A recent study (Taylor & Asher, 1984b) employed a questionnaire method to examine children’s goals in game situations. Factor analyses of the responses of third to sixth grade children identified four goal types: performance goals, relationship goals, avoidance goals, and rule-oriented goals. Comparison of the responses of popular and unpopular children suggested that there are important differences in the goal commitments of children differing in their social effectiveness. For instance, unpopular children in the lower grades, as compared to their popular peers, were less concerned with having positive interpersonal relationships with other children playing games.
Unpopular children were more concerned than popular children with avoiding negative experiences. Interestingly, performance goals, such as attaining positive outcomes, were differentially related to sociometric status as a function of grade level. Among third and fourth grade children, those with peer difficulties tended to have a higher performance orientation. However, in the higher grades, popular children expressed a high performance orientation.

Although research concerning children's goal orientations in social situations has just begun, the evidence thus far does suggest that a child's goal orientations are important to his social competence. If this is the case, then it is important to consider the motivations contributing to a child's choice of goal orientations. Taylor and Asher (1984a) suggest that the motivation to adopt, and to pursue, adaptive social goals stems from the child's confidence in his ability to achieve such goals. Indeed, research, to be discussed, supports this notion. However, it will be argued that, in fact, there are two separate types of beliefs regarding one's confidence which may be important to goal orientation, and also to social competence.

One type of beliefs may involve the child's convictions concerning the efficacy of a particular strategy in reaching a desired outcome. A child may have certain strategies within his cognitive and behavioural repertoire, but not utilize those strategies because he does not believe that they will be successful in achieving the desired outcome. Little research has
considered children's beliefs regarding social strategies. However, Deluty (1983) found that children who had been identified as aggressive, assertive or submissive did differ from each other in their evaluations of aggressive, assertive and submissive strategies. For instance, highly aggressive children, as compared to the other behavioural types of children, rated aggressive strategies as significantly more good, strong, wise, successful, kind, and brave. In contrast, assertive children rated assertive strategies as more good, kind, and wise than did either aggressive or submissive children, and as more successful than did aggressive children. The aggressive children viewed assertive strategies as less strong and brave than did other children. In addition, highly aggressive children were more likely than other children to choose aggressive strategies as ones that they ought to do, and that would make them feel best. They were less likely than other children to choose assertive strategies as ones which they ought to do, and which would make them feel best. Deluty's (1983) results lend credence to the notion that differences in children's beliefs about strategies may underlie their use of strategies, and thus their social competence. For example, if children see socially appropriate strategies as ineffective, they may then see little utility in being committed to appropriate social goals. By a 'sour grapes' kind of process, they may adopt social goals and thus social strategies which are inappropriate.

The second type of beliefs, which is the type referred to by
Taylor and Asher (1984a) concerns beliefs of social self-efficacy. Bandura (1984) considers self-efficacy to involve "people's judgements of their capabilities to execute given levels of performance" (pg. 232). Self-efficacy is considered to mediate both the tendency to attempt skillful interaction, and to persist in one's attempts when faced with difficulties. It may be that children who engage in maladaptive social behaviours do not believe that they are able to behave in a more competent manner, regardless of their beliefs about appropriate strategies. Thus, low levels of self-efficacy may also be involved in the adoption of maladaptive goals in interpersonal situations.

In this regard, the concept of learned helplessness is useful. As was previously mentioned, research suggests that children who attribute their social failures to their incompetencies may develop a learned helplessness approach to social situations, characterized by lack of persistance or the continued use of ineffective strategies (Goetz & Dweck, 1980). Such children may have little faith in either the social skills they have learned, or their ability to carry out those social skills. In either case, children may be apt to adopt maladaptive goals. In fact, recent research concerning children's achievement motivation has indicated that there is a relationship between levels of confidence and goal orientations (Dweck & Bempechat, 1983). It seems that children with little confidence in being judged competent are apt to adopt the goal of avoiding a negative
among expectations of aversive or pleasant effects, physiological arousal, beliefs of self-efficacy, and competent behaviour.

There is some empirical evidence that social self-efficacy is related to social competence in children. For instance, Wheeler and Ladd (1982) found that a measure of children's self-efficacy in social situations was positively related to a sociometric measure of popularity. Thompson (cited in Harter, 1982) also
reported a positive relationship between peer acceptance and a measure of perceived social competence. Further research is needed regarding the role of self-efficacy to social competence.

(b) Belief systems and social skills training. As the foregoing discussion has indicated, elements of the child's belief systems, such as goal commitment, self-efficacy, and strategy evaluation, may be important contributors to social competence. It would follow, then, that interventions designed to enhance social competence should strive to effect such elements, a point made by Ladd and Mize (1983). However, social skills training programs have seldom directly intervened in children's social belief systems. Further, there is little known regarding the extent to which existing social skills training programs affect children's social beliefs.

In fact, it may be that an important source of change as a result of social skills training is the effect of intervention on a child's beliefs regarding social interaction. For instance, Asher and Renshaw (1981) hypothesized that one reason why the coaching program is effective may be that it affects children's goal orientations regarding playing games. It will be recalled that during training, children are often reminded that use of the taught strategies will make game-playing more fun. It may be that children initially were more committed to unadaptive goals, such as avoiding failure, and changed their goal orientation as a result of treatment. However, no studies to date have examined
the effect of intervention on children’s commitment to social goals.

Also, social skills training may bring about behavioural change through its effect on children’s evaluations of the taught strategies. Children who learn particular social strategies, who are persuaded that they are effective strategies, and who have the opportunity to experience success in applying these strategies in their everyday social encounters, may well change in their evaluations of the skills. Such changes may result in increased use of appropriate strategies, and in changes to more adaptive goal orientations. However, this possibility has also not been examined in intervention studies.

According to Bandura (1977a), self-efficacy may be a central mediator of therapeutic change. Through procedures such as verbal persuasion and the provision of opportunities for successful performance, interventions may increase the level and strength of an individual’s beliefs of self-efficacy. Such beliefs, in turn, may mediate changes in skill use. Although there is some research evidence indicating that therapeutic interventions with adults increase self-efficacy (e.g., Bandura, 1984), there is little evidence in this regard concerning children. One study which did include measures of social self-efficacy examined changes for four treatment conditions: individual skills training, group skills training, group experience, and no treatment. A main effect for peer involvement, but not for skills training, was found (Bierman...
These results suggest that the feedback received from peers may be an important source of changes in perceived social efficacy.

Behavioural change may also be mediated by changes in the child's level of concern or anxiety regarding peer interactions. Treatment which enhances skills, and provides opportunities to experience mastery of skills (and thus enhances self-efficacy), should reduce anxiety. The acquisition of behavioural skills may also effect the way in which the environment is perceived. For instance, the child who feels he has the skills to control a potentially stressful social situation may construe the situation as less threatening than the skill-deficient child. In turn, such cognitive appraisals may have a beneficial effect on coping behaviour (Bandura, 1977a).

Present Study

A primary purpose of the present study was to evaluate the effectiveness of a social skills training program which was specifically designed to promote change in clinic children. It is my conviction that children experiencing social difficulties of such severity as to require milieu treatment at a children's mental health centre require a training program which includes procedures designed to achieve all three goals previously outlined: enhancing skill concepts, enhancing behaviour performance, and enhancing feedback abilities. Further, for such children, it may be particularly important that each social skill
is presented in a very specific, detailed manner, and that the
child be aided to develop memory codes for both the verbal
descriptions of the skill and the behavioural sequence of the
skill. Finally, my previous experience with clinic children has
convinced me that strategies aimed at maintenance and
generalization of taught skills are particularly important with
such a population. An informal study showed that a social skills
training program which emphasized modelling and role-playing of
skills was quite effective in teaching the skills, but had only a
small effect on children's tendency to use the skills in the
natural environment.

In order to provide an intervention which is effective with a
milieu population, a program was developed which is based on the
cognitive-social learning model of social skills training. The
program follows the coaching procedure, while also employing
components of the Structured Learning approach. It was believed
that the specific training in the behavioural sequences comprising
skills, as afforded by the Structured Learning approach, would
allow the children to retain accurate, detailed knowledge
concerning skill performance. The coaching procedures which
encourage concept attainment, graduated practice, and feedback
abilities would promote generalization and maintenance of the
taught skills. Thus, it was hypothesized that a program which
incorporates all of the above elements would be effective in
improving the social functioning of clinic children, as evidenced
in their daily behaviour.

The second purpose of the present study was to examine changes in cognitive and affective elements that occur with social skills training. It was hypothesized that the intervention strategy to be used in the present study would result in changes in children's belief systems. Specifically, it was expected that children receiving social skills training would increase in their level of self-efficacy, show changes in their commitments to goals in interpersonal situations, and show changes in their beliefs regarding appropriate social strategies. It was also hypothesized that trained children will show a reduction in their level of concern regarding interactions with peers.
Subjects

Subjects were recruited by contacting the case managers associated with a milieu treatment program at a children's mental health centre. The milieu program provides a comprehensive treatment program, including on-site educational, recreational, and therapeutic services, to children and their families. The majority of the children reside at the Centre, although some of the children return to their families each evening, and most children spend weekends with their families. Each child is assigned a case manager (a social worker or psychologist) who is responsible for co-ordinating the child's treatment program, and who serves as the child's and the family's therapist.

The case managers were requested to refer children who were between the ages of 8 and 13, and who demonstrated difficulties in their peer interactions. Case files were then examined, and the case managers were interviewed, to confirm the appropriateness of the referred children for the program. As a result of this process, 16 boys, ranging in age from 8 years, 6 months to 13 years (mean age 10 years, 8 months) were selected for inclusion in the present study. Psychiatric, psychological, and educational assessments had indicated that all of the boys demonstrated
normative intellectual abilities. The most common psychiatric diagnosis was Disturbance of Conduct (Appendix A). All of the boys had previously been identified by various sources (e.g., school personnel, family physicians) as exhibiting 'peer problems'. Informal rating forms completed by the case managers indicated that the children scored in the 'low' range in the use of the 11 social skills to be trained in the present study.

Letters were then sent to the selected children's guardians, explaining that the purpose of the project was to evaluate the effectiveness of two 'skills-training' programs (Appendix B). All of the guardians provided written permission for their child's participation in the study.

The 16 children were assigned to either the experimental condition, the social skills training program, or to an activity control condition, designed to impart nonsocial skills, but which paralleled closely the experimental condition. Assignment was on a random basis, with the important exception that an equal number of children at each age was assigned to each condition.

The Training Procedures

Both conditions were carried out over a 5-week period in which the children took part in 3 1-hour sessions per week, for a total of 15 sessions. The same two trainers (myself and a trained assistant, with an Honours B.A. in Psychology) conducted all sessions for both conditions. The children were seen in four groups of four. One group for each condition consisted of
children from 8 to 10 years, while the second group consisted of children 11 to 13.

All of the children participating in the study were told that the purpose of the sessions was to learn skills which are useful in playing games. Further, the structure of the sessions was the same for all groups. That is, each session included concept discussion, modelling, role-playing, game playing, individual feedback, and homework assignments. A token reward program was employed to promote participation and adherence to group rules.

**Social skills training sessions.** The major goals of the training sessions were to enhance the children's skills concepts, promote skill performance, and foster skill maintenance and generalization. The general format of the training sessions was as follows:

1. Discussion of the social concept, including its attributes, exemplars, and non-exemplars. Every child was prompted to contribute to the discussion. The trainer emphasized the relationships among an appropriate social goal, the relevant social concept, and the specific social strategies. This segment of the session covered about 10 minutes.

2. Focus on one social skill which is an exemplar of the relevant concept. The trainers attempted to elicit from the children the particular behavioural steps comprising the skill, and then summarized the steps on the blackboard. The trainers then modeled the skill, and asked the children to evaluate their
performance. The children then had the opportunity to individually role-play the skill. After role-playing, each child evaluated his performance. These procedures required approximately 25 minutes.

3. Opportunity to practise the skill during group interaction. The children took part in a 10-minute group activity (i.e., game playing), and the trainers provided feedback throughout the activity. For each training session, an activity was chosen which would be suitable as a context for practising the targeted skill.

4. Self-evaluation. After the activity, each child was seen individually for a few minutes by one of the trainers. The child was asked to evaluate his performance, in terms of (a) attempts to apply the concept, (b) proficiency at performing the actual skill steps, (c) the response of the other children to his behaviour, and (d) his attributions for success or failure. Children were helped to make attributions for outcomes which would be adaptive, and to identify other situations where skill use would be appropriate.

5. Homework assignment. The children were encouraged to use the skill in their living environment and at school, and to report back to the trainers about their use of the skill.

Four general concepts and specific corresponding skills taught in the program were chosen on the basis of the midchildhood social competence literature. These were:
<table>
<thead>
<tr>
<th>Concept</th>
<th>Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Entering a relationship</td>
<td>- paying attention</td>
</tr>
<tr>
<td></td>
<td>- beginning a conversation</td>
</tr>
<tr>
<td></td>
<td>- asking to join in</td>
</tr>
<tr>
<td>2. Maintaining a Relationship</td>
<td>- giving suggestions and directions</td>
</tr>
<tr>
<td>(activity oriented)</td>
<td>- carrying on a conversation</td>
</tr>
<tr>
<td>3. Maintaining a Relationship</td>
<td>- giving compliments</td>
</tr>
<tr>
<td>(person oriented)</td>
<td>- offering help</td>
</tr>
<tr>
<td></td>
<td>- showing understanding of another's feelings</td>
</tr>
<tr>
<td>4. Handling Conflict</td>
<td>- asking for help</td>
</tr>
<tr>
<td></td>
<td>- making a complaint</td>
</tr>
<tr>
<td></td>
<td>- negotiating</td>
</tr>
</tbody>
</table>

One session was devoted to each skill. In addition, after training in the skills comprising one concept, a session was devoted to reviewing that concept, and skills which the children needed further practice performing. During this session, the children also had the opportunity to practise the skills in the game context, without coaching from the trainers. Self-initiation of the skills was expected, and was discussed during the individual post-play feedback.

Parallel activity control group. The sessions for this
condition involved the same procedures outlined above for the social skills training condition. However, the children in the parallel activity groups were taught skills which are impersonal in nature, and which focus on self-control strategies. The program included:

<table>
<thead>
<tr>
<th>Concept</th>
<th>Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Concentrating</td>
<td>- mastering distractions</td>
</tr>
<tr>
<td></td>
<td>- processing complex patterns</td>
</tr>
<tr>
<td></td>
<td>- controlling action</td>
</tr>
<tr>
<td>2. Remembering</td>
<td>- visual memory</td>
</tr>
<tr>
<td></td>
<td>- auditory memory</td>
</tr>
<tr>
<td>3. Planning</td>
<td>- auditory sequencing</td>
</tr>
<tr>
<td></td>
<td>- visual sequencing</td>
</tr>
<tr>
<td></td>
<td>- sequential planning</td>
</tr>
<tr>
<td>4. Anticipating Consequences</td>
<td>- developing alternatives</td>
</tr>
<tr>
<td></td>
<td>- evaluating consequences</td>
</tr>
<tr>
<td></td>
<td>- developing part goals</td>
</tr>
</tbody>
</table>

These concepts and skills were adapted from Fagen, Long, and Stevens (1975), *Teaching Children Self-Control*.

Appendix C provides the training schedule for each condition, as well as a sample lesson for each condition.

**The Assessment Battery**

**Behavioural measures.** Two forms of behavioural measures were utilized: questionnaires completed by several sets of raters, and direct observation of free-play behaviour. The
following section will describe each measure.

1. **Response Generalization Measures:** Two instruments examined the effects of social skills training on more general aspects of the child's functioning. Parents, teachers, and case managers completed the *Walker Problem Behaviour Identification Checklist* (WPBIC) (Walker, 1983). The fifty items comprising this instrument describe observable problem behaviours, and the respondent is asked to circle a corresponding number if that behaviour has been observed in the child's response pattern. 

The WPBIC was designed for use with children in elementary grades. Cut off points are provided which discriminate disturbed from nondisturbed children.

The Manual (Walker, 1983) provides information regarding the
psychometric properties of the test. For example, split-half reliability for the WPBIC has been reported as .98. Examination of contrasted-groups validity showed differences between the means of experimental and control groups which were significant beyond the .001 level of confidence. Criterion validity assessment yielded a biserial correlation of .68 between checklist scores and criteria indicative of emotional disturbance. An examination of test-retest stability yielded an overall coefficient of .80 for a 3-week period. Factor analysis demonstrated that the five factors of the WPBIC are relatively independent of one another, with the exception of a .67 correlation between Acting out and Distractability. Evaluation of item validity revealed that the range of item variances is from .00 to .21 (Appendix D).

In addition, the mothers of the children completed the revised Personality Inventory for Children (PIC) Factor Scales (Lachar, 1982). This 131-item true-false inventory generates scores for four scales:

1. Undisciplined-Poor Self Control: primarily measures ineffective discipline, and also examines impulsivity, poor peer relationships, and limited conscience development,

2. Social Incompetence: primarily measures sad affect, and also taps shyness, peer rejection, social isolation, and lack of leadership qualities,

3. Internalization-Somatic Symptoms: primarily measures worry and a poor self-concept, and also measure somatization,
insecurity, and psychotic behaviour,

4. **Cognitive Development**: which primarily measure adaptive behaviour.

A 15-item *Lie Scale* is also included. The *Factor Scales* were constructed from a factor analysis of the 313 items that comprise the 12 clinical scales of the *PIC*, and represent broad-band dimensions of psychopathology. Each scale yields a *T*-score, and normative information is provided for various groups, including boys aged 6 to 16. Extensive information concerning reliability and validity of the *PIC Factor Scales* is provided in the Manual Supplement. For instance, stability coefficients for a clinic population retested 4 to 72 days later were .88 for the undisciplined-poor self concept factor, .93 for the social incompetence factor, .83 for the internalization-somatic complaints factor and .82 for the cognitive development factor.

In a contrasted-groups validity study, Lachar, Gdowski, and Snyder (1982) found that the *PIC Factor Scales* meaningfully distinguished six homogenous samples: delinquent, hyperactive, cerebral dysfunction, somatizing, retarded, and psychotic children (Appendix E).

