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A Group Intervention for Adolescents with Learning Disabilities:

A Treatment-Outcome Study with a Clinical Sample

by

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A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy
Department of Human Development and Applied Psychology
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Abstract

A treatment-outcome study was designed to evaluate the effectiveness of a 10-week interpersonal group therapy intervention for clinically referred adolescents with learning disabilities (LD). The treatment was aimed at 12-18 year old males who could openly verbalize and discuss their feelings. Thirty-one adolescents were randomly assigned to a group therapy treatment, or a 'usual care' control group receiving no group treatment. Pre, post and follow-up assessments of 15 adolescents and a matched control group measured self-reported behavioral and psychological adjustment, loneliness, self-worth and interpersonal friendship variables. Parent reports of adolescents' behavioral and psychological adjustment along with friendship variables were assessed. Treatment outcome was also assessed by self and parent reports on a measure of clinical significance. A repeated measures analysis of variance for related samples was conducted for each scale to determine group differences. A consistent pattern of results in the present study offered no support for the effectiveness of this intervention. Across all measures, the group treatment did not contribute differentially to outcomes beyond a standard model of care used at the agency. Group treatment does not seem to improve clinically relevant outcomes. Specifically, both adolescents and parents reported mixed levels of satisfaction with the group experience. As the first experimental study carried out at the agency to investigate group treatment effectiveness, the no-difference findings are important because of the potential questions they raise to facilitate further research and application to clinical practice.
Acknowledgements

A very special thanks to my thesis supervisor, Dr. Judith Wiener, whose input meant so much. I would like to express my appreciation and thanks to my committee, Dr. Barry Schneider, Dr. Tom Humphries and Dr. Michele Peterson-Badali, for their support and direction.

For their invaluable contributions, I would also like to thank the following: all of Integra’s staff, Dr. Richard Cummings and Dr. Faye Mishna, for their encouragement of my work, the study’s participants and their parents, Sue Elgie, friends, family, and especially my two wonderful boys, Matthew and Michael. Finally, to my husband Angelo Costaris, I would like to express my deepest thanks for his support, understanding, sense of humour and encouragement.
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CHAPTER 1

INTRODUCTION

The scarcity of well designed psychotherapy intervention research for adolescents in general, and specifically for children and adolescents with learning disabilities (LD), has gained increasing attention from researchers who have been documenting with greater awareness the scope of emotional and behavioral problems of children and adolescents (Kazdin, 1993). The importance of developing effective treatments has been underscored by several areas of research. The high prevalence rates (17% to 22%) of developmental, emotional and behavioral problems among youth 18 years of age and younger provide one index of the need for interventions (Kendall, 1998; Kazdin & Weisz, 1998). Also, many childhood disorders like learning disabilities, affect multiple areas of functioning (e.g., other symptom domains, social functioning, family relations) (Handwerk & Marshall, 1998). The importance of developing adequate interventions for adolescents with LD is highlighted by the accumulating data suggesting that adolescents with LD are at heightened risk for the development of social and emotional problems across a range of domains (Handwerk & Marshall, 1998; Heath, 1995; Turk-Kaspa & Bryan, 1995).

Current intervention research highlights the progress towards developing effective treatments. First, there are several hundred treatment-outcome studies in which psychotherapy in varying forms has been evaluated (Kazdin & Weisz, 1998; Durlak & Wells, 1997). These consist of randomized controlled trials, setting the stage for what is needed to establish the
foundation of effective clinical work. Second, a number of meta-analyses have led to the conclusion that psychotherapy for children and adolescents is effective (Weisz, Weiss, Han, Granger & Morton, 1995). Third, there is a movement in the field to delineate empirically supported (Task Force on Promotion and Dissemination of Psychological Procedures, 1995) or evidence-based treatments (Roth & Fonagy, 1996).

A growing body of research has documented specific exemplary features for discerning whether treatments are efficacious, by considering both methodological strengths and methodological challenges in conducting intervention research (Chambless & Hollon, 1998; Seligman, 1995). Exemplary features of interventions for group designs include: random assignment, well-documented evidence of uniform training of therapists, tests involving clinical samples, multimethod outcomes, tests of clinical significance, real-world functional outcomes, and measurement of maintenance effects. Methodological constraints within clinic settings such as the difficulty implementing randomized control trials (Seligman, 1995), small sample size (Burlingame, Kircher & Taylor, 1994), low statistical power (Kazdin, 1998a) and the limited use of manuals (Chorpita, Barlow, Albano & Daleiden, 1998) have been identified as obstacles to lab-clinic collaboration. There are very few intervention studies that encompass clinically impaired samples, assess multiple outcome domains over time, conduct follow-up and provide materials (e.g., manuals, videotapes, training programs) that facilitate further research and application to clinical practice.