2. **Situation Generalization Measure**: The *Social Skills Checklist*, modified from the one provided by McGinnis & Goldstein (1984), provided a measure of skill use across a variety of contexts. The checklist consists of eleven items, which each describe one of the skills taught in the social skills condition.
The respondent is asked to indicate whether the child practises each skill never, almost never, seldom, often, almost always, or always. These descriptions are assigned a value from 1 to 7 respectively. The sum of the numbers selected for each skill yield a Total Social Skills Score, which can range from 11 to 77. The respondent is also asked to describe a problem situation concerning each skill. This requirement should help the respondent to consider the child's current behaviour in relation to the relevant skill, and also provided contexts for discussion and role-playing in the social skills training group. The checklist was completed by the child's case manager, the social worker or psychologist who is closely involved with all facets of the child's life (e.g., home, school, therapy) (Appendix F).

3. **Direct Observation:** In order to obtain a measure of actual behaviour in a naturalistic context, the children were videotaped in a free-play situation. A trained observer later coded the children's behaviour from the videotapes, according to the following categories of behaviour (adapted from Ladd, 1981):

(a) **Initiation** - The child’s behaviour is judged to be initiating contact when the child begins a conversation, or asks to join in an activity, in a positive (pleasant) or neutral (matter-of-fact) tone, directed toward a peer or peers.

(b) **Leads** - The target child’s behaviour is judged to be leads when the child gives directions or suggestions to another peer or peers in a positive or neutral tone.
(c) **Questions** - The child's behaviour is judged to be questions when the child verbally expresses a question in a positive or neutral tone toward a peer or peers. Asking for help is not included in this category.

(d) **Support** - The child's behaviour is judged to be supportive when the child compliments another child, verbally or nonverbally indicates understanding of another child's feelings, or helps the child in a pleasant manner.

(e) **Prosocial Assertion** - The child's behaviour is judged to be prosocially assertive when the child asks for help, makes a complaint, or negotiates with another child, in a pleasant or neutral tone.

(f) **Social Other** - The child's behaviour toward a peer or peers is judged to be social other when the behaviour cannot be judged as one of the above categories, but can be described as watching a peer or peers from a distance of 3 feet or less, touching a peer or peers in a positive or neutral manner, or talking to a peer or peers in a positive or neutral tone.

(g) **Social Negative** - The child's behaviour is judged to be social-negative when the child touches, gestures, or talks to a peer or peers in a negative (hostile or rejecting) tone or manner.

(h) **Nonsocial** - The child's behaviour is judged to be nonsocial when the child is not watching, or glancing, or touching, or talking, to another peer or peers. Watching from a distance greater than 3 feet from peers is also judged as non-social.
(i) Adult Contact - The child's behaviour is judged to be adult contact when the child looks at or speaks to the adult.

Cognitive and affective measures. Three measures of social cognitive elements, and one measure concerning affect, were utilized.

1. Self-Efficacy: The Children's Self-Efficacy for Peer Interaction Scale (CSPI) (Wheeler & Ladd, 1982) is a measure of children's self-efficacy for prosocial persuasive skills, and thus provided an indication of changes in self-efficacy as a result of skill training. The scale has been shown to tap social self-efficacy in two contexts — conflict and nonconflict situations. The two-week test-retest reliability for boys is .90. The measure is positively correlated with the self concept scale of the Piers-Harris (Piers and Harris, 1964), and less positively correlated with academic concept, as measured by the Piers-Harris. The CSPI is negatively correlated with the Piers-Harris anxiety scale. It is positively related to teachers' ratings of social efficacy. In all cases, the correlations are higher for the nonconflict subscale than for the conflict subscale.

The measure consists of 22 items. Each item presents a situation (e.g., "a kid is yelling at you") and a persuasive strategy (e.g., "telling the kid to stop"). The child is asked to judge his ability to perform the behaviour by choosing one of four responses: HARD!, hard, easy, or EASY! These four responses are assigned values of 1, 2, 3, and 4 respectively, and the sum of
these scores yields the Total score, which may range from 22 to
88. Conflict and Nonconflict Scores are determined by computing
the mean of the relevant items. (Appendix G).

2. Social Strategy Evaluation: The effect of training on
children's beliefs regarding social strategies was assessed by
administering a revised form of Deluty's (1983 Strategy Evaluation
Measure. The latter measure was derived from the Children's
Action Tendency Scale (Deluty, 1979), a self-report instrument
which yields assertiveness, aggressiveness, and submissiveness
scores. These three subscales have been shown to correlate highly
with peer- and teacher-reports of interpersonal behaviour.
Deluty's (1983) strategy evaluation measure presents children with
an interpersonal situation, and three choices of strategy
(strategies which are aggressive, assertive, or submissive).
Children are first asked to rate each strategy on six dimensions
(e.g., successful-unsuccesful, brave-cowardly), using a
seven-point Likert scale. Children are then asked to choose
"Which of these things 'should' you do? That is, which of these
three things would your parents say you ought to do?" The
children are then asked to answer two additional questions,
concerning which strategy would make them feel best, and which one
would make the other individual or individuals involved in the
situation feel best.

Because Deluty's measure only concerns strategies for use in
conflict situations, some items from his measure were deleted, and
additional items were added to the measure, in order to examine a broader range of social strategies. The additional items were taken from the Children's Assertive Behaviour Scale (Michelson & Wood, 1983). This instrument also provides children with assertive, aggressive and submissive alternatives. Scores have been shown to be correlated with peer, parent, and teacher ratings of behaviour.

Two types of scores may be derived from the Strategy Evaluation Measure. Mean Likert scores may be derived by computing the mean Likert rating for each dimension and for each of the three types of strategies. For each of the three choice questions, the mean frequency of choice of each type of strategy may be computed (Appendix H).

3. Goal Orientation: Changes in children's goal commitment in interpersonal situations were assessed through administration of Taylor and Asher's (1984b) *How I Feel About Playing Games* questionnaire. This measure consists of 35 items which each describe two types of children, one group for whom a certain goal is important, and another for whom that goal is not important. The child is first asked to decide which description is most like him, and then is asked to decide whether the description is really true or or sort of true for him. Each item is scored on a four-point scale, with four indicating high preference for that goal. Factor analysis has revealed four subscales: Performance Goals, Relationship Goals, Avoidance Goals, and Rule-oriented.
Goals. The alpha coefficients for the subscales range from .81 to .84 (Appendix I)

4. Anxiety: In order to determine the effects of social skills training on children's concerns regarding peer interaction, the Peer Acceptance subscale of Buhrmester's (1982) Children's Concerns Inventory was administered. This seven-item subscale presents items concerning making and keeping friends. Children choose from four responses: very worried, somewhat worried, not too worried, and not at all worried, and these responses are scored 4, 3, 2, and 1 respectively. The responses are summed to provide a Peer Acceptance Concerns Score.

The Peer Acceptance subscale has been shown to correlate negatively with peer sociometric measures and self-report measures of peer acceptance. It also correlates negatively with measures of competence in sports competitions, and, to a lesser degree, measures of competence in schoolwork. Examination of reliability provided an Alpha coefficient of .75 for boys, and a test-retest correlation of .56 after three weeks (Appendix J).

Test Administration and Procedure

Behavioural measures.

The WPBIC, PIC, and Social Skills Checklist were completed during the time periods 2 weeks prior to training, 2 weeks after training, and 2 months after training. At each data collection time period, teachers and case managers were individually contacted in order to explain the purpose of the data collection.
and to request completion of the assessment instruments. All raters remained uninformed regarding group assignment throughout the study.

Parents were sent an explanatory letter at each assessment period. The case managers assumed responsibility for distribution and recovery of the parents' assessment measures. In most cases these tasks were accomplished at weekly parent counseling sessions.

For the direct observation assessment, four play groups were formed, such that each play group included two experimental group children and two control group children. Each play group was brought to a room, and told that they could play with the provided play materials for a half-hour period. One childcare worker remained with the children during the play sessions, but was instructed to interact with the children only when it was necessary for their physical or emotional well-being. The room was equipped with a video camera, mounted unobtrusively in a top corner. Filming was controlled from an adjacent room. Filming began when the children had entered the room and stopped when the children began leaving the room.

Each of the four play groups participated in two play sessions at the time of pretest, and two sessions during the posttest period. Although play sessions had also been scheduled for the 2-month follow-up period, it was decided to eliminate this step. The pretest-posttest experience had shown that scheduling...
the play periods was extremely difficult, and disruptive to the usual operation of the treatment centre. Snowstorms, illness, emergencies, crises, and teachers' and therapists' schedules all contributed to tax the resources of all involved. Frank discussion with the centre staff suggested that a third repetition of the experience would be inadvisable.

However, the appropriate data was secured for the pretest and posttest periods, providing a total of 16 half-hour videotaped play periods (4 groups x 2 play periods x 2 assessment periods). Also, before the actual pretest sessions, each group was filmed once in order to work out any filming problems, and to provide material for observer training.

The primary observer was a psychologist with expertise in the area of behavioural programming, and the secondary observer was an individual completing his Doctorate in developmental psychology. Both raters remained naive to subject condition throughout the study. These two individuals were trained by myself to code the children's behaviour according to the behaviour categories. Practice sessions, and discussion of problem areas continued until the observers achieved an overall reliability of 95% (calculated as Agreements x 100 / Agreements + Disagreements).

The primary observer then rated the free-play sessions. A time sampling procedure was employed to obtain the ratings. The observer first assigned each child a number, from one to four. The videotape and a specially-prepared audiotape were then
started. The audiotape announced a number, from one to four, every six seconds. The observer coded the behaviour of the target child, according to one of the nine behaviour categories, on a data sheet. She then focused attention on the child assigned the next number, and coded his behaviour when his number was announced. Thus, each child was observed once in each 24-second interval, yielding an average of 57 observations per child each session.

The secondary observer coded one third of the total available observations, such that each of the four groups of children was observed once, at the pretest and at the posttest. Observations were collected from the beginning, the middle, and the end of play sessions. For these reliability checks, the primary and secondary observers coded simultaneously. A screen separated the two observers in order to prevent any form of communication.

Interrater reliability was again computed, using the formula, Agreements x 100 / Agreements + Disagreements. For the pretest, overall reliabilities ranged from 95 to 98%. Mean pretest percentages of agreement for the categories were: Social Other, 98.61; Nonsocial, 91.99; Social Negative, 81.25; Initiations, 88.89; Leads, 95.83; Questions, 100; Support, 100; Assertion, 100; and Adult Contact, 86.67. The mean deviation across categories was 5.12.

At the posttest level, overall reliabilities ranged from 95 to 98%. Mean posttest percentages of agreement for the categories
were: Social Other, 98.06, Nonsocial, 98.36; Social Negative, 83.33; Initiations, 100; Leads, 94.44; Questions, 100; Support, 66.67; Assertion, 79.17; and Adult Contact, 100. The mean deviation across categories was 4.65. Little confidence is attached to the relatively low interrater reliability for Support, since there were very few opportunities to rate this behaviour.

Category scores for each session were computed for each child by summing the total number of behaviours coded within each observational category, and then dividing each category total by the total number of observations available for the child. The mean proportions across the two play sessions at the pretest level, and at the posttest level, were then calculated.

Cognitive and affective measures.

The cognitive and affective measures were administered by experienced child psychometrists. Training regarding the assessment procedures was provided. The tests were administered individually and all test items were read to the child. In all cases, administration of the test battery required less than one hour. However, for some children it was necessary to complete the instruments over two sessions. Each psychometrist tested the same children at each assessment period. All measures, with the exception of Social Strategy Evaluation, were completed at all three assessment periods. The Social Strategy Evaluation measure was completed for pretest and posttest periods. Inspection of the data for this measure showed that at the pretest level children
rated the assertive strategies very positively, the aggressive strategies very negatively, and the passive strategies somewhat negatively. Further, pretest responses for the choice questions showed that the children saw the assertive responses as the ones which they ought to do, which would make them feel best, and which would make the other child feel best. The posttest data showed few significant changes (Table K-1).
CHAPTER III
RESULTS

Data Analysis

Since the measures employed in the present study were not expected to yield a normal distribution, non-parametric techniques were chosen as the most appropriate forms of analyses. Furthermore, since the presentation of the program was modified according to age level, to insure a uniform effect for program treatment across age, the age factor was combined for the analyses.

Differences between the experimental and control groups were examined by employing the Mann-Whitney Test (two-tailed), for each dependent measure, and at each measurement period. Within-group changes across three measurement periods were analyzed by applying the Friedman Two-Way (8 subjects by 3 measurement periods) Analysis of Variance by Ranks. Thus, the Mann-Whitney Test provided information regarding main effects, while the Friedman Test provided information regarding simple effects. Where the Friedman Test was significant, multiple comparison tests were performed to locate the differences, using the Wilcoxon Matched-Pairs, Signed-Ranks Test. Where appropriate, the Mann-Whitney Test (one-tailed) was applied to 'change scores', to examine relative change.

One experimental group subject was unavailable at the
follow-up time period, and was therefore assigned the mean of his
group for each measure. At posttest, this child showed positive
change scores at a level equal to or greater than his group mean,
for most measures. Therefore, assignment of the group mean at
follow-up was considered to be a conservative strategy.

For the sake of clarity, the results of the specific tests
used at each data analysis point are presented in tabular form.
In the text, all results which are reported to show significance
have a probability level less than .05. Results indicating a
trend are significant at $p < .10$.

**Behavioural Measures.** In this section, the results concerning the
two forms of behavioural measures (questionnaires and direct
observation) will be presented.

1. **Response Generalization Measures:** (a) Teachers' ratings of
    the WPBIC: Table K-2 presents the mean scores, and Table 1
    summarizes the statistical analyses, for the teachers' ratings of
    the WPBIC. Experimental and control group Total was not
    significantly different at any of the three measurement periods –
    pretest, posttest, and 2-month follow-up. However, within-group
    analyses indicated that experimental group Total was significantly
different across the three measurement periods ($\chi^2 = 7.00, p <
.05$). Further analysis indicated that experimental group Total
decreased from pretest to posttest ($p < .05$) and from pretest to
follow-up ($p < .05$). There was no evidence of control group
change.
Table 1

Comparison of Experimental and Control Groups for the Teachers' Ratings of the WPBIC

<table>
<thead>
<tr>
<th>Scale</th>
<th>Between-group Differences</th>
<th>Within-group Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mann-Whitney</td>
<td>Friedman's ANOVA $\chi^2$</td>
</tr>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>ACT.OUT</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>WITHDRAW.</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>DISTRAC.</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>DIST.PEER</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMMATURE</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: All results reported in the table are significant at .05 level. A dash indicates that a significant result was not obtained.
There were no between-group differences evident for Disturbed Peer Relations. Both groups showed significant within-group change ($\chi^2_r = 6.33$, $p < .05$ for the experimental group, and $\chi^2_r = 8.45$, $p < .05$ for the control group). The experimental group decreased from pretest to posttest ($p < .05$), and from pretest to follow-up ($p < .05$), on this measure. The control group also decreased from pretest to posttest ($p < .05$), but increased from posttest to follow-up ($p < .05$). It should be noted that at both the posttest and follow-up, experimental group Disturbed Peer Relations showed a floor effect: five of the eight subjects obtained a T-score of 46, which corresponds to a raw score of zero. This floor effect contributed to the finding of no between-group differences at follow-up.

Distractability showed no between-group differences. However, the within-group analysis for the experimental group approached significance ($\chi^2_r = 5.38$, $p < .10$). Further analysis indicated that Distractability tended to decrease from pretest to posttest ($p < .10$) and also from pretest to follow-up ($p < .10$). There was no evidence of control group change.

No significant results were obtained for Acting Out, Withdrawal, or Immaturity. Experimental group Withdrawal showed a floor effect at follow-up (all experimental subjects obtained a raw score of zero for Withdrawal).

(b) Case Managers' Ratings of the WPBIC: Table K-3 provides the mean scores for the case managers' ratings of the WPBIC, and Table
2 summarizes the analyses. The experimental and control groups did not show significantly different Total scores at any of the three measurement periods. However, within-group analyses showed that the experimental group obtained significantly different Total scores across the measurement periods ($\chi^2_r = 10.75, p < .05$). Further analyses indicated that the experimental group Total decreased from pretest to posttest ($p < .05$), and from posttest to follow-up ($p < .05$). There was no evidence of control group change across the measurement periods.

There were no significant differences between the Disturbed Peer Relations scores of the two groups at the pretest or posttest, but at follow-up, the experimental group's scores were significantly lower than those of the control group ($p < .05$). Analyses of within-group change reflected this pattern: the experimental group obtained significantly different scores across the three measurement periods ($\chi^2_r = 7.45, p < .05$), while the control group did not show significant differences. Analyses of experimental-group change scores showed no significance from pretest to posttest, but a significant decrease in Disturbed Peer Relations from posttest to follow-up ($p < .05$), and from pretest to follow-up ($p < .05$). At follow-up, seven of the eight experimental subjects obtained a raw score of zero for Disturbed Peer Relations.

Although the experimental and control groups did not obtain significantly different Acting Out scores at any of the three
Table 2

Comparison of Experimental and Control Groups for the Case Managers' Ratings of the WPBIC

<table>
<thead>
<tr>
<th>Scale</th>
<th>Between-group Differences</th>
<th>Within-group Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mann-Whitney</td>
<td>Friedman's ANOVA $\chi^2$</td>
</tr>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>ACT.OUT</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>WITHDRAW.</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>DISTRAC.</td>
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<td>-</td>
</tr>
<tr>
<td>DIST.PEER</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IMMAT.</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: All results reported in the table are significant at .05 level. A dash indicates that a significant result was not obtained.
measurement periods, the experimental group showed within-group change across these periods ($\chi^2 = 8.75, p < .05$), while the control group showed no evidence of change. Further analyses indicated that experimental group Acting Out decreased from pretest to posttest ($p < .05$), and showed a trend to further decrease from posttest to follow-up ($p < .10$).

The analyses for Withdrawal, Distractability, and Immaturity showed no significant results. However, it should be noted that the experimental group showed a tendency to obtain lower Withdrawal scores than the control group at pretest ($p < .10$), and at follow-up five of the eight experimental subjects obtained a raw score of zero on Withdrawal.

(c) Parents' Ratings of the WPBIC: The means for parents' ratings of the WPBIC are presented in Table K-4, and the analyses are summarized in Table 3. The experimental and control groups Total scores were not significantly different at any of the three measurement periods. However, the within-group analysis for the experimental group approached significance ($\chi^2 = 5.25, p < .10$). Further analyses showed decreased Total from posttest to follow-up ($p < .05$), and also a significant decrease from pretest to follow-up ($p < .05$). There was no evidence of control group change.

The results for Distractability were similar: no between-group differences were evident, but the within-group analysis for the experimental group approached significance ($\chi^2 = \ldots$).
Table 3
Comparison of Experimental and Control Groups for the Parents' Ratings of the WPBIC

<table>
<thead>
<tr>
<th>Scale</th>
<th>Between-group Differences</th>
<th>Within-group Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mann-Whitney</td>
<td>Friedman's ANOVA $\chi^2$</td>
</tr>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>ACT.OUT</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>WITHDRAW.</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>DISTRAQ.</td>
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<td>-</td>
</tr>
<tr>
<td>DIST.PEER</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IMMAT.</td>
<td>-</td>
<td>-</td>
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<tr>
<td>TOTAL</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: All results reported in the table are significant at .05 level. A dash indicates that a significant result was not obtained.
Experimental group Distractibility tended to decrease from posttest to follow-up \((p < .10)\), and from pretest to follow-up \((p < .10)\).

Acting Out showed no between-group differences, but the experimental group scores were significantly different across measurement periods \((\chi^2 = 11.28, \ p < .05)\). Experimental group Acting Out decreased from posttest to follow-up \((p < .05)\) and from pretest to follow-up \((p < .05)\). The within-group analysis for the control group approached significance \((\chi^2 = 6.08, \ p < .10)\). Relative to pretest, control group Acting Out decreased at posttest \((p < .05)\), and showed a trend to decrease at follow-up \((p < .10)\).

There was no evidence of between-group differences for Disturbed Peer Relations. Both the experimental group and the control group within-group analyses approached significance \((\chi^2 = 5.39, \ p < .10, \text{ and } \chi^2 = 6.10, \ p < .10 \text{ respectively})\). Experimental group Disturbed Peer Relations decreased from posttest to follow-up \((p < .05)\). Control group scores decreased from pretest to posttest \((p < .05)\), and tended to decrease from pretest to follow-up \((p < .10)\).

There were no significant results found for parents’ ratings of Withdrawal and Immaturity. Both the experimental and the control group showed a floor effect for Withdrawal.

(d) Parents’ Ratings of the PIC Factor Scales: Mean parent-rated PIC scores are presented in Table K-5, while Table 4 provides a
Table 4

Comparison of Experimental and Control Groups for the Parents' Ratings of the PIC Factor Scales

<table>
<thead>
<tr>
<th>Factor&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Between-Group Differences</th>
<th>Within-group Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mann-Whitney</td>
<td>Friedman's ANOVA &lt;sup&gt;x&lt;/sup&gt;&lt;sup&gt;2&lt;/sup&gt;</td>
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<td></td>
<td>Pre</td>
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<tr>
<td>III</td>
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</tr>
<tr>
<td>IV</td>
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</tbody>
</table>

Note: All results reported in the table are significant at .05 level. A dash indicates that a significant result was not obtained.

<sup>a</sup> Factor I is Undisciplined-Poor Self Control, Factor II is Social Incompetence, Factor III is Internalization-Somatic Complaints, and Factor IV is Cognitive Development.

<sup>b</sup> Comparison of experimental and control change scores (Mann-Whitney) did not show significance.
summary of the statistical analyses. In regards to the Lie Scale, in no case was the I-score greater than 49, which suggests that parents were not responding to the test items in an overly-defensive manner.

For Factor I, Undisciplined/Poor Self-Control, the experimental group scored lower than the control group at the pretest level ($p < .05$). However, there were no significant differences between the groups at posttest or follow-up. Both showed significant within-group change (experimental group $\chi^2 = 10.84$, $p < .05$, and control group $\chi^2 = 11.55$, $p < .05$). The experimental group decreased on Factor I at each time of measurement ($p < .05$). The control group showed a decrease for the pretest to posttest comparison ($p < .05$) and for the pretest to follow-up comparison ($p < .05$).

For Factor II, Social Incompetence, the experimental and control groups showed no significant differences at the pretest or posttest, but at the follow-up there was a trend for experimental Factor II to be less than control Factor II ($p < .10$). Within-group analysis indicated that the control group achieved significantly different scores over the three time periods ($\chi^2 = 14.08$, $p < .05$). Further analyses indicated that the control group showed a tendency to decrease on Factor II from pretest to posttest ($p < .10$) and from pretest to followup ($p < .10$). The experimental group did not show significant change.

No significant differences were found for Factor III.
Internalization, and Factor IV, Cognitive Development.

2. Situation Generalization Measure: Table K-6 presents the mean scores for the Case Managers' ratings of the Social Skills Checklist, and the statistical analyses are summarized in Table 5. No significant differences were evident between the groups. Both groups showed significant differences in their within-group scores across the three measurement periods (experimental group $\chi^2 = 9.73, p < .05$, and control group $\chi^2 = 9.13, p < .05$). Analyses of the within-group changes indicated that both groups' scores increased from pretest to posttest ($p < .05$), and from pretest to follow-up ($p < .05$), but showed no significant change from posttest to follow-up. Analyses of the relative amount of positive change for each group showed that the experimental group's scores tended to increase more than did the control group scores, for the pretest to follow-up comparison ($p < .10$).

3. Direct Observation Measure: Table 6 summarizes the analyses for each of the nine behavioural categories, and also presents the mean scores. The most frequently shown behaviour for both groups was Social Other. Nonsocial was fairly common, followed by Social Negative. The remaining categories of behaviour showed a relatively low rate of occurrence.

For the categories Assertion, Social Other, and Questions, the experimental and control groups were not significantly different at the pretest, and the experimental group scored significantly higher than the control group at the posttest ($p <
Table 5
Comparison of Experimental and Control Groups for the Case Managers' Ratings of the Social Skills Checklist (Total Score)

<table>
<thead>
<tr>
<th></th>
<th>Between-group Differences</th>
<th>Within-group Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mann-Whitney</td>
<td>Friedman's ANOVA $\chi^2$</td>
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<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
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</tbody>
</table>

Note: All results reported in the table are significant at .05 level. A dash indicates that a significant result was not obtained.

a  Comparison of experimental and control change scores (Mann-Whitney) approached significance ($p \leq .10$), indicating that the experimental group tended to increase more on this measure than did the control group.
Table 6

Comparison of Experimental and Control Groups for the Direct Observation Measures

<table>
<thead>
<tr>
<th>Behaviour</th>
<th>Between-group Differences</th>
<th>Within-group Differences</th>
<th>Mean Relative Frequency</th>
<th>Time of Measurement</th>
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<td>Pre-Post</td>
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<td>Social Other</td>
<td>-</td>
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<td>-</td>
<td>Experimental</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td></td>
<td></td>
<td>Control</td>
</tr>
<tr>
<td>Assertion</td>
<td>-</td>
<td>Exp &gt; Con</td>
<td>Exp↑</td>
<td>Experimental</td>
</tr>
<tr>
<td></td>
<td>Control</td>
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<td>Control</td>
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<tr>
<td>Questions</td>
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<td>Exp &gt; Con</td>
<td>-</td>
<td>Experimental</td>
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<tr>
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<td>Control</td>
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<td></td>
<td>Control</td>
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<tr>
<td>Questions²</td>
<td>-</td>
<td>Exp &gt; Con</td>
<td>Exp↑</td>
<td>Experimental</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td></td>
<td></td>
<td>Control</td>
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</tbody>
</table>

continued
Table 6 continued

<table>
<thead>
<tr>
<th>Leads</th>
<th>Exp &gt; Con</th>
<th>Exp↑</th>
<th>Experimental</th>
<th>0.030</th>
<th>0.041</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leads^a</td>
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<td>Exp↑</td>
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<td>0.044</td>
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<tr>
<td>Social Neg.</td>
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<td>-</td>
<td>Con↑</td>
<td>Experimental</td>
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<td>Experimental</td>
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<td></td>
<td>Control</td>
<td>0.003</td>
<td>0.001</td>
</tr>
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</table>

Note: All results reported in the table are significant at .05 level.

^a Without Subject 7.
Experimental group **Assertion** significantly increased \( (p < .05) \). Although **Social Other** and **Questions** did not show a significant increase for either group, these scores did tend to increase more for the experimental group than for the control group \( (p < .10) \).

In regards to **Questions**, one experimental subject (Subject 7) obtained the highest pretest score of all subjects, but the lowest experimental group score at posttest. Because this child's extreme scores for **Questions** appeared to reflect some unknown situational factor, the analyses for experimental group **Questions** was recalculated, after omitting Subject 7's scores. These analyses showed a significant difference for the posttest between-group comparison \( (p < .05) \), and a significant increase across the measurement periods for the experimental group \( (p < .05) \).

Results for **Leads** indicated that the experimental group tended to score higher than the control group at the time of pretest \( (p < .10) \). Inspection of the data indicated that this tendency was accounted for by Subject 7, who obtained a **Leads** score which was over twice as high as the mean **Leads** score for his group. Although the experimental group scored significantly higher than the control group at the posttest level \( (p < .05) \), this finding was not reflected in either within-group changes or analysis of relative change in the two groups. It appeared that the nonsignificant findings were a result of a severe decline in...
the score of Subject 7.

In order to obtain a clearer picture of the results concerning Leads, the scores for Subject 7 were deleted, and the analyses were recalculated. The results of these analyses showed no difference between the experimental and control groups at pretest, a significant difference at posttest \( p < .05 \), and a significant increase from pretest to posttest for the experimental group \( p < .05 \).

The experimental and control groups Social Negative did not differ at either the pretest or the posttest. Both groups showed a significant decline in their scores after training \( p < .05 \), and there was no difference in the relative amount of decline.

The two groups also showed equivalence at both the pretest and the posttest for Initiation. However, the control group showed an increase in Initiation after training \( p < .05 \). This increase was slight, as reflected in the finding of no difference in the relative amount of positive change in the two groups.

For Nonsocial, the two groups initially were similar, but the control group showed significantly higher scores than the experimental group at posttest \( p < .05 \). Control group Nonsocial did show an increase after training \( p < .05 \).

The two groups’ Adult Contact showed no significant differences at either time period, and no within-group change was evident.

Because Support had near-zero means at each assessment
period, further data analyses were not performed.

**Cognitive and Affective Measures.** This section presents the results for the three measures of social cognition, and the one measure of affect.

1. **Self-Efficacy:** Table K-7 provides the mean scores and Table 7 provides the analyses summary for the self-efficacy measures. There were no significant differences between the experimental and control group Total at any of the three times of measurement. However, the experimental group did show within-group change across the measurement periods \(\chi^2 = 6.65, p < .05\). The more specific experimental-group analyses demonstrated positive change from pretest to posttest \(p < .05\), and a trend in the same direction for the posttest to follow-up scores \(p < .10\). No within-group changes were evident for the control group.

**Conflict** and Nonconflict were also computed. Analyses indicated no significant results for Nonconflict. For Conflict, the results mirrored those for Total. The experimental and control groups were not significantly different at any of the three measurement periods. The experimental group did show within-group change across the measurement periods \(\chi^2 = 7.15, p < .05\). The experimental group showed a significant increase from pretest to posttest \(p < .05\) and from posttest to follow-up \(p < .05\). The control group showed no evidence of within-group change.

In light of the results for Conflict and Nonconflict,
Table 7
Comparison of Experimental and Control Groups for the Self-efficacy for Peer Interactions Scale

<table>
<thead>
<tr>
<th>Scale</th>
<th>Between-group Differences</th>
<th>Within-group Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mann-Whitney</td>
<td>Friedman's ANOVA $\chi^2$</td>
</tr>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
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<tr>
<td>Conflict</td>
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<tr>
<td>Nonconflict</td>
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</tbody>
</table>

Note: All results reported in the table are significant at .05 level. A dash indicates that a significant result was not obtained.
analyses of differences between the experimental group's scores on these two scales were performed. The Mann-Whitney Test indicated that at the pretest level, the experimental group scored significantly lower on *Conflict* than on *Nonconflict* ($p < .05$), while by the posttest period, no significant difference between the two scales was evident.

2. Goal Orientation: Table K-8 provides the mean scores for each of the four goal types: *Performance*, *Relationship*, *Avoidance*, and *Rule-Oriented*. None of the analyses for each goal type showed evidence of between-group differences. There was also no evidence of within-group change across the measurement periods for either group.

Inspection of the pretest means for each goal type suggested that the experimental children scored at a higher level for *Relationship* than for the other goal types. Mann-Whitney Tests confirmed that the experimental children preferred *Relationship* goals more highly than *Avoidance* goals ($p < .05$), and tended to prefer *Relationship* goals more highly than *Performance* goals ($p < .05$). There was no difference between the preferences for *Relationship* and *Rule-Oriented* goals. The relationships between preferred goals were similar at posttest.

3. Anxiety: Table K-9 provides the means for *Peer Acceptance Concerns*. No significant results were obtained.
CHAPTER IV
DISCUSSION

Social skills training is quickly becoming a popular type of intervention for children exhibiting social adjustment problems. The purpose of the present study was to examine changes that occur with social skills training. More specifically, the present study was designed to evaluate the effectiveness of a social skills training program which was particularly designed to promote improvement in the social behaviour of clinic children. A secondary purpose of the present study was to examine changes in cognitive and affective elements which occur with social skills training. Before proceeding with a detailed analysis concerning the meaning of the obtained results, it may be helpful to provide a global perspective of the major findings.

The general pattern of changes noted in the social skills trained children suggested that the most salient area of improvement concerned orientation towards problematic interpersonal situations. After social skills training, children's play behaviour showed less verbal and physical aggression. Concomitantly, prosocial behaviour increased. Specifically, the social skills trained children were more apt to ask questions, and to give suggestions and directions to other children, in a manner which would be conducive to further interpersonal activity. Disagreements were more likely to be
handled in a prosocially assertive manner, such as negotiating a solution. More global aspects of behaviour, in various social contexts, also showed positive changes - particularly those involving disruptive and aggressive behaviours, and behaviours associated with inadequate peer relations. Anecdotal reports from adults involved with the children complemented the formal ratings of global behaviour (e.g., "He handles problems with other kids without getting angry like he used to" and "Yesterday, he had a nice conversation with another child for 10 minutes!"). Further, the social skills trained children increased in their confidence in handling situations involving conflict. The following discussion will address the meaning of the observed changes from a number of perspectives: (1) behavioural changes, (2) cognitive and affective changes, (3) methodological issues, and (4) the cognitive-social learning model of social skills training.

**Behavioural Changes**

Confidence in the effectiveness of social skills training requires demonstration of the treatment's ability to produce behavioural changes which are long-lasting, and which are evident across the child's important social contexts. It is also important that the treatment's effectiveness be demonstrated with the various client populations which may be in need of intervention. In particular, it would be useful to have evidence concerning the effectiveness of social skills training with children exhibiting adjustment problems of such severity that they must be removed.
from their usual school and/or home environment. Should research support the utility of social skills training for clinic populations, such treatment could be promoted as a cost-effective, time-limited method of enhancing the social adjustment of these troubled children.

Such children often present with social difficulties which are chronic in nature. Their current behaviour may often reflect a history of maladaptive social reinforcement and exposure to inappropriate models of social behaviour. These factors may serve to reduce the probability of achieving significant therapeutic change through treatments designed for children with less severe problems. Therefore, it appears appropriate to assume that the probability of achieving success with social skills training would be increased by incorporating into a program procedures which would address all three possible goals of such training: knowledge enhancement, enhancement of behavioural competencies, and fostering of skill maintenance and generalization. Thus, the present study drew from the work of the coaching approach, and the Structured Learning approach, in order to develop a training method for children with severe social adjustment problems.

Further, the content of the training program was designed to impart those skills which appear to be most important to effective social functioning in mid-childhood. The taught skills were also considered to be ones which would be useful across a wide variety of social contexts.
Examination of the effectiveness of training clinic children in specific social skills also required careful selection of an appropriate control condition. It could be that any changes consequent to social skills training follow from the procedures employed, rather than the content, of the training. For instance, providing children with an opportunity to interact with one another away from their usual social contexts, could in itself be responsible for changes in social functioning. Therefore, the present study incorporated a control condition which closely paralleled the procedures of the social skills training condition. Thus, when there is evidence of changes for the experimental condition but not the control condition, one can assert with some confidence that the changes are a result of the content of the program, rather than some element of the procedures. In this section, the evidence of behavioural change, as reflected by measures of response generalization, situation generalization, and direct observation, will be discussed.

(a) Response Generalization: Behaviour checklists (the WPBIC and the PIC) were completed by teachers, case managers, and parents, in order to obtain data regarding the effects of social skills training on general aspects of behaviour. Regarding the milieu treatment situation, both teachers and case managers rated the experimental group as showing significantly fewer behaviour problems at the posttest than at pretest, as reflected by Total of the WPBIC. The case managers indicated a further reduction in
behaviour problems from posttest to follow-up. Control condition children were not seen as showing fewer overall problems.

The findings were similar for the Disturbed Peer Relations scale of the WPBIC. Both sets of raters saw a significant decrease in the experimental group's peer-oriented behaviour problems. Although the teachers also rated the control group as showing fewer peer problems after training, this improvement was seen as temporary: there was a significant increase for the control group's Disturbed Peer Relations scores from posttest to follow-up. Further, the case managers rated the experimental group's improvement in regards to Disturbed Peer Relations to be of such an extent as to show a significant difference between the experimental and control group at follow-up. The teachers did not see the groups as significantly different at follow-up, but they did rate the experimental group as very low on this scale (5 of 8 experimental subjects received a raw score of zero). Thus, the probability of finding a significant between group difference was restricted by the inability of the Peer Relations Scale to show any greater experimental group improvement.