There has been a growing recognition of the need to forge a liaison between clinician and researcher in the design and implementation of outcome research (Goldfried & Wolfe, 1998). Methodologically strong treatment-outcome research, however, is enormously demanding. Most
clinical settings can not meet the necessary methodological expectations for efficacious treatment design (Chambless & Hollon, 1998; Peterson & Bell-Dolan, 1995). The result is a restriction in treatment outcome research which is in need of empirical support and clinical validation (Peterson & Bell-Dolan, 1995). For example, psychodynamically oriented psychotherapy as applied to adolescents is widely applied in clinical practice but very rarely empirically supported (Kazdin, 1998a). It is not surprising that there are virtually no empirical studies documenting the effectiveness of group therapy for adolescents with LD.

Research has shown that adolescents with LD are at greater risk to experience social problems (Swanson & Malone, 1992), depression (Heath, 1995), loneliness (Margalit, 1993), inadequate social perception (Bryan, 1997), attention deficits and hyperactivity (San Miguel, Forness & Kavale, 1996) and internalizing and externalizing behaviour problems (Handwerk & Marshall, 1998) compared to youth without LD. Children and adolescents with LD often exhibit inadequate interpersonal skills resulting in peer rejection (Swanson & Malone, 1992; Wiener, Harris & Shirer, 1990) and have difficulty establishing and maintaining satisfying peer relationships (Tur-Kaspa & Bryan, 1995). They may display more poorly developed conversational skills (Valiance, Cummings & Humphries, 1998), greater external locus of control (Grolnick & Ryan, 1990) and are at greater risk for exhibiting low self-esteem (Smith & Nagle, 1995) than youth without LD.

In general, group therapy is an atypical intervention for adolescents with LD. Some literature, however, suggests that group therapy can benefit children and adolescents with LD (Mishna, 1996; Brown & Papagno, 1991; Omizo & Omizo, 1986). Although modifications may be required due to cognitive deficits, adolescents with LD and psychosocial problems fit the
criteria for group therapy (Rutan & Stone, 1984; Mishna, Kaiman, Little & Tarshis, 1994; Berg & Wages, 1982). Rosenthal (1992) indicated that group therapy can contribute significantly to the self-development of the adolescent with LD through the group's use of peer interaction, consensual validation and behavioral reinforcement. Advocates of group therapy for adolescents with LD indicate that a group experience provides a miniature real-life situation which may improve socialization skills, decrease the adolescents' sense of isolation and build self-esteem through acceptance and helping others (Mishna, 1996; Bednar & Kaul, 1994).

While well-controlled studies of group therapy for adolescents with LD are limited and those available present somewhat ambiguous results, directions in most of the reported literature offer some encouragement to continue evaluation of group therapy as a viable intervention for this population (Shechtman, Vurembrand & Hertz-Lazarowitz, 1994; Scheidlinger & Aronson, 1991).

Thus, the present study was designed to evaluate the effectiveness of a group treatment for adolescents with LD. In the interest of drawing from research to inform clinical practice, many of the sound practices and methodological issues that meet the 'gold standard' of empirically validated studies (Kazdin, 1994) were implemented in the present study. These included a naturally existing clinical population, random assignment, use of multiple outcome measures and multiple informants, assessment of clinical significance and documentation of treatment integrity.

In the present study, a 'treatment package strategy' was used to evaluate the effectiveness of a 10-week group therapy intervention for adolescents with LD within a clinic setting (Kazdin, 1998b). This strategy evaluates the effects of a particular treatment as it is ordinarily used, given
the goal of evaluating the impact of the overall package. The term 'package' emphasizes that the
treatment may be multifaceted and include several components that could be delineated
conceptually and operationally. The group intervention evaluated in this study was embedded in
a larger context of services. Specifically, the mandate of the agency where this study was
conducted is to offer an integrated array of treatment options (e.g., group therapy, individual
counselling, family therapy, summer camp) and service providers (e.g., case managers, group
leaders, camp leaders/therapists). Following the recommendations of an evidence-based
treatment approach (Kazdin, 1998b; Roth & Fonagy, 1996), this study focused on one treatment
component offered at the agency — a group therapy intervention. This study takes an initial step
towards the examination of the effectiveness of a psychosocial intervention.

This design was constructed to select a particular type of clinical problem (i.e., LD and
social/emotional), a particular set of participants (i.e., 12 to 18 year-olds), and a particular type
of treatment (i.e., interpersonal group therapy) applied across a narrow range of treatment
intervention (i.e., 10-week treatment course) in order to evaluate the effectiveness of this
intervention in the context of a 'real-world' clinic-setting.
CHAPTER 2

LITERATURE REVIEW

Introduction

There is a consensus that developing and improving clinical research is an immediate priority (Chorpita, Barlow, Albano & Daleiden, 1998). In general, researchers have acknowledged how difficult it is to implement a successful intervention in the treatment of childhood disorders (Beutler, 1998; Kazdin, 1998 a & b). Advancing the effectiveness of psychosocial treatments involves the difficult task of documenting and evaluating the effects of an intervention in a controlled and meaningful manner. Empirical evaluations in support of interpersonal group therapy in general, and specifically for adolescents with LD is completely lacking. This chapter provides a review of the pertinent literature necessary for discerning the effectiveness of an interpersonal group intervention for adolescents with LD. First, the distinctive features of friendship development in adolescence, the psychosocial problems of adolescents with LD and typical interventions implemented with this population will be reviewed. Next, the findings of current research on group treatment-outcomes for adolescents and empirical support of group therapy for adolescents with LD will be presented, noting features of the research that warrant close attention. Finally, the conceptual framework, methodology and strategies used to evaluate Integra’s group model will be presented.
Friendship and Adolescent Development