Thus, it does appear that the social skills training program resulted in a meaningful reduction in behaviours suggestive of disturbed peer relations, in the school context and the treatment centre context. Moreover, this reduction was maintained over two months. The control group's temporary reduction in such behaviours suggests that the parallel activity condition may have
provided the children with skills which were of some utility in school social contexts, but which were not sufficient to maintain the observed behaviour changes.

The improvements shown by the Disturbed Peer Relations scale are especially encouraging in light of previous treatment outcome research employing the WPBIC. It appears that changes on Disturbed Peer Relations are not commonly found. For instance, a crises-resource program for elementary level boys exhibiting problem behaviours resulted in changes on all of the WPBIC scales except Disturbed Peer Relations and Immaturity (Kerlin & Latham, 1977). Evaluation of a parent-training program targeting child behaviour problems showed no changes for Disturbed Peer Relations, Immaturity, and Withdrawal, but improvement on the other scales (Holland & Hyde, 1979). The improved ratings for Disturbed Peer Relations found in the present study suggest that the program was successful in addressing the specific area of concern targeted, peer relations.

Case managers and teachers saw no changes on the WPBIC Withdrawal subscale. However, it should be noted that withdrawal was not seen as a problem area for these children: in only one case (control group, pretest, case manager) was a mean score above the point suggested by Walker (1983) as indicative of a problem area (T-score of 60). Therefore, one would not expect to find a large decrease in such behaviours. The Withdrawal scores reflect the common situation that children selected for milieu treatment.
are more likely to exhibit seriously disruptive behaviours than they are to exhibit behaviours indicative of social isolation. In terms of broad-band syndromes (Achenbach, 1982), such children tend to be classified as Externalizing, rather than Internalizing.

In view of the Externalizing characteristics of the sample, it is interesting that the case managers rated the experimental group as showing a reduction in disruptive and aggressive behaviours (WPBIC Acting Out) at posttest, and a tendency towards a further reduction at follow-up. However, this reduction was not of a sufficient magnitude to show a significant difference between the experimental and control groups at either posttest or follow-up. Nevertheless, since the control group showed no reduction in this area of behaviour, it appears that the social skills program did impart skills which tended to reduce the occurrence of disruptive and aggressive behaviours.

Teachers saw a tendency for children trained in social skills to show fewer behaviours indicative of distractability, suggesting that such training may also have a beneficial effect on classroom skills. It is interesting that the case managers did not perceive a change in such behaviours, while the teachers did not perceive a change in aggressive and disruptive behaviours. Since the WPBIC Acting Out and Distractability scales are highly correlated (.67), one might expect that the scores for these two scales might be quite similar within a set of raters. The obtained findings
suggest two possibilities. It may be that the situations sampled by teachers and case managers differ in their tendency to elicit certain behaviours. For instance, the classroom situation may well provide more opportunities for the observation of distractability, while less-structured situations, familiar to case managers, may be more likely to elicit aggressive behaviours. A second possibility is that the raters were differentially sensitive to behaviour changes. Teachers are likely to highly value task-related skills, while case managers must deal with the ramifications of aggressive and disruptive behaviour both in the milieu situation and the home situation.

Overall, the results of the response generalization measures rated by milieu program personnel provide encouraging evidence regarding the ability of social skills training to affect more general aspects of behaviours. The strongest evidence of positive change was found for the Disturbed Peer Relations subscale, suggesting that the training of specific social skills results in a reduction in problematic peer relations. The evidence suggesting a decrease in disruptive and aggressive behaviours, and also behaviours suggestive of distractability, further supports the hypothesis that social skills training may promote changes across a number of behaviour categories.

The parents of the children completed two measures of response generalization: the WPBIC and the PIC. Only one scale of the WPBIC showed significant change. Parents of children in the
social skills training condition did not see a decrease in disruptive and aggressive behaviours (as measured by Acting Out) immediately after training, but did rate such behaviours as significantly decreased by the point of follow-up. Since children in the milieu treatment program have rather limited contact with their parents (in most cases, weekends only) it may be that changes in the social skills trained children were not noticed until some time after the program’s completion. Although no significant change was perceived for control condition children, the experimental group’s change was not robust enough to show a difference between the experimental and control conditions at either posttest or follow-up.

There were quite a number of trends towards change evident in the parent’s ratings of the WPBIC. Parents of control condition children indicated that there was some reduction in behaviours measured by Acting Out and Disturbed Peer Relations. Parents of social skills trained children saw some reduction in behaviours measured by Distractability and Disturbed Peer Relations, as well as Total. Thus, it appears that parents of children in both conditions saw some positive changes in their children.

The parent’s ratings on the PIC showed significant change for two factors. Both the experimental and the control groups were seen as decreasing on behaviours measured by Factor I, Undisciplined-Poor Self Control, after training. The experimental group showed a further reduction from posttest to follow-up. It
may be that both training conditions were effective in producing changes in behaviours measured by Factor I, although the factors responsible for change may have been different for each condition. Social skills trained children may have been able to employ the taught skills in conflict situations, thus reducing the occurrence of disruptive behaviours. The control condition children were trained in skills focusing on self-control and self-monitoring, and may have been able to generalize these skills to problematic situations at home. Alternatively, the perceived changes may have occurred independent of the training conditions.

The results concerning Factor II, Social Incompetence were complex. The control condition children showed a significant reduction on this scale from pretest to posttest, while the experimental group showed no significant reduction. However, at follow-up, the experimental group tended to receive lower scores than did the control group. Inspection of mean scores indicated that, at pretest, parents saw the control condition children as exhibiting serious problems in the behaviours measured by Factor II (T-score well over 70), while parents of social skills trained children were not apt to see Social Incompetence as a serious problem area (T-score of 69.63). Further, the control group's reduction in behaviours measured by Factor II was not of such magnitude as to eliminate concern about these children's social functioning (mean score at follow-up was 69.58), while the social skills trained children obtained a mean score at follow-up which
was well within the normative range (58.43). Thus, it appears that the training in impersonal skills generated some improvement in the area of social competence, as perceived by parents, but was unsuccessful in eliminating parental concern regarding this area. The social skills trained children were seen as exhibiting less social competence problems than the control group at pretest (although not to a significant degree), and by the point of follow-up, obtained scores indicative of normative functioning.

Overall, the results concerning the parent-rated measures are less encouraging regarding changes in behaviour after social skills training. It may be that parents did not have sufficient opportunity to accurately judge any changes in behaviour. Also, factors in the home environment may have discouraged behaviour change. One factor which may have had a significant impact on the results involves the parent-child relationship. Social behaviour can not be viewed independent of context, and each child in the present study was involved in a unique parent-child relationship. It is probable that characteristics of each relationship differentially encouraged or prevented behaviour change.

Alternately, social skills training may have produced changes in the home environment, but the nature of the parent-child relationship prevented the recognition of change.

(b) Situation Generalization: The Social Skills Checklist was administered in order to provide some indication of the use of the taught social skills in various situations. The case
managers, who remain informed about the child's behaviour at school, at home, and in therapeutic and recreational programs, rated the children on the use of the specific skills taught in the social skills training condition. The results indicated that the children in both training conditions increased in their use of the taught social skills, although the experimental group tended to increase more than did the control group.

It was not expected that the control condition children would show an increase in the use of untaught skills. However, since the children in each condition were involved with each other throughout the day, it may be that the control condition children increased in social skill use as a result of observing, and then employing, the skills demonstrated by the social skills trained children. However, other behavioural measures do not provide strong support for this interpretation. The control group did not demonstrate increased social skill use (with the exception of one skill) in the free-play situation (see following section). They also did not show a stable decrease in behaviours suggestive of problematic peer relations, in the milieu treatment context. Perhaps the most likely interpretation of the results for this measure involves problems with the measure itself. This interpretation will be discussed in a subsequent section, Methodological Issues.

(c) Direct Observation of Behaviour: The present study did demonstrate that social skills training can effect changes in
specific behaviours of seriously maladjusted children. After social skills training, children exhibited significantly higher levels of prosocially assertive behaviours, such as negotiating; leading behaviours, such as giving suggestions and directions; and questioning behaviours. These changes in free-play behaviour were not evident for the parallel activity control condition. Further, children trained in social skills showed a significantly higher level of "social other" behaviour (i.e., untrained positive or neutral social behaviour) than did control children (although the experimental group's change was not robust enough to show a significant result). Negative social behaviour decreased, but the control condition children also showed decreased levels of negative social behaviour.

The latter finding requires reflection. It is probable that the experimental group's decrease in negative behaviour was related to their increase in prosocial behaviours. At the pretest, negative behaviours were most often shown when a disagreement arose. For instance, name calling, or even physical aggression, was apt to be the result of a difference in opinion regarding issues such as the rules of a game, or one child's hoarding of play materials. Such disagreements are not uncommon among children; however, it did appear that the social skills trained children employed more appropriate means of handling such disputes after training. It may well be that training in negotiating, making complaints, and giving suggestions and
directions reduced the need for an aggressive response in a conflict situation.

The decrease in negative social behaviour shown by control condition children is somewhat puzzling. One would not expect training in impersonal problem-solving techniques to have a direct effect on social behaviour. However, it may be that children who are taught to concentrate on their game-playing and to take a systematic approach towards game-playing, are less likely to attend to provocative behaviour in a play situation. There may also be a relationship between the control group's increase in non-social behaviour and the decrease in negative behaviour. If the children were interacting less with other children, they had less opportunity to display negative behaviours. However, the possibility that the reduction in negative behaviour was unrelated to either training condition cannot be ruled out.

It is difficult to hypothesize as to why the control condition children increased in their non-social behaviour. It may be that the provision of training in impersonal skills encouraged these children to engage in solitary activity.

The present study found that supportive behaviours, such as helping or complimenting, were shown very infrequently at both the pretest and posttest level, despite direct training in such behaviours. Ladd (1981) specifically trained Grade 3 children to offer support, and also found that the frequency of supportive behaviour remained very low. Yet, research has indicated that
such behaviours are related to peer popularity (Coie, Dodge, & Coppotelli, 1982). It may be, as Ladd (1981) suggested, that children value supportive behaviours, but employ such behaviours sparingly in their usual peer interactions.

Although the experimental children were also trained in initiation skills, they did not show a posttest increase in the use of such skills. In fact, the control condition children showed a slight, but significant increase in such skill use. It may be that the control condition children were less successful in their initiations than the experimental children, and thus engaged in a greater amount of initiating behaviours. The experimental children may have initiated an activity or a conversation with another child and then remained involved in the relationship.

Overall, the direct observation data supports the hypothesis that social skills training can produce changes in maladjusted children's observable behaviours. The increase in the use of skills which were directly taught in the social skills training condition (assertion, leads, and questions) suggests that it was the training in those specific skills which resulted in behavioural change. The lack of evidence for control condition change in these behaviours further supports this hypothesis.

It is interesting to compare the relative frequency of the behaviours of the children in the present study with similar data collected by Ladd (1981). For instance, examination of pretest, experimental group data suggests that the relative frequency of
supportive, questioning, and leading behaviours was very low for children in both studies (e.g., Leads was .06 for Ladd's study and .03 for the present study). However, inspection of other behaviour categories suggests an interesting difference between the two samples of children. Ladd's (1981) sample of third grade children, who were chosen for study because they received few 'like to play with' sociometric nominations, showed a high frequency of nonsocial behaviour (.66) and a low frequency of 'social other' behaviour (.22). The seriously maladjusted children involved in the present study showed the opposite pattern (.21 for nonsocial behaviour and .61 for 'social other' behaviour). Also, Ladd's (1981) sample showed so few negative behaviours that this category of behaviour was dropped from the analysis, while the relative frequency of such behaviour was .09 for the present study. It appears that the children in Ladd's (1981) study showed behaviours characteristic of withdrawal. In contrast, the direct observation data obtained in the present study compliments the behaviour rating scales' findings of an emphasis on acting-out behaviours, with few problems in the area of withdrawal. In light of these differences in the samples, it is noteworthy that a program employing similar procedures was effective in promoting behavioural change in both samples.

(d) Summary of Behaviour Changes: The results of the present study in regards to behaviour changes are summarized with reference to the practical issues previously identified as
requiring attention: 1. effectiveness of social skills training with clinical populations, 2. methods of enhancing generalization and maintenance of skills, 3. choice of curriculum, and 4. ease of program implementation.

1. The present study provided encouraging evidence that social skills training may produce beneficial changes in clinic children's social functioning, as compared to a training program which closely parallels the procedures of the social skills training program, but which focuses on impersonal skills. Although the evidence for changes in the home environment is less convincing than that for the treatment environment, it may be concluded that training seriously maladjusted children in social skills may produce significant behaviour changes in several areas: frequency of social skill use during free-play, reduction in behaviours suggestive of disturbed peer relations, and reduction in disruptive and aggressive behaviours.

2. The present study employed several procedures designed to enhance the generalization and maintenance of skills. These procedures included concept discussion, enhancement of feedback abilities, and homework assignments. The obtained results indicated that any behaviour changes evident at posttest were maintained over a 2-month period. Also, social skills trained children showed a further improvement in some areas of behaviour from posttest to follow-up. Control condition children showed no evidence of
improvement over the follow-up period, and according to teachers, actually increased in behaviours indicative of problematic peer relations. Unfortunately, follow-up data for the direct observation measure was not available, and thus one cannot comment regarding the maintenance of behaviour changes in the free-play situation. However, the positive findings for the other behaviour measures suggest that skill use in the free-play situation may have been maintained at posttest levels over 2 months.

3. There are many social skills which may be trained, ranging from very specific behaviours, such as rate of smiling, to quite general behaviours, such as co-operation. In the past, social skills training curriculums were often designed on the basis of adult intuition. The present study attempted to identify and train those skills which would be of most import to improved social functioning for seriously maladjusted children. The taught skills were chosen on the basis of the midchildhood social competence literature, which suggests three areas of social skills important to general social functioning: initiating relationships, maintaining relationships, and handling conflict. The positive behavioural changes shown by the response generalization measures suggest that the taught skills were, indeed, relevant to the children's daily social functioning. Further, the pattern of changes suggests that the lessons concerning handling conflict were particularly important for these
It will be recalled that the most salient area of change involved orientation towards problematic interpersonal situations. Since the subjects did appear to exhibit characteristics of the Externalizing syndrome, and showed improvement in regards to such characteristics (e.g., aggressive and negative behaviours), it appears that the lessons regarding making complaints, negotiating, and asking for help were pertinent in providing the children with appropriate means of handling conflict situations. However, since the present study did not compare differing social skills curriculums, no conclusions can be drawn regarding whether the taught skills were the ones of most import for clinic children's social competence.

4. The present study designed a social skills training program which incorporated procedures of the Structured Learning approach, and the coaching approach. An attempt was made to create a program which would be practical for implementation in a treatment centre context. Experience with the program showed that it does possess a number of practical merits. The training procedures were easily understood by both staff and children. The variety of activities in the sessions generally kept the children involved and interested for the entire hour. The ratio of four children to two staff proved to be appropriate. When one child required individual attention from a trainer, the second trainer could continue with the group lesson.

However, there are a number of practical issues which should
be carefully considered before such a program is implemented in milieu treatment programs. One concerns staffing. Social skills training has often been put forth as a treatment which can easily be provided by front-line workers such as teachers and child care workers. When the client population is seriously maladjusted children, it would be advisable for at least one of the trainers to have advanced knowledge and experience regarding the emotional functioning of such children.

A vignette may illustrate this need. One child attended the first two sessions of social skills training, but at the time of the third session, a staff member informed me that the boy was in his room, refusing to come to the session. According to the staff member, the boy thought the sessions were "boring" and "a waste of time". I went over to speak to the boy, while the second trainer started the session. Initially, the boy was very resistant to discussing his feelings about social skills training. However, when I suggested that "sometimes it is hard to talk about areas where you're having problems", he agreed, and poured out his feelings: he was no good at getting along with people, and going to the sessions stirred up his feelings of inadequacy.

In the ensuing discussion, I re-emphasized that the training could help him to get along with others, and that I could help him to handle his anxiety during the sessions. The child did come to the session, and all subsequent ones. Further, he not only showed improvement on the behavioural measures, but was reported by staff
members to be more relaxed and confident after training.

Judging from such experiences, it is recommended that social skills training with seriously maladjusted children be considered a psychotherapeutic intervention, and that trainers have expertise in both general clinical issues and the specifics of social skills training. Blind adherence to a skills training manual will not suffice.

Another practical issue concerns the selection of appropriate candidates for training. It was observed that a few of the children in the social skills training program did not show a significant amount of positive change. One child missed a number of sessions, was very disruptive to the group when he was in attendance, and actually showed regression on some measures at posttest. This child was experiencing serious disruption in his family during the time the program was conducted, and staff indicated that he showed a regression across almost all areas of functioning. It appears that this boy had not yet developed coping skills sufficient to enable him to appropriately manage disruptive events. Although it is sometimes difficult to judge such matters, it is recommended that one criterion for a child's participation in social skills training should be a level of emotional development which will enable him to benefit from the program. Children displaying very few coping abilities may require other types of psychotherapeutic intervention before they may benefit from social skills training.
A final practical issue concerns the necessary time allotment for social skills training, and the commitment of all treatment personnel to the program. The present study involved removing children from their usual educational and therapeutic programs for three 1-hour sessions a week. The initial scheduling of the training sessions was very difficult, since each child follows an individualized treatment plan at the Centre. Further, there were times when treatment personnel expressed some dismay that skills training sessions prevented a child's participation in another activity. However, in most cases, the Centre staff were accommodating and enthusiastic regarding the skills training sessions. It is essential that before a social skills training program be introduced in a milieu treatment program, all staff involved with the children be fully informed regarding the nature of social skills training, its potential benefits, and the required time allotment. Staff commitment to the success of the program is an important factor in providing a treatment which will be effective, but will not unduly interfere with other treatments.

Cognitive and Affective Changes

A second purpose of the present study was to examine cognitive and affective changes which might occur with social skills training. It has been argued by some (e.g., Bandura, 1977a) that changes in such elements may have a direct relationship to changes in behaviour consequent to therapeutic
intervention. However, little research has examined whether, in fact, cognitive and affective changes do occur with social skills training. Should such evidence be obtained, further research would be indicated to directly test the relationship between changes in affect and cognition, and changes in behaviour.

(a) **Self-efficacy**: Bandura (1977a) has suggested that therapeutic interventions may increase the client's level of self-efficacy regarding the targeted behaviours. Concerning social skills training, it may be that such training increases the child's level of self-efficacy in relation to his social skills. In order to investigate this notion, the children participating in the present study were asked to respond to a measure which specifically taps self-efficacy in peer interaction situations.

It was found that children trained in social skills did increase in their level of self-efficacy for peer interaction situations. Further, analysis of scales tapping two different peer interaction contexts showed that the experimental children's increase in self-efficacy was accounted for by an improvement in their self-efficacy regarding conflict situations (e.g. teasing and arguing). Self-efficacy for nonconflict situations (e.g., asking if one can join in a game) showed no change. The control condition children showed no changes in self-efficacy. However, there were no significant differences between the experimental and control groups at any of the times of measurement, suggesting that the experimental group's increase on this measure was of small
Nevertheless, it is interesting to speculate as to why the experimental children increased in their level of self-efficacy for conflict situations, but not for nonconflict situations. At pretest, children in the social skills condition showed significantly lower levels of self-efficacy for conflict situations than they did for nonconflict situations. It would appear that these children saw situations involving conflict as ones in which they would experience particular difficulty. It seems that the training procedures which focused on handling problem situations may have had a positive effect on self-efficacy for such situations. It is not surprising that self-efficacy for nonconflict situations did not show a significant change, since the children did not initially view themselves as experiencing much difficulty in these situations (the mean score at each time period corresponded to a response of 'easy').

These results suggest that self-efficacy is situation specific. The lack of change in the control children's social self-efficacy also supports this notion, since the control children were also provided with an intervention which encouraged self-efficacy, but for impersonal skills.

The two condition's differential effects on social self-efficacy are in contrast to Bierman and Furman's (1984) evidence that group participation, and not social skills training, promotes social self-efficacy. It may be that the social skills
training procedures employed in the current study were more effective than those of Bierman and Furman (1984) in encouraging social self-efficacy. However, since the latter study did not distinguish between social self-efficacy for conflict and for nonconflict situations, and did not specifically train skills for handling problem situations (conversational skills were targeted), it is difficult to draw any firm conclusions.

(b) Strategy Evaluation: The present study also attempted to investigate changes in children's evaluations of social strategies. However, even at pretest, the children tended to rate assertive strategies in a very positive manner, aggressive strategies as quite negative, and passive strategies as somewhat negative. Further, assertive strategies were clearly seen as ones which the child 'ought to do', which would make him feel best, and which would make the other child involved in the situation feel best. This finding was initially surprising, since previous research has shown that aggressive and nonaggressive children tend to rate the three types of strategies differently. One might expect seriously maladjusted children, many of whom are aggressive, to show a pattern of responses similar to that of aggressive children. However, children in a milieu treatment program have most often been exposed to several years of attempts to change their behaviour. It seems reasonable to hypothesize that these children have learned to provide an adult with responses which are socially desirable.
(c) **Goal Orientation:** Asher and Renshaw (1981) have suggested that one factor important to the effectiveness of the coaching program may be that it changes children's goal orientations. However, the present study found no significant changes for four types of goals: Performance, Avoidance, Rule-oriented and Relationship. At pretest, children in the social skills condition preferred Relationship goals more than they preferred Performance and Avoidance goals. It may be that the children's responses do indeed reflect their preferred goals. However, judging from the children's comments during the skill training, one is again tempted to speculate that these children were well aware of socially desirable responses.

(d) **Anxiety:** It has also been suggested that therapeutic interventions may lessen anxiety regarding the targeted problems. Therefore, the present study included a measure designed to investigate children's anxiety regarding peer acceptance. However, no significant changes were found. Children scored at a rather low level at the pretest -- the mean score for both the experimental and control groups suggested that the most common response was "not too worried" ("2" on a scale of 1 - 4) for each test item.

(e) **Summary of Cognitive and Affective Changes:** The present study found that after social skills training, but not impersonal skills training, children showed an increased level of social self-efficacy for conflict situations. No changes were found in
children’s evaluations of social strategies, in their goal orientations, or in their level of concern regarding peer acceptance.

Overall, the present study provides only modest support for the hypothesis that social skills training results in changes in cognitive and affective elements. However, the children’s pretest responses for the strategy evaluation, goal orientation, and anxiety measures, provided little room for positive change. Further research, perhaps employing more sophisticated measuring instruments, is clearly indicated regarding the nature of children’s belief systems.

Although the positive changes in the experimental children’s self-efficacy were modest, they do support the hypothesis that therapeutic interventions may result in an increase in self-efficacy. Further, it may be that the experimental children’s behavioural improvements were directly related to their increased self-efficacy. However, the design of the present study did not allow for a test of this hypothesis.

Methodological Issues

In any research, but perhaps particularly in clinical research, methodological problems may hinder one’s attempt to determine the validity of hypotheses. In this section, methodological issues of particular relevance to the present study will be discussed. These are: (a) the measurement of social behaviour, (b) the measurement of cognitive and affective
elements, and (c) problems intrinsic to clinical research.

(a) The measurement of social behaviour is a very complex matter. Decisions must be made regarding the most appropriate level of measurement (e.g., broad-band versus narrow-band), and the particular contexts of behaviour which should be examined (e.g., school versus home). Further, measurement instruments should ideally be highly reliable, show concurrent and predictive validity, and be easily administered. Unfortunately, there are few measures of social competence which meet these criteria.

However, confidence in the accuracy of one’s measurements may be enhanced through employing multiple measures of the relevant behaviours. The present study strove to obtain a comprehensive view of changes in children’s social behaviour by employing four different measures of such behaviour.

One measure, the WPBIC, was considered to provide an indication of the generalization of training in social skills to broader aspects of behaviour. The WPBIC was chosen for use in the present study for several reasons: it is not time-consuming, it presents observable, operational statements about behaviour, and it includes a scale specifically designed to measure problems in peer relations. However, the WPBIC also has a number of drawbacks. It measures only the presence or absence of behaviour problems. In the present study, a number of individuals who completed the WPBIC commented that it was not sensitive to the behaviour changes which they had observed. Also, the checklist
was originally designed for use by teachers, and thus its appropriateness for use by other raters, such as parents, may be questionable. In view of the differential findings for teachers' and case managers' ratings in the present study, further research concerning the correspondence between types of raters is indicated.

The most serious drawback of the WPBIC proved to be that it did not measure an adequate range of behaviour functioning. The floor effect shown for Disturbed Peer Relations prevented an accurate measure of behaviour change.

The PIC Factor Scales were considered to be a measure of response generalization which would be particularly appropriate for completion by the parents. Its primary merits include a solid base of research, and a scale which specifically taps social incompetence. However, this measure also had several drawbacks. The parents involved in the present study complained that the 131-item measure was too time-consuming. Several parents also commented that the true-false measure was not sensitive to behaviour changes. Indeed, the PIC was developed in order to provide a highly stable measure of personality functioning. Therefore, it may not be sensitive enough to detect changes with short term intervention techniques and a relatively short follow-up period.

It should be noted that both of the above instruments measure social incompetence. There do not appear to be any standardized
rating instruments of social competence which are appropriate for measuring changes in the social functioning of children in milieu treatment.

The present study included one instrument which was designated as a measure of the generalization of trained skills to various situations. The Social Skills Checklist was completed by case managers, who are familiar with the child's behaviour at school, home, and treatment program activities. The reliability of the Social Skills Checklist has not been demonstrated, and there is reason to question the reliability and validity of the measure for the current study. Case managers expressed some difficulty in regards to rating the children's actual skill use in peer interactions. Further, it is suspected that these individuals tended to expect an improvement in social skills, and thus rated the children more highly at posttest and follow-up. Although case managers remained uninformed regarding condition assignment throughout the study, it had been known at the Centre for many months prior to program implementation that "social skills training research" would be conducted. It is believed that these factors served to reduce the reliability and validity of the measure for both conditions.

The final measure of social behaviour employed in the present study was direct observation of behaviour in a free-play situation. As has been previously mentioned, the collection of this data was extremely difficult, to the extent that follow-up
data could not be obtained. Further, the training of observers, and the coding of behaviour, was very time-consuming. However, the present study did demonstrate that social behaviour may be functionally measured through observation techniques. Thus, the use of such measures in social skills treatment evaluation research is highly desirable.

(b) The measurement of cognitive and affective elements also involves a number of difficulties. The most serious problem with the measures employed in the present study was the transparency of the items. There is reason to believe that the children tended to respond to the items in a socially desirable manner.

Measures of social cognition are in their infancy, and thus do not provide an extensive history of research concerning reliability and validity. A problem specific to the current study concerns the reliability and validity of these measures with a population of children showing serious maladjustment. It may be erroneous to assume that milieu treatment children will respond to standardized questionnaires in the usual manner. Further research is need to address this question.

(c) The last area of methodological issues to be discussed concerns those which are specific to research with clinical populations. One typical problem is the difficulty in obtaining adequate sample sizes, a problem clearly reflected in the current study. Subjects were very difficult to obtain, and the final sample was only half as large as originally intended. Confidence
in the validity and generalizability of the obtained results would have been enhanced if larger samples had been available.

Subject maintenance throughout the study is also often problematic. Although efforts may be made to increase the probability that subjects will not be lost, the unexpected often occurs. In the present study, one child was unavailable at follow-up because he was abruptly moved from his mother to his father, who lives in another province.

Another issue concerns contamination of the treatment and control groups, which may be unavoidable in clinical research. In the present study, all of the children interacted with each other on a daily basis, and thus it is possible that the control group, in effect, received some "treatment".

A final issue concerns the inclusion in the research design of appropriate control groups. Since the number of potential subjects was limited, the present study was restricted by the lack of a no-treatment control group. Therefore, when both groups showed similar change, one could not separate treatment effects from the possible effects of elements independent of either treatment.

The above issues are only illustrative of the complexities involved in clinical research. However, it is through working with these complexities that clinical research and theory will advance.
The Cognitive-Social Learning Model of Social Skills Training

Ladd and Mize's (1983) model of social skills training integrates three possible goals of such training: enhancing knowledge, enhancing behavioural abilities, and promoting maintenance and generalization of skills. Further, the model provides a theoretical rationale for the use of specific procedures to address each of these goals. The present study designed an intervention program based on Ladd and Mize's (1983) conceptual model, and found positive changes in maladjusted children's social behaviour. In view of this evidence in support of the model, it is important that the areas of correspondence between the model and the current program be emphasized.

For example, Ladd and Mize (1983) suggest that one goal of training involves improving the breadth and accuracy of social concepts. Previous research has addressed this goal by providing concept instruction on various levels: global concepts, such as co-operation (Oden & Asher, 1977), more specific concepts, such as asking questions (Ladd, 1981), and specific behavioural steps involved in executing a skill (McGinnis & Golstein, 1984). The present study, following on the suggestions of Ladd and Mize (1983), attempted to incorporate all three of these levels of concept enhancement, and thus provide an integrated, hierarchical scheme for conceptualizing social skills. Instruction was provided regarding aspects of a global concept (e.g., goals, function, consequences), and also regarding aspects of specific skills which are examples of the global concept. Thirdly, very
detailed and specific instruction was provided regarding the behavioural steps compromising each skill. Further, review of the presented material continued until the children could generate the ideas accurately. As Ladd and Mize (1983) suggest, such instruction may have provided the children with social concepts which are more powerful as a means of representing, organizing, and guiding experience. In turn, concepts understood at a higher level of abstraction may have contributed to the maintenance and generalization of skills in the natural environment.

Procedures designed to enhance behavioural abilities are also an important component of the cognitive-social learning model of social skills training. The present program (1) required memorization of the behavioural steps comprising each skill, (2) provided opportunities to practise the skill in a role-playing situation, with informative and evaluative feedback, and (3) provided opportunities to practise the skill in a semi-naturalistic context (game playing during the session). The latter procedure may be particularly important to the maintenance and generalization of skills to other contexts. It will be recalled that training programs which employ role-playing procedures, but not practise in more naturalistic situations (e.g., Structured Learning) have had limited success in establishing skill use in everyday contexts. The effective use of skills in such contexts requires several additional competencies, such as the ability to monitor a complex situation for appropriate
times to initiate the skill, and to adjust skill performance according to the characteristics of the specific situation. Role-playing alone does not afford the opportunity to develop such abilities. However, the game-playing procedures provided a context for practising monitoring skills in a semi-naturalistic context, and while receiving support from the trainers. Also, the children were directly coached to use targeted social skills while game playing. Finally, the review sessions provided an opportunity for the children to experience independent skill use, and thus develop confidence in their ability to perform skills without the trainers' support. These procedures may well have eased the passage of skill use into everyday interactions.

As is apparent from the comments thus far, many of the procedures employed in skill training may have ramifications for skill maintenance and generalization. Ladd and Mize (1983) suggest that children's inferences and affect regarding social interactions may also be important to skill maintenance. For example, the child who is confident in his social abilities may be more apt to initiate and persist in skill use. However, training programs have seldom attempted to directly influence such elements. The present study incorporated several procedures designed to influence inferences and affect. The children were given messages such as, "By practising these skills here and in other places, you'll become really good at them", and "It's OK to feel a little nervous at first. The more you practise the skills,
the less nervous you'll be." It appeared that the private discussions with each child at the end of the session were particularly important in terms of promoting positive affect regarding social situations. The children valued this "private time" highly, and many used the opportunity to talk about anxieties and problems regarding social situations outside of the sessions. The homework assignments were discussed, and inferences and attributions regarding social events were explored.

The nature of the children's verbal reports did suggest that they were attempting to practise the skills outside of the sessions. However, it should be noted that the sincerity of their reports was not directly confirmed with independent sources (e.g., teachers, childcare workers), since the study's design required that such individuals remain uninformed regarding the type of training received by each child. It is suggested that training programs, whenever possible, involve important individuals in the child's daily life. For instance, notes could be sent to teachers and parents, outlining "Today's Skill", and requesting that the child's use of the skill be encouraged and praised (McGinnis & Goldstein, 1983). This procedure has been incorporated into a training program which I am currently conducting, and appears to be serving as another important tool in promoting maintenance and generalization of skills.

As has been illustrated, the training program employed in the present study was directly based on the cognitive social learning
model of skill training. The results of the present study suggest that this model may provide a useful means of conceptualizing the purposes, procedures, processes, and outcomes of social skills training. Further support for the model requires research designed to test specific hypotheses suggested by this conceptualization. For instance, it would be useful to determine the relative contribution of each procedure to treatment effectiveness. Also, further study is required regarding the reciprocal influence of various factors (e.g., knowledge, behaviour, beliefs, affect) contributing to social competence. In regards to the present study, it is very interesting that the children's increase in prosocially assertive behaviours, and decrease in negative behaviours, was accompanied by an increase in self-efficacy for conflict situations. A direct test of the relation between these changes would be an important contribution to cognitive-social learning theory.

Conclusions

Previous research has suggested that social skills training may be an important technique for improving social competence. However, research to date has failed to examine the effectiveness of group social skills training for seriously maladjusted children. One purpose of the present study was to address this neglect, by examining behavioural changes consequent to social skills training, in a milieu treatment setting. The results of the present study are encouraging, in that a time-limited group
treatment resulted in a significant reduction in behaviour problems, and a significant increase in the use of a number of the taught skills. Also, anecdotal evidence from staff (who were uninformed regarding group assignment) supported the notion that the social skills trained children showed positive changes in their everyday social interaction. In fact, such evidence suggests that the methodological problems encountered with the behaviour rating instruments employed in the present study may have resulted in an underestimation of treatment effectiveness.

Moreover, the results suggested that behavioural improvements were maintained over a 2-month period. This finding is important, in that previous research has often neglected to directly examine the stability of behavioural changes. Further, those programs which have examined this issue, have often shown rather limited success in producing stable behavioural improvement in important interpersonal contexts. The success of the current program in this regard, suggests that the combination of procedures employed, and the choice of curriculum content, are important for the long-term effectiveness of social skills training with seriously maladjusted children. However, it remains for further research to examine the relative contribution of each procedure (e.g., concept discussion, homework assignments), and each skill (e.g., negotiating, carrying on a conversation) to treatment effectiveness. Also, replication of the present study with larger samples, and with a no-treatment control group, would lend further
credence to the program's utility. In the meantime, the social skills training program employed in the present study may be considered a worthwhile contribution to the treatment of seriously maladjusted children. In fact, the administrative personnel of the Centre where the present study was conducted, have wholeheartedly endorsed the treatment program. At their request, I am now conducting in-service staff training, in order that a greater number of children may benefit from social skills training.

The second purpose of the present study was to examine cognitive and affective changes which may occur with social skills training. The results suggested that the tested program may encourage self-efficacy for conflict situations. Although no other changes in cognitive and affective elements were found, it appears that methodological problems hindered an accurate examination of this issue. Conceptual advance regarding the specific locus of training effects requires greater refinement of the measuring instruments employed to research this question.

The ability to interact competently with one's peers is an important component of general adjustment. Thus, treatments aimed at preventing or ameliorating social competence problems should be a focus of conceptual and empirical endeavour.
APPENDIX A

Demographic Data

The following chart provides a summary of demographic data for the sample. The information was obtained through examination of each child's file. 'Psychiatric diagnosis' refers to the specific diagnosis provided by one of the treatment centre's psychiatrists. 'I.Q. range' refers to the range reported in the child's file. Exact I.Q. scores were not available.
### Demographic Data

<table>
<thead>
<tr>
<th>I.D.</th>
<th>Age</th>
<th>Psychiatric Diagnosis</th>
<th>I.Q. Range</th>
<th>Parents' Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Experimental Group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>8-3</td>
<td>Unsocialized Disturbance of Conduct</td>
<td>Low Ave. - Ave.</td>
<td>Unemployed</td>
</tr>
<tr>
<td>2</td>
<td>8-5</td>
<td>Hyperkinetic Conduct Dist.</td>
<td>Average</td>
<td>Factory worker, homemaker</td>
</tr>
<tr>
<td>3</td>
<td>10-3</td>
<td>Dist. of Emotions</td>
<td>Average</td>
<td>Factory worker, waitress</td>
</tr>
<tr>
<td>4</td>
<td>10-4</td>
<td>Behavioural Disorder</td>
<td>Average</td>
<td>Factory worker, homemaker</td>
</tr>
<tr>
<td>5</td>
<td>10-11</td>
<td>Dist. of Emotions, with Relationship Problems</td>
<td>Average</td>
<td>Machine operator, homemaker</td>
</tr>
<tr>
<td>6</td>
<td>11-7</td>
<td>Conduct Disorder</td>
<td>Average</td>
<td>Homemaker</td>
</tr>
<tr>
<td>7</td>
<td>12-4</td>
<td>Neurotic Depression</td>
<td>Above Average</td>
<td>Assembler, homemaker</td>
</tr>
<tr>
<td>8</td>
<td>12-10</td>
<td>Behavioural Disorder</td>
<td>Average</td>
<td>Welder, factory worker</td>
</tr>
<tr>
<td><strong>Control Group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>8-10</td>
<td>Hyperkinetic Conduct Dist.</td>
<td>Above Average</td>
<td>Nurse</td>
</tr>
<tr>
<td>10</td>
<td>9-1</td>
<td>Dist. of Emotions, Conduct Disorder</td>
<td>Average</td>
<td>Sales Clerk, homemaker</td>
</tr>
</tbody>
</table>

*continued*
<table>
<thead>
<tr>
<th>Demographic Data continued</th>
<th>I.D. Age</th>
<th>Psychiatric Diagnosis</th>
<th>I.Q. Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
<td>11</td>
<td>9-8 Unsocialized Dist. of Conduct</td>
<td>Average</td>
</tr>
<tr>
<td>[ ]</td>
<td>12</td>
<td>10-10 Behavioural Dist.</td>
<td>Average</td>
</tr>
<tr>
<td>[ ]</td>
<td>13</td>
<td>11-1 Mixed Dist. of Conduct and Emotions</td>
<td>Average</td>
</tr>
<tr>
<td>[ ]</td>
<td>14</td>
<td>11-9 Dist. of Conduct</td>
<td>Average</td>
</tr>
<tr>
<td>[ ]</td>
<td>15</td>
<td>12-8 Dist. of Emotions with Relationship Problems</td>
<td>Average</td>
</tr>
<tr>
<td>[ ]</td>
<td>16</td>
<td>13-0 Behavioural and Learning disorder</td>
<td>Low Average</td>
</tr>
</tbody>
</table>

- The Mann-Whitney Test showed no difference between the groups for age.

a WISC, WISC-R, or Stanford-Binet.

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APPENDIX B

Letter to Parents

The following letter was sent to parents of children who had been referred by case managers as appropriate for inclusion in the present study.
December 5, 1984

Dear Parents:

The purpose of this letter is to obtain your approval for your child to take part in a skills training program. I will be conducting this program, and evaluating its effectiveness, as part of the requirements to obtain a Doctoral degree in Psychology.

The purpose of the program is to teach children skills which will help them to get along better with other people. There will be two types of training conducted -- one which focuses on teaching interpersonal skills, and one which focuses on teaching self-control skills. I don't know yet which group your child will be in, but both should be beneficial.

The program will run from January 21 to February 22. Three one-hour sessions will be held each week, as part of the children's regular treatment program. The children will be taught the skills, and will practise them while playing games with each other. When we had a similar group last year, the children enjoyed the sessions, while learning important skills.

I would also like to videotape the children while they are playing, both before and after the treatment program. The purpose of this procedure is to determine whether the training results in any changes in the children's behaviour. I will also be asking you to fill out two questionnaires regarding your child's behaviour.

Please be assured that any information regarding your child or your family will be kept strictly confidential. Your child's name will not appear in my report of this program, nor will any information which might disclose his identity. The videotapes will not be used for any other purpose, and will be destroyed once the research is completed. Also, you will retain the right to withdraw your child from treatment at any time. I will be glad to discuss your child's progress in the treatment after the program has ended.
If you agree to having your child participate in this program, please sign the attached two forms.

Thank you very much.

Sincerely,

Jo-Anne Lewicki
Jo-Anne Lewicki, M.A.
Doctoral Candidate
University of Windsor
Psychometrist
Regional Children's Centre

Cornelius Holland, Ph. D.
Supervisor
Associate Professor
University of Windsor

JL:CH:is

Enclosures.
APPENDIX C

Training Schedule and Sample Lessons

The chart provides the schedule of training sessions. One session was devoted to each skill. When the skills representing one concept had been covered, a review session was conducted.

The two sample lessons (one for each condition) provide an illustration of the training procedures. Of course the exact dialogue of the sessions varied somewhat, according to the needs and issues presented by the children. The activity conducted in each session also varied, depending on the targeted skill. For example, when the skill 'giving directions and suggestions' was taught, a fairly complex game was introduced. The children practised using the targeted skill as they taught themselves the rules of the game. The same game was used for the control condition children, when they were mastering the skill, 'developing steps to reach a goal'.
<table>
<thead>
<tr>
<th>Session</th>
<th>Target</th>
<th>Social Skills Group</th>
<th>Parallel Activity Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>New concept</td>
<td>Entering a relationship</td>
<td>Concentrating</td>
</tr>
<tr>
<td></td>
<td>New skill</td>
<td>Paying attention</td>
<td>Mastering distractions</td>
</tr>
<tr>
<td>2</td>
<td>Same concept</td>
<td>Entering a relationship</td>
<td>Concentrating</td>
</tr>
<tr>
<td></td>
<td>New skill</td>
<td>Beginning a conversation</td>
<td>Processing complex patterns</td>
</tr>
<tr>
<td>3</td>
<td>Same concept</td>
<td>Entering a relationship</td>
<td>Concentrating</td>
</tr>
<tr>
<td></td>
<td>New skill</td>
<td>Asking to join in</td>
<td>Controlling action</td>
</tr>
<tr>
<td>4</td>
<td>Review &amp; independent practise</td>
<td>For the skills, paying attention, beginning a conversation, and asking to join in, which are examples of the concept, entering a relationship.</td>
<td>For the skills, mastering distractions, processing complex patterns, and controlling action, which are examples of the concept, concentrating.</td>
</tr>
<tr>
<td>5</td>
<td>New concept</td>
<td>Maintaining a relationship (activity oriented)</td>
<td>Remembering</td>
</tr>
<tr>
<td></td>
<td>New skill</td>
<td>Giving suggestions and directions</td>
<td>Visual Memory</td>
</tr>
<tr>
<td>6</td>
<td>Same concept</td>
<td>Maintaining a relationship (activity oriented)</td>
<td>Remembering</td>
</tr>
<tr>
<td></td>
<td>New skill</td>
<td>Carrying on a conversation</td>
<td>Auditory memory</td>
</tr>
<tr>
<td>7</td>
<td>Review &amp; independent practise</td>
<td>Skills - giving suggestions and directions, and carrying on a conversation, examples of the concept, maintaining a relationship (activity oriented).</td>
<td>Skills-auditory memory and visual memory, examples of the concept, remembering.</td>
</tr>
<tr>
<td>Session</td>
<td>Target</td>
<td>Social Skills Group</td>
<td>Parallel Activity Group</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------</td>
</tr>
<tr>
<td>8</td>
<td>New concept</td>
<td>Maintaining a relationship (person oriented)</td>
<td>Planning</td>
</tr>
<tr>
<td></td>
<td>New skill</td>
<td>Giving compliments</td>
<td>Auditory sequencing</td>
</tr>
<tr>
<td>9</td>
<td>Same concept</td>
<td>Maintaining a relationship (person oriented)</td>
<td>Planning</td>
</tr>
<tr>
<td></td>
<td>New skill</td>
<td>Offering help</td>
<td>Visual sequencing</td>
</tr>
<tr>
<td>10</td>
<td>Same concept</td>
<td>Maintaining a relationship (person oriented)</td>
<td>Planning</td>
</tr>
<tr>
<td></td>
<td>New skill</td>
<td>Showing understanding of another's feelings</td>
<td>Sequential planning</td>
</tr>
<tr>
<td>11</td>
<td>Review &amp;</td>
<td>Skills - giving compliments, offering help, &amp; showing understanding of feelings, which are examples of the concept, maintaining a relationship (person oriented)</td>
<td>Skills - auditory sequencing, visual sequencing, &amp; sequential planning, examples of the concept, planning.</td>
</tr>
<tr>
<td></td>
<td>independent practise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>New concept</td>
<td>Handling conflict</td>
<td>Anticipating consequences</td>
</tr>
<tr>
<td></td>
<td>New skill</td>
<td>Asking for help</td>
<td>Developing alternatives</td>
</tr>
<tr>
<td>13</td>
<td>Same concept</td>
<td>Handling conflict</td>
<td>Anticipating consequences</td>
</tr>
<tr>
<td></td>
<td>New skill</td>
<td>Making a complaint</td>
<td>Evaluating consequences</td>
</tr>
<tr>
<td>14</td>
<td>Same concept</td>
<td>Handling conflict</td>
<td>Anticipating consequences</td>
</tr>
<tr>
<td></td>
<td>New skill</td>
<td>Negotiating</td>
<td>Developing part goals</td>
</tr>
<tr>
<td>15</td>
<td>Review &amp;</td>
<td>Skills - asking for help, making a complaint, &amp; negotiating, examples of the concept, handling conflict.</td>
<td>Skills - developing alternatives, evaluating consequences, &amp; developing part goals, examples of anticipating consequences.</td>
</tr>
<tr>
<td></td>
<td>independent practise</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SOCIAL SKILLS TRAINING

Session 2  Concept: Getting Involved  Skill: Beginning a Conversation

Today we are going to learn another skill that will help make games more fun to play and help you to get to know other kids better. Remember that in this group you will earn checkmarks for trying and participating. At the end of the session you will be able to turn in the checkmarks for something.

Now, what was the general idea we talked about last time? - Getting involved.

What does getting involved mean? - Doing things with other kids so everyone has fun.

What are examples of getting involved?
What happens when you get involved? - Meet people, find out interesting things, have someone to talk to, have fun, feel good about yourself, not think about problems.

What are examples of not getting involved?
What happens when you don't get involved? - Lonely, won't have friends when do want them, won't learn new things, won't be able to practise games and sports, an adult might tell you what to do.

What is the skill we learned last time that is an example of getting involved? - Paying attention.

What are the steps for paying attention?

Why is it important to pay attention? - People know you are
interested in them, will want to be with you more, can have fun together.
When should you get involved?
When should you not get involved? – Supposed to be doing something else.

Today we will learn another skill that is an example of the general idea getting involved. This skill is beginning a conversation. What is a conversation? Why do people have conversations? Why do you think it is important to be skillful at beginning a conversation? – Meet new people, have someone to talk to when lonely, have something to do.

What could happen if you are not skillful at starting a conversation? If you are? Let's see if we can figure out the steps involved in beginning a conversation.

1. Choose whom you want to talk with.
2. Decide what you want to say.
3. Choose a good time and place.
4. Pay attention to the other person.
5. Start talking in a friendly way.

Notes
Topics? Other person's interests
When? Person not busy – You are not supposed to be doing something else.
It's important to have a friendly attitude. How do you show that you have a friendly attitude? - look interested, look at the person, have a nice tone of voice.
Also, watch the other person to see if he is interested in what you are saying and not bored.
OK, let's go through all the steps. Now, Sue and I are going to show you how to be skillful at starting a conversation. Your job is to watch and see if we do a good job. (model coping response) ex. Gee, I'd sure like to have someone to talk to. There's someone I could talk to -- maybe I should go over to her. I don't know - I'm kind of nervous. Well, I'll give it a try ... Hi there! (etc.)
How did I do? Did I follow the steps? (Go through them).
How did I look? How did it turn out in the end? Did my role play remind you of times when you needed to start a conversation?
Now each one of you will have a turn to do a role play, so you can learn to be skillful at starting a conversation. Remember that for our role plays, we talk to ourselves right out loud. Talking to ourselves help us to remember the steps. Don't worry if you feel a little nervous starting a conversation, everybody does at first. Remember that you will get checks for trying to do well.
Now who is going to help ........ do his role play?
And remember, that everyone is going to watch the role play so they can make positive comments afterwards.

Role Plays:
A new kid moved in next door to you last week. You see him outside in his yard and want to talk to him.

You're playing checkers with someone you don't know very well. You'd like to ask him if he plays hockey, because you want someone to play hockey with.

You've been waiting in line to get into the show for a long time. You're bored. There's some kids your age in front of you.

You're eating lunch at school and you'd like to tell the other kids what you did on the weekend.

Children give positive feedback for each role play. Encourage them to be specific. Did he follow the steps? What did you like about what he did? How did he look? Trainer gives positive feedback, and points out areas of weakness. Child may try again if time. What could you do to make it even better?

Now you will be able to play a game. While playing, try to start a conversation. Also, remember to pay attention, like we practised last time. If you start conversations, and pay attention, the game will be more fun, and you will get to know people better.

Activity: Craft

Each trainer watches two children. Prompt as necessary. ex. Bill, maybe you could start a conversation while you are waiting your turn. Sam, I like the way you are paying attention to Tom's story. What is a question you could ask him?

After 10 minutes of game-playing, each child is seen privately by
one trainer.
- ask child for instances where used skill. Help if necessary.
- ask what outcome was. Ask for attributions, correct negative ones (ex. it didn't work because I'm no good at this — point out what did well, suggest how could improve, emphasize that can improve.)
- if didn’t use, explore why. Emphasize utility of skill.
- when could use skill in future
- ask if did homework. If yes, how did it turn out? Explore attributions. If didn’t use, explore why
- assign homework. Tonight and tomorrow I would like you to try starting a conversation. See how it goes and what happens. We will talk about it next time.

Now, how many checks did you earn? Let’s see what you can cash them in for.
Impersonal Skills Training

Session 2. Concept: Concentrating. Skill: Thinking about Complicated Patterns (Processing Complex Patterns)

Today we are going to learn another skill that will help make games more fun to play. Remember that in this group you will earn checkmarks for trying and participating. At the end of the session you will be able to turn in the checkmarks for something.

Now, what was the general idea we talked about last time? - Concentrating.

What does concentrating mean - paying attention to the game and not letting other things get in the way.

What are examples of concentrating? What happens when you concentrate? What happens if you don’t concentrate? (don’t do as well as you could, get frustrated)

What is the skill we learned last time that is an example of concentrating - mastering distractions. What are the steps for mastering distractions? Why is it important to try to master distractions? When should we use this skill? When is it not important to master distractions?

Today we will learn another skill that is an example of the general idea concentrating. This skill is called thinking about complicated patterns. To do this you have to really pay attention to the whole thing. Who can give me an example of thinking about complicated patterns? If you are playing checkers, and you don’t
notice that your friend could jump you on his next turn, then you might lose some checkers! What could happen if you are skillful at paying attention to complicated patterns? When is it important to use this skill? When is it not important? Let's see if we can figure out the steps involved in thinking about complicated patterns.

Steps
1. Decide what you need to pay attention to.
2. Remember to look at and think about all of the pattern. Think about how all the parts fit together.
3. Look away and think about the pattern.
4. Look back again, and see if you notice anything new.

OK, let's say all of the steps together.

Now, Sue and I are going to show you how to be skillful at thinking about complex patterns. Your job is to watch and see if we do a good job. We are going to role play, just like last time. Situation: Sue and I are playing Sorry. I have to look at the whole board to decide what to do next (speak out loud to self as go through steps).

How did I do? Did I follow the steps? How did I look? Could you tell that I was concentrating? How did it turn out in the end?

Now each of you will have a turn to do a role play, so you can learn to be skillful at thinking about complicated patterns. Remember that for our role plays, we talk to ourselves right
Talking to ourselves helps us to remember the steps. Remember that you will get checks for trying to do well. And remember that everyone is going to watch the role play so they can make positive comments afterwards.

Role Plays
- Baseball, hockey, basketball situations
- Backgammon, chess situations (previously set up)
- Other games, such as Sorry, checkers, card games

(Children give positive feedback for each role play. Encourage them to be specific. Did he follow the steps? What did you like about what he did? How did he look? Trainers also point out areas of weakness. Children may try again if there is time.)

Now you will be able to play a game. While playing, try to think about the whole pattern. Also, practise ignoring distractions. These skills will help you to have more fun laying the game.

Activity: Checkers or chess

Each trainer watches two children. Prompt as necessary. ex. Bill, are you remembering to look at the whole board, the whole pattern? Did you think about what it is important to look at?

After 10 minutes of game playing, each child is seen by one trainer, privately.
- ask child for instances when used skill. Help if necessary.
- ask what the outcome was.
- When else could he use this skill?
- If did not use, explore why. Remind child that paying attention
to the whole pattern will make the game more fun.
- discuss homework - ask if tried the skill, mastering
distractions. Discuss outcome.
Now, tonight and tomorrow try to practise the steps to thinking
about complicated patterns. We will talk about how you did next
time.
APPENDIX D

The Walker Problem Behaviour Checklist

This instrument provided a measure of response generalization to various areas of behaviour in various contexts. The circled values are summed to provide a raw score for each subscale. These raw scores are then transformed to $I$-scores.
Walker Problem Behavior Identification Checklist
Revised 1983
Hill M. Walker, Ph.D.

Published by
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12031 Wilshire Boulevard
Los Angeles, California 90025

INSTRUCTIONS

Please read each statement and circle the number to the right of the statement if you have observed that behavior in the child’s response pattern during the last 2-month period. If you have NOT observed the behavior described in the statement during this period, do NOT circle any numbers.

Example:
1. Has temper tantrums...........
2. Has no friends.....................

In the example, statement 1 is considered to be present and statement 2 is considered to be absent.

PROFILE ANALYSIS CHART

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APPENDIX E

Personality Inventory for Children Factor Scales

This instrument provided a measure of response generalization in the home environment. Parents respond True or False for each item. A scoring key is used to obtain raw scores for each scale, and these scores are transformed to T-scores. Four broad-band factors are obtained: undisciplined-poor self concept, social incompetence, internalization-somatic complaints, and cognitive development.
PART I

1. My child often plays with a group of children.
3. Other children often get mad at my child.
4. My child worries about things that usually only adults worry about.
5. My child has many friends.
6. My child seems average or above average in intelligence.
7. My child’s manners sometimes embarrass me.
8. My child has a good sense of humor.
10. My child is worried about sin.
11. Other children don’t seem to listen to or notice my child much.
13. My child has little self-confidence.
14. I often wish my child would be more friendly.
15. My child can comb his (her) own hair.
16. My child is usually rejected by other children.
17. My child seems to enjoy destroying things.
18. Now and then my child writes letters to friends.
19. Thunder and lightning bother my child.
20. The school says my child needs help in getting along with other children.
21. My child often asks if I love him (her).
22. Other children look up to my child as a leader.
23. My child could ride a tricycle by age five years.
25. My child frequently complains of being hot even on cold days.
26. My child’s behavior often makes others angry.
27. Recently my child has complained of eye trouble.
28. Others think my child is talented.
29. My child frequently has gas on the stomach (sour stomach).
30. My child is good at lying his (her) way out of trouble.
31. My child often cheats other children in deals.
32. My child is good at leading games and things.
33. At one time my child had speech difficulties.
34. Pester ing others is a problem with my child.
35. My child can cut things with scissors as well as can others of his (her) age.
36. My child doesn’t seem to care to be with others.
37. My child has difficulty doing things with his (her) hands.
38. Others think my child is mean.
39. My child seems to know everyone in the neighborhood.
40. My child would never take advantage of others.
41. My child can be left home alone without danger.
42. My child jumps from one thing to another.
43. My child has been in trouble for attacking others.
44. My child seems too serious minded.
45. My child has more friends than most children.
46. When my child gets mad, watch out.
47. My child really has no real friend.
48. My child is as happy as ever.
49. My child often complains that others don’t understand him (her).

GO ON TO THE NEXT PAGE
50. My child has very few friends.
51. My child likes to play active games and sports.
52. Sometimes I worry about my child's lack of concern for others' feelings.
53. Often my child is afraid of little things.
54. My child tends to see how much he (she) can get away with.
55. My child almost never argues.
56. My child often disobeys me.
57. My child likes to show off.
58. Others have said my child has a lot of "personality."
59. My child goes to bed on time without complaining.
60. My child likes to "boss" others around.
61. Reading has been a problem for my child.
62. A scolding is enough to make my child behave.
63. My child sometimes disobeys his (her) parents.
64. My child is in a special class in school (for slow learners).
65. My child usually plays alone.
67. My child often brings friends home.
68. My child learned to count things by age six years.
69. My child could print his (her) first name by age six years.
70. My child doesn't seem to learn from mistakes.
71. My child can't seem to wait for things like other children do.
72. My child always does his (her) homework on time.
73. My child is usually a leader in groups.
74. Sometimes my child lies to avoid embarrassment or punishment.
75. Other children make fun of my child's different ideas.
76. Sometimes my child's muscles twitch.
77. My child worries about talking to others.
78. My child first talked before he (she) was two years old.
79. School teachers complain that my child can't sit still.
80. My child has some bad habits.
81. Several times my child has spoken of a lump in his (her) throat.
82. My child frequently has nightmares.
83. My child almost never acts selfishly.
84. My child is usually in good spirits.
85. My child seems fearful of blood.
86. My child seems more clumsy than other children his (her) age.
87. My child will do anything on a dare.
88. My child sometimes becomes envious of the possessions or good fortune of others.
89. Shyness is my child's biggest trouble.
90. Usually my child gets along well with others.
91. My child gets lost easily.
92. My child often has headaches.
93. My child seems to get along with everyone.
94. My child is easily embarrassed.
95. My child is very popular with other children.
96. My child gets confused easily.
97. My child is almost always smiling.
98. My child loses most friends because of his (or her) temper.
99. My child is shy with children his (her) own age.
100. My child was difficult to toilet train.
101. My child wants a lot of attention when sick.

GO ON TO THE NEXT PAGE
102. My child can count change when buying something.

103. My child can tell the time fairly well.

104. Many times my child has become violent.

105. My child can take a bath by him (her) self.

106. Recently my child has complained of chest pains.

107. There is seldom a need to correct or criticize my child.

108. My child has as much pep and energy as most children.

109. Recently the school has sent home notes about my child's bad behavior.

110. Sometimes my child will put off doing a chore.

111. My child often talks about death.

112. My child has been difficult to manage.

113. Sometimes my child's room is messy.

114. My child is usually afraid to meet new people.

115. My child almost never needs punishing or scolding.

116. My child could eat with a fork before age four years.

117. Often my child complains of blurring (blurred vision).

118. My child needs protection from everyday dangers.

119. My child respects the property of others.

120. Frequently my child will put his (her) hands over his (her) ears.

121. Everything has to be perfect or my child isn't satisfied.

122. Spanking doesn't seem to affect my child.

123. My child talks a lot about his (her) size or weight.

124. My child often will cry for no apparent reason.

125. My child will worry a lot before starting something new.

126. My child usually looks at the bright side of things.

127. My child often has crying spells.

128. Sometimes my child gets hot all over without reason.

129. My child seems tired most of the time.

130. Others have remarked how smart my child is.

131. My child takes illness harder than most children.

GO ON TO THE NEXT PAGE
(unless instructed to stop at the end of Part I)
APPENDIX F

Social Skills Checklist

The Social Skills Checklist, adapted from McGinnis and Goldstein (1984, pp. 32-47), provided a measure of skill use across various situations in the child's daily social interactions. The Social Skills Score is the sum of the chosen values.
SOCIAL SKILLS CHECKLIST

Please read each item carefully, and the six possible choices. Consider the child's behaviour during the last two weeks. Please provide an example of a problem situation involving each skill.

1. Listening: Does the child appear to listen when someone is speaking and make an effort to understand what is being said?
Problem Situation: ____________________________

2. Beginning a Conversation: Does the child begin a conversation in an appropriate manner and at an appropriate time?
Problem Situation: ____________________________

3. Joining in: Does the child know and practice acceptable ways of joining an ongoing activity or group?
Problem Situation: ____________________________

4. Giving Directions and Suggestions: When playing with others, does the child give directions and make suggestions appropriately?
Problem Situation: ____________________________

5. Carrying on a conversation - Does the child maintain conversations by actively participating and asking questions?
Problem Situation: ____________________________

6. Giving Compliments - Does the child tell others that he likes something about them or something they have done?
Problem Situation: ____________________________

7. Offering Help: Does the child recognize when someone needs or wants assistance, and offer his help?
Problem Situation: ____________________________

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<td>8. Showing Understanding of Another's Feelings:</td>
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APPENDIX G

Children's Self-efficacy for Peer Interaction Scale

This instrument provided a measure of children's beliefs of self-efficacy in social situations with peers. The child's response -- HARD!, hard, easy, or EASY! -- is assigned a value of 1, 2, 3, or 4 respectively. The sum of these values yields the Social Self-efficacy Score. Scores for self-efficacy in conflict situations, and in nonconflict situations, are also computed.
The Children's Self-Efficacy for Peer Interaction Scale

1. Some kids want to play a game. Asking them if you can play is _______ for you.
2. Some kids are arguing about how to play a game. Telling them the rules is _______ for you.
3. Some kids are teasing your friend. Telling them to stop is _______ for you.
4. You want to start a game. Asking other kids to play the game is _______ for you.
5. A kid tries to take your turn during a game. Telling the kid it's your turn is _______ for you.
6. Some kids are going to lunch. Asking if you can sit with them is _______ for you.
7. A kid cuts in front of you in line. Telling the kid not to cut in is _______ for you.
8. A kid wants to do something that will get you into trouble. Asking the kid to do something else is _______ for you.
9. Some kids are making fun of someone in your classroom. Telling them to stop is _______ for you.
10. Some kids need more people to be on their teams. Asking to be on a team is _______ for you.
11. You have to carry some things home after school. Asking another kid to help you is _______ for you.
12. A kid always wants to be first when you play a game. Telling the kid you are going first is _______ for you.
13. Your class is going on a trip and everyone needs a partner. Asking someone to be your partner is _______ for you.
14. A kid does not like your friend. Telling the kid to be nice to your friend is _______ for you.
15. Some kids are deciding what game to play. Telling them about a game you like is _______ for you.
16. You are having fun playing a game but the other kids want to stop. Asking them to finish playing is _______ for you.
17. You are working on a project. Asking another kid to help is _______ for you.
18. Some kids are using your play area. Asking them to move is _______ for you.
19. Some kids are deciding what to do after school. Telling them what you want to do is _______ for you.
20. A group of kids wants to play a game that you don't like. Asking them to play a game you like is _______ for you.
21. Some kids are planning a party. Asking them to invite your friend is _______ for you.
22. A kid is yelling at you. Telling the kid to stop it _______ for you.

*Non-conflict items
APPENDIX H

Social Strategy Evaluation

This instrument provided a measure of children's evaluations of assertive, aggressive, and submissive strategies. The Likert points are assigned values of one to seven. The mean Likert score for each of the three types of strategy may be obtained by calculating the mean Likert rating for each dimension. For the choice questions, the mean frequency of choice of each type of strategy may be computed. Items 1, 6, and 7 are from Deluty (1983), while items 2, 3, 4, and 5, are from Michelson and Wood (1982).
STRATEGY EVALUATION

1. You're standing in line for a drink of water. A kid your age and size walks over and just shoves you out of line. What would you do?

   a. Push the kid back out of line.
      
      good __________ bad
      weak __________
      wise __________ fool
      unsuccessful __________ successful
      kind __________ cruel
      cowardly __________ brave

   b. Tell them, "You've no right to do that."
      
      good __________ bad
      weak __________
      wise __________ fool
      unsuccessful __________ successful
      kind __________ cruel
      cowardly __________ brave

   c. I'd go to the end of the line.
      
      good __________ bad
      weak __________
      wise __________ fool
      unsuccessful __________ successful
      kind __________ cruel
      cowardly __________ brave

   i. Which one of these things should you do? That is, which of these three things would your parents say you ought to do? __________

   ii. Which one of these three ways of acting would make you feel best? __________

   iii. Which one of these three ways of acting would make the other kid feel the best? __________

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2. Some people are talking about a hobby you really like, and you want to join in and say something. What would you do?

a. Interrupt and immediately starting talking about how good you are at the hobby.

   good __:__:__:__:__:__:_bad
   weak __:__:__:__:__:_:_strong
   wise __:__:__:__:__:__:__f_oolish
   unsuccessful __:__:__:__:__:__:__:__successful
   kind __:__:__:__:__:__:__::_cruel
   cowardly __:__:__:__:__:__:__::_brave

b. Move closer to the group and enter into the conversation when you have a chance.

   good __:__:__:__:__:__:_bad
   weak __:__:__:__:__:_:_strong
   wise __:__:__:__:__:__:__:_foolish
   unsuccessful __:__:__:__:__:__:__:__successful
   kind __:__:__:__:__:__:__::_cruel
   cowardly __:__:__:__:__:__:__::_brave

c. Not say anything.

   good __:__:__:__:__:__:_bad
   weak __:__:__:__:__:_:_strong
   wise __:__:__:__:__:__:__:_foolish
   unsuccessful __:__:__:__:__:__:__:__successful
   kind __:__:__:__:__:__:__::_cruel
   cowardly __:__:__:__:__:__:__::_brave

i. Which one of these things should you do? That is, which of these three things would your parents say you ought to do? ________________________

ii. Which one of these three ways of acting would make you feel best? ________________________

iii. Which one of these three ways of acting would make the other kid feel the best? __________

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3. You need someone to do something for you. What would you do?

a. Say, "You gotta do this for me!"

   good __:__:____:__:__:bad
   weak __:__:____:__:__:strong
   wise __:__:____:__:__:foolish
   unsuccessful __:__:____:__:__:successful
   kind __:__:____:__:__:cruel
   cowardly __:__:____:__:__:brave

b. Not ask for anything to be done.

   good __:__:____:__:__:bad
   weak __:__:____:__:__:strong
   wise __:__:____:__:__:foolish
   unsuccessful __:__:____:__:__:successful
   kind __:__:____:__:__:cruel
   cowardly __:__:____:__:__:brave

c. Say, "Would you please do something for me?" and then explain what you want.

   good __:__:____:__:__:bad
   weak __:__:____:__:__:strong
   wise __:__:____:__:__:foolish
   unsuccessful __:__:____:__:__:successful
   kind __:__:____:__:__:cruel
   cowardly __:__:____:__:__:brave

i. Which one of these things should you do? That is, which of these three things would your parents say you ought to do? ________________

ii. Which one of these three ways of acting would make you feel best? ________________

iii. Which one of these three ways of acting would make the other kid feel the best? ________________
4. You see someone trip and fall down. What would you do?

a. Laugh and say, "Why don't you watch where you're going?"

   good  __:__:_:_:_:_:_:_ bad
   weak  __:__:_:_:_:_:_:_:__ strong
   wise  __:__:_:_:_:_:_:_:__ foolish
   unsuccessful  __:__:_:_:_:_:_:_:__ successful
   kind  __:__:_:_:_:_:_:_:__ cruel
   cowardly  __:__:_:_:_:_:_:_:__ brave

b. Say, "Are you all right? Is there anything I can do?"

   good  __:__:_:_:_:_:_:_:__ bad
   weak  __:__:_:_:_:_:_:_:__ strong
   wise  __:__:_:_:_:_:_:_:__ foolish
   unsuccessful  __:__:_:_:_:_:_:_:__ successful
   kind  __:__:_:_:_:_:_:_:__ cruel
   coward  __:__:_:_:_:_:_:_:__ brave

c. Do nothing and ignore it.

   good  __:__:_:_:_:_:_:_:__ bad
   weak  __:__:_:_:_:_:_:_:__ strong
   wise  __:__:_:_:_:_:_:_:__ foolish
   unsuccessful  __:__:_:_:_:_:_:_:__ successful
   kind  __:__:_:_:_:_:_:_:__ cruel
   cowardly  __:__:_:_:_:_:_:_:__ brave

i. Which one of these things should you do? That is, which of these three things would your parents say you ought to do?   _______________________

ii. Which one of these three ways of acting would make you feel best? _______________________

iii. Which one of these three ways of acting would make the other kid feel the best? _______________________

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5. You see someone you would like to meet. What should you do?

a. Not say anything to the person.

- good: __:__:__:__:__:__ bad
- weak: __:__:__:__:__:__ strong
- wise: __:__:__:__:__:__ foolish
- unsuccessful: __:__:__:__:__:__ successful
- kind: __:__:__:__:__:__ cruel
- cowardly: __:__:__:__:__:__ brave

b. Yell at the person and tell them to come over to you.

- good: __:__:__:__:__:__ bad
- weak: __:__:__:__:__:__ strong
- wise: __:__:__:__:__:__ foolish
- unsuccessful: __:__:__:__:__:__ successful
- kind: __:__:__:__:__:__ cruel
- cowardly: __:__:__:__:__:__ brave

c. Walk over to the person, introduce yourself, and start talking.

- good: __:__:__:__:__:__ bad
- weak: __:__:__:__:__:__ strong
- wise: __:__:__:__:__:__ foolish
- unsuccessful: __:__:__:__:__:__ successful
- kind: __:__:__:__:__:__ cruel
- cowardly: __:__:__:__:__:__ brave

i. Which one of these things should you do? That is, which of these three things would your parents say you ought to do? ________________

ii. Which one of these three ways of acting would make you feel best? ________________

iii. Which one of these three ways of acting would make the other kid feel the best? ________________
6. You see some kids playing a game. You walk over and ask if you can join. They tell you that you can't play with them because you're not good enough. What would you do?

a. Ask them to give me a chance.

   
   good ________bad
   weak ________strong
   wise ________foolish
   unsuccessful ________successful
   kind ________cruel
cowardly ________brave

b. Interfere with their game so they won't be able to play.

   
   good ________bad
   weak ________strong
   wise ________foolish
   unsuccessful ________successful
   kind ________cruel
cowardly ________brave

c. Walk away, feeling hurt.

   
   good ________bad
   weak ________strong
   wise ________foolish
   unsuccessful ________successful
   kind ________cruel
cowardly ________brave

i. Which one of these things should you do? That is, which of these three things would your parents say you ought to do?

ii. Which one of these three ways of acting would make you feel best?

iii. Which one of these three ways of acting would make the other kid feel the best?
7. You're having lunch in the cafeteria. Your friend has a big bag of delicious chocolates for dessert. You ask if you can have just one, but your friend says, "No." What would you do?

a. Offer to trade something of mine for the chocolate.
   
   good __:__:__:_:_:_:_:___:bad
   weak __:__:__:_:_:_:_:___:___:___:strong
   wise __:__:__:_:_:_:_:___:___:___:foolish
   unsuccessful __:__:__:_:_:_:_:___:___:___:successful
   kind __:__:__:_:_:_:_:___:___:___:cruel
   cowardly __:__:__:_:_:_:_:___:___:___:brave

b. Call the kid mean and selfish.

   good __:__:__:_:_:_:_:___:bad
   weak __:__:__:_:_:_:_:___:___:___:strong
   wise __:__:__:_:_:_:_:___:___:___:foolish
   unsuccessful __:__:__:_:_:_:_:___:___:___:successful
   kind __:__:__:_:_:_:_:___:___:___:cruel
   cowardly __:__:__:_:_:_:_:___:___:___:brave

c. Forget about it and continue eating my lunch.

   good __:__:__:_:_:_:_:___:bad
   weak __:__:__:_:_:_:_:___:___:___:strong
   wise __:__:__:_:_:_:_:___:___:___:foolish
   unsuccessful __:__:__:_:_:_:_:___:___:___:successful
   kind __:__:__:_:_:_:_:___:___:___:cruel
   cowardly __:__:__:_:_:_:_:___:___:___:brave

i. Which one of these things should you do? That is, which of these three things would your parents say you ought to do?
ii. Which one of these three ways of acting would make you feel best?
iii. Which one of these three ways of acting would make the other kid feel the best?
APPENDIX I

"How I Feel About Playing Games" Questionnaire

This instrument provided a measure of children's goal orientations in game-playing situations. Responses are scored from 1 to 4, with 4 indicating high preference for the goal. These values are then summed to provide scores for four subscales: Performance Goals, Relationship Goals, Avoidance Goals, and Rule-oriented Goals.
### HOW I FEEL ABOUT PLAYING GAMES

<table>
<thead>
<tr>
<th>NAME</th>
<th>REALLY TRUE</th>
<th>SORT OF TRUE</th>
<th>TRUE for me</th>
<th>FOR me</th>
<th>BUT</th>
<th>REALLY TRUE</th>
<th>TRUE for me</th>
<th>SORT OF REALLY TRUE for me</th>
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<tr>
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</tr>
</tbody>
</table>

### For some kids it’s important to have a Coke with their hamburger:
- Other kids would rather have a Pepsi.

### Other kids don’t care much about winning:
- Some kids like playing games because it gives them a chance to get to know other kids better.
- Other kids getting to know the other players isn’t that important.

### Other kids don’t care about being one of the first ones chosen:
- For some kids winning the game is really important.
- Other kids don’t care much about winning.
- For some kids thinking they are a good game player is not important.

### Other kids don’t worry about whether they will be chosen:
- Some kids are afraid that they might not be chosen for games.
- Other kids try to get back at a kid who bumps or pushes them during the game.
- Some kids are afraid that other children might play too rough.

### Other kids try to ignore it when another player bumps or pushes them:
- Some kids try to get back at a kid who bumps or pushes them during the game.
- Some kids are afraid that other children might play too rough.
- Some kids are afraid that other children might play too rough.

### Other kids don’t worry about other children playing too rough:
- Some kids are afraid that other children might play too rough.
- Some kids try to get back at a kid who bumps or pushes them during the game.
- Some kids are afraid that other children might play too rough.

### Other kids don’t worry about other children cheating:
- Some kids watch closely to make sure the other kids don’t cheat.
- Other kids don’t worry about other children cheating.
- Other kids don’t worry about other children cheating.

### Other kids don’t care whether they are one of the best players:
- For some kids it’s important to be one of the best players in the game.
- Other kids don’t care whether they are one of the best players.
- Other kids don’t care whether they are one of the best players.
20. [ ] [ ] For some kids it's really important that everyone has a good time playing the game.

BUT Other kids aren't bothered much if other players aren't having a good time.

21. [ ] [ ] Some kids worry about getting into arguments or fights with other kids in the game.

BUT Other kids don't worry about getting into arguments or fights with other players.

22. [ ] [ ] For some kids it's really important that the other kids think they are fun to play with.

BUT Other kids don't care whether the other children think they are fun to play with.

23. [ ] [ ] For some kids it's important to show the other kids that they can play the game well.

BUT Other kids don't care about showing the other children that they are good at the game.

24. [ ] [ ] Some kids are afraid that the other children might tease or make fun of them.

BUT Other kids don't worry about the other children teasing them.

25. [ ] [ ] For some kids it's really important that everyone gets a chance to play.

BUT Other kids don't worry much about everyone getting a chance to play.

26. [ ] [ ] Some kids are disappointed when they don't play the best they can in the game.

BUT Other kids aren't bothered when they don't play their best.

27. [ ] [ ] Some kids worry that other kids might not want to play with them.

BUT Other kids don't worry about whether other kids will want to play with them.

28. [ ] [ ] Some kids would rather play games they know they are really good at.

BUT Other kids don't mind if they aren't really good at the game.
<table>
<thead>
<tr>
<th></th>
<th>REALLY SORT OP</th>
<th>TRUE</th>
<th>TRUE</th>
<th>FOR ME</th>
<th>FOR ME</th>
</tr>
</thead>
<tbody>
<tr>
<td>29.</td>
<td>For some kids, it's important to get along well with the other kids</td>
<td>BUT</td>
<td>Other kids don't worry about how well they get along with the other players</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30.</td>
<td>Some kids are afraid that the other kids will think they are clumsy or not very good at the games</td>
<td>BUT</td>
<td>Other kids don't worry about other kids thinking they are clumsy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31.</td>
<td>Some kids get upset when other kids don't play fair in the game</td>
<td>BUT</td>
<td>Other kids don't worry much about other kids playing fair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32.</td>
<td>For some kids, it's important to make sure they get as many turns as the other kids</td>
<td>BUT</td>
<td>Other kids don't worry about getting as many turns as the other kids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33.</td>
<td>For some kids, it's important to try and help other kids play the game</td>
<td>BUT</td>
<td>For other kids, helping other children with the game isn't that important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34.</td>
<td>Some kids worry that the other kids in the game might not like them</td>
<td>BUT</td>
<td>Other kids don't worry about not being liked by the other players</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35.</td>
<td>Some kids like getting to go first in the game</td>
<td>BUT</td>
<td>Other kids don't care about getting to go first</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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APPENDIX J

Peer Acceptance Subscale of the Children's Concerns Inventory

This instrument provided a measure of children's concerns regarding making and keeping friends. Responses are scored on a 4-point scale, with 4 indicating very worried. These values are summed to provide a Peer Acceptance Concerns Score.
WORRIES I HAVE

Name ___________________ Boy or Girl Age ___ Grade ___ Teacher _____
(circle which)

INSTRUCTIONS: Please read each question very carefully. Next draw a circle around the one answer below the question which is best for you. There are no right answers, so please answer the way you truly feel.

Sample Questions

a. How worried do you get about crossing the street alone?
   very worried somewhat worried not too worried not at all worried

1. How worried are you that maybe you're not as popular as you'd like to be?
   very worried somewhat worried not too worried not at all worried

2. How worried are you that maybe other kids don't really like to do things with you all that much?
   very worried somewhat worried not too worried not at all worried

3. When a friend gets mad at you, how nervous do you get that they might not want to be your friend anymore?
   very worried somewhat worried not too worried not at all worried

4. How worried are you that you don't have as many friends as you might like?
   very worried somewhat worried not too worried not at all worried

5. How nervous do you get when you have to sit and talk with kids you don't know very well?
   very worried somewhat worried not too worried not at all worried

6. How worried are you about keeping the friends you have?
   very worried somewhat worried not too worried not at all worried
7. How worried do you get about being liked by the kids at school?

<table>
<thead>
<tr>
<th></th>
<th>very worried</th>
<th>somewhat worried</th>
<th>not too worried</th>
<th>not at all worried</th>
</tr>
</thead>
</table>

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APPENDIX K

Tables of Mean Scores for All Measures
Table K-1

Raw Scores of the Experimental and Control Groups for the Strategy Evaluation Measure

Mean Ratings Across Dimensions

<table>
<thead>
<tr>
<th>Type of Strategy</th>
<th>Assertive</th>
<th>Aggressive</th>
<th>Passive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>Pretest</td>
<td>Posttest</td>
<td>Pretest</td>
</tr>
<tr>
<td>Exp.</td>
<td>6.06</td>
<td>6.07</td>
<td>2.46</td>
</tr>
<tr>
<td>Control</td>
<td>6.16</td>
<td>6.42</td>
<td>2.12</td>
</tr>
</tbody>
</table>

Mean Ratings for Each Dimension

<table>
<thead>
<tr>
<th>Type of Strategy</th>
<th>Assertive</th>
<th>Aggressive</th>
<th>Passive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension</td>
<td>Group</td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>Good/</td>
<td>Exp.</td>
<td>5.98</td>
<td>6.16</td>
</tr>
<tr>
<td>Weak/</td>
<td>Exp.</td>
<td>5.48</td>
<td>5.75</td>
</tr>
<tr>
<td>Strong</td>
<td>Control</td>
<td>6.25</td>
<td>6.46</td>
</tr>
<tr>
<td>Wise/</td>
<td>Exp.</td>
<td>6.27</td>
<td>6.11</td>
</tr>
<tr>
<td>Foolish</td>
<td>Control</td>
<td>6.07</td>
<td>6.45</td>
</tr>
</tbody>
</table>

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Table K-1 continued

Successful/ Exp. 6.21 6.29 2.36 2.50 3.23 3.27
Unsuccessful Control 6.13 6.21 1.84 2.20 3.52 3.68
Kind/ Exp. 5.91 5.95 1.82 1.88 4.23 3.55
Cruel Control 6.20 6.34 1.61 2.16 3.73 3.82
Cowardly/ Exp. 6.23 6.12 3.02 3.39 3.53 3.75
Brave Control 6.11 6.54 2.86 2.48 3.79 3.79

Note: Scores could range from 1 to 7.

Total Frequency of Strategy Choice Across Situations

Question 1. Which of these things should you do?

<table>
<thead>
<tr>
<th>Group</th>
<th>Assertive</th>
<th>Aggressive</th>
<th>Passive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre Post</td>
<td>Pre Post</td>
<td>Pre Post</td>
</tr>
<tr>
<td>Experimental</td>
<td>46 45</td>
<td>1 0</td>
<td>9 11</td>
</tr>
<tr>
<td>Control</td>
<td>35 39</td>
<td>2 2</td>
<td>19 15</td>
</tr>
</tbody>
</table>

Question 2. Which one of these would make you feel best?

<table>
<thead>
<tr>
<th>Group</th>
<th>Assertive</th>
<th>Aggressive</th>
<th>Passive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre Post</td>
<td>Pre Post</td>
<td>Pre Post</td>
</tr>
<tr>
<td>Experimental</td>
<td>42 37</td>
<td>4 2</td>
<td>10 17</td>
</tr>
<tr>
<td>Control</td>
<td>42 38</td>
<td>2 7</td>
<td>12 11</td>
</tr>
</tbody>
</table>

Question 3. Which one of these would make the other kid feel best?

<table>
<thead>
<tr>
<th>Group</th>
<th>Assertive</th>
<th>Aggressive</th>
<th>Passive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre Post</td>
<td>Pre Post</td>
<td>Pre Post</td>
</tr>
<tr>
<td>Experimental</td>
<td>37 39</td>
<td>2 1</td>
<td>17 16</td>
</tr>
<tr>
<td>Control</td>
<td>35 38</td>
<td>6 2</td>
<td>15 16</td>
</tr>
</tbody>
</table>

Note: Scores could range from 0 to 56 (7 situations x 8 subjects)
Table K-2

Mean T-Scores of the Experimental and Control Groups for the Teachers' Ratings of the WPBIC

<table>
<thead>
<tr>
<th>Scale</th>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up (2 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT.OUT</td>
<td>Exp.</td>
<td>69.50</td>
<td>61.88</td>
<td>62.00</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>66.88</td>
<td>66.25</td>
<td>67.88</td>
</tr>
<tr>
<td>WITHDRAW.</td>
<td>Exp.</td>
<td>51.88</td>
<td>56.38</td>
<td>45.57</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>56.38</td>
<td>54.13</td>
<td>52.63</td>
</tr>
<tr>
<td>DISTRAC.</td>
<td>Exp.</td>
<td>61.00</td>
<td>56.50</td>
<td>54.14</td>
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<tr>
<td></td>
<td>Control</td>
<td>56.00</td>
<td>57.75</td>
<td>55.25</td>
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<tr>
<td>DIST.PEER</td>
<td>Exp.</td>
<td>59.75</td>
<td>50.38</td>
<td>49.29</td>
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<td>Control</td>
<td>71.25</td>
<td>53.13</td>
<td>63.88</td>
</tr>
<tr>
<td>IMMATURE.</td>
<td>Exp.</td>
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<td>54.00</td>
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<tr>
<td></td>
<td>Control</td>
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<td>65.63</td>
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<td>TOTAL</td>
<td>Exp.</td>
<td>67.50</td>
<td>60.88</td>
<td>57.43</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>67.50</td>
<td>64.50</td>
<td>67.00</td>
</tr>
</tbody>
</table>
Table K-3

Mean T-Scores of the Experimental and Control Groups for the Case Managers' Ratings of the WPBIC

<table>
<thead>
<tr>
<th>Scale</th>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up (2 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT.OUT</td>
<td>Exp.</td>
<td>76.75</td>
<td>65.25</td>
<td>61.86</td>
</tr>
<tr>
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<td>Control</td>
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<td>65.50</td>
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<td>Exp.</td>
<td>57.50</td>
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<td></td>
<td>Control</td>
<td>72.13</td>
<td>59.25</td>
<td>60.88</td>
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<tr>
<td>DISTRAC.</td>
<td>Exp.</td>
<td>60.88</td>
<td>53.00</td>
<td>52.86</td>
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<tr>
<td></td>
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<td>52.88</td>
<td>54.50</td>
</tr>
<tr>
<td>DIST.PEER</td>
<td>Exp.</td>
<td>60.50</td>
<td>56.88</td>
<td>46.43</td>
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<tr>
<td></td>
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<td>60.25</td>
<td>67.75</td>
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<tr>
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<td>Exp.</td>
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<tr>
<td></td>
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<td>52.13</td>
<td>59.25</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Exp.</td>
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<tr>
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<td>66.63</td>
</tr>
<tr>
<td>Scale</td>
<td>Group</td>
<td>Pretest</td>
<td>Posttest</td>
<td>Follow-up (2 months)</td>
</tr>
<tr>
<td>-------------</td>
<td>--------</td>
<td>---------</td>
<td>----------</td>
<td>----------------------</td>
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<tr>
<td>ACT.OUT</td>
<td>Exp.</td>
<td>74.13</td>
<td>70.75</td>
<td>63.86</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>81.25</td>
<td>71.75</td>
<td>70.75</td>
</tr>
<tr>
<td>WITHDRAW.</td>
<td>Exp.</td>
<td>53.50</td>
<td>53.63</td>
<td>48.14</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>52.63</td>
<td>48.13</td>
<td>53.38</td>
</tr>
<tr>
<td>DISTRAC.</td>
<td>Exp.</td>
<td>59.13</td>
<td>58.63</td>
<td>55.43</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>66.50</td>
<td>60.25</td>
<td>58.50</td>
</tr>
<tr>
<td>DIST.PEER</td>
<td>Exp.</td>
<td>65.13</td>
<td>63.38</td>
<td>60.71</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>80.63</td>
<td>66.38</td>
<td>67.88</td>
</tr>
<tr>
<td>IMMATURE</td>
<td>Exp.</td>
<td>62.88</td>
<td>68.25</td>
<td>61.71</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>71.00</td>
<td>60.75</td>
<td>63.13</td>
</tr>
<tr>
<td>TOTAL</td>
<td>Exp.</td>
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<td>69.50</td>
<td>62.14</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>81.75</td>
<td>69.88</td>
<td>70.25</td>
</tr>
</tbody>
</table>
Table K-5

Mean T-Scores of the Experimental and Control Groups for the Parents' Ratings of the PIC

<table>
<thead>
<tr>
<th>Factor</th>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up (2 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Exp.</td>
<td>86.63</td>
<td>75.88</td>
<td>69.14</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>93.50</td>
<td>79.13</td>
<td>79.63</td>
</tr>
<tr>
<td>II</td>
<td>Exp.</td>
<td>67.88</td>
<td>61.63</td>
<td>58.43</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>79.50</td>
<td>67.50</td>
<td>69.50</td>
</tr>
<tr>
<td>III</td>
<td>Exp.</td>
<td>69.63</td>
<td>60.50</td>
<td>59.43</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>78.75</td>
<td>69.50</td>
<td>67.38</td>
</tr>
<tr>
<td>IV</td>
<td>Exp.</td>
<td>64.13</td>
<td>61.38</td>
<td>60.71</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>70.75</td>
<td>65.13</td>
<td>69.00</td>
</tr>
</tbody>
</table>

* Factor I is Undisciplined-Poor Self Control, Factor II is Social Incompetence, Factor III is Internalization-Somatic Complaints, and Factor IV is Cognitive Development.
Table K-6

Mean Raw Scores of the Experimental and Control Groups for the Case Managers' Ratings of the Social Skills Checklist

<table>
<thead>
<tr>
<th>Time of Measurement</th>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up (2 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experimental</td>
<td>25.00</td>
<td>40.63</td>
<td>39.43</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>29.00</td>
<td>37.75</td>
<td>36.88</td>
</tr>
</tbody>
</table>
Table K-7

Mean Raw Scores of the Experimental and Control Groups for the Children's Self-Efficacy for Peer Interaction Scale

<table>
<thead>
<tr>
<th>Score</th>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up (2 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>Experimental</td>
<td>60.63</td>
<td>66.38</td>
<td>72.14</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>66.75</td>
<td>66.63</td>
<td>73.00</td>
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<tr>
<td>Conflict</td>
<td>Experimental</td>
<td>2.51</td>
<td>2.82</td>
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<td></td>
<td>Control</td>
<td>2.75</td>
<td>2.74</td>
<td>3.16</td>
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<tr>
<td>NonConflict</td>
<td>Experimental</td>
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<td>3.25</td>
<td>3.44</td>
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<td></td>
<td>Control</td>
<td>3.38</td>
<td>3.38</td>
<td>3.51</td>
</tr>
</tbody>
</table>
Table K-8

Mean Scores of the Experimental and Control Groups for the Goal Orientation Measure

<table>
<thead>
<tr>
<th>Scale</th>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up (2 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>Experimental</td>
<td>2.25</td>
<td>2.15</td>
<td>2.26</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>2.14</td>
<td>2.09</td>
<td>2.01</td>
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<tr>
<td>Relationship</td>
<td>Experimental</td>
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<td>3.06</td>
<td>3.06</td>
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<td></td>
<td>Control</td>
<td>2.74</td>
<td>2.78</td>
<td>3.04</td>
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<tr>
<td>Avoidance</td>
<td>Experimental</td>
<td>2.13</td>
<td>1.92</td>
<td>2.19</td>
</tr>
<tr>
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<td>Control</td>
<td>2.00</td>
<td>1.84</td>
<td>2.09</td>
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<tr>
<td>Rule-oriented</td>
<td>Experimental</td>
<td>2.79</td>
<td>2.92</td>
<td>2.43</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>2.96</td>
<td>2.29</td>
<td>2.33</td>
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</tbody>
</table>
Table K-9

Mean Total Scores of the Experimental and Control Groups for the Peer Acceptance Concerns Scale

<table>
<thead>
<tr>
<th>Time of Measurement</th>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up (2 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experimental</td>
<td>14.00</td>
<td>11.88</td>
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</tr>
<tr>
<td></td>
<td>Control</td>
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<td>11.88</td>
<td>11.13</td>
</tr>
</tbody>
</table>

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REFERENCES


University.


VITA AUCTORIS

1953  Born in Windsor, Ontario, to Andrew and Pauline Levang.