Researchers in the field of peer relationships point to friendship as an indicator of social competence and mental health (Youniss & Smollar, 1989; Berndt, 1988; Hartup, 1996; Parker & Asher, 1993). Indeed, there is an increasing recognition that peer relationships play a mediating role in the psychosocial adjustment of adolescents. To date, however, friendship of adolescents with learning disabilities and its link to adjustment has been studied far less frequently and systematically compared to research on the general population. The following section provides a brief overview of key theoretical perspectives underlying friendship development in adolescence as well as a review of the pertinent research documenting the effects of friendship support on adolescent development. It is important to contrast the following descriptions of normal friendship development with the typical experience of an adolescent with LD; namely, friendships are often hard to form, adolescents with LD are less popular as a group and less socially accepted, they may have difficulty perceiving social cues and most importantly may have less success and experience in establishing and maintaining social relationships.

Sullivan's (1953) interpersonal theory highlights the importance of interpersonal relations between peers during school age and early adolescence. Sullivan made explicit the distinction between acceptance by the group and what he termed *chumship*. Acceptance by the group was defined as "the first opportunity to see oneself through the other's eyes" (p. 248). In a review of friendship in adolescence, Youniss and Haynie (1992) integrated the literature on friendship during the adolescent period. Three key constructs summarize the unique characteristics of friendship relations: reciprocity, co-construction and consensual validation. Reciprocity refers
to the symmetrical nature of the relationship. Sullivan (1953) noted that reciprocity was the distinguishing feature between parent and peer relations, parent-child relationships being asymmetrical. Although reciprocity is not sufficient to sustain a friendship, it is viewed as the specific beginning of friendship. Current research indicates that reciprocal friendships become more prevalent during early adolescence (Clark & Ayers, 1993). In adolescence, friends agree that reciprocity is a guiding principle in their interactions. Co-construction refers to the process by which friends sort through reality together and by adolescence have achieved a more in-depth knowledge of what each thinks. As a result, intimacy and self-disclosure become a salient process of adolescent friendship. The third feature encompasses the concept of consensual validation. By adolescence, friends become more dependent on one another for clarifying feelings and ideas. As Sullivan stated, during this period, adolescents think of their own welfare as dependent on the relationship. Embedded in this general model is the position that friendship is fundamental to the development of social maturity. A crucial step toward social maturity is the adolescent's belief that a friend's well being becomes essential to his/her own sense of well-being (Sullivan, 1953). Through adolescence, reciprocity and autonomy become guiding principles in their relationships. Reciprocity brings about mutual respect and liking, an intimacy involved with the sharing of ideas and a shared history between friends (Berndt & Hanna, 1995).

Other interpersonal theorists (Selman, 1980; Youniss & Smollar, 1985) suggest that when adolescents have a close friend, they have an opportunity to practice their interpersonal skills and become more socially competent. Such skills may increase the likelihood of making friends in other situations. Friendship support provides the adolescent with the opportunity to explore his/her social identity and acquire the skills to successfully negotiate a social position.
(Asher & Gottman, 1989). In order to establish friendships, adolescents need to develop the ability to communicate effectively, to have a degree of empathy and tact, and have the sensitivity to respond appropriately in a given situation. Rubin (1980) indicates that friendship support provides the context and encouragement for adolescents to expand their social network and expand their repertoire of social skills. Duck (1983) delineates four types of skills youth must acquire in order to achieve friendship: social skills, interpersonal competence (i.e., handling other people without disruption), communication competence and relational competence (i.e., the ability to handle oneself skilfully when dealing with intimacy, privacy, and trust).

Research indicates that friendship support is positively correlated with popularity, school competence and good social reputations (Wentzel, 1994; Cauce, 1986); positively correlated with self-esteem (Savin-Williams & Berndt, 1990; Robinson, 1995) and psychosocial adjustment (Buhrmester, 1990) as well as negatively correlated with anxiety and loneliness (Parker & Asher, 1987; 1990; Vernberg, 1990; Vernberg, Absender, Ewell & Beery, 1992) and depression (Lewinsohn, Roberts, Seely, Rohde & Gotlib, 1994).

Thus, in the absence of supportive friends and peer groups, adolescents with LD may not develop the necessary social skills and social cognitive skills (Ladd, 1989; Parker & Asher, 1987; Bierman, 1986) needed to reduce the risk for later adjustment problems (Parker & Asher, 1987).
Psychosocial Problems of Adolescents with LD

Developmentally, the adolescent with LD is often confronted with not only the general challenges of adolescence but also the unique difficulties associated with having a learning disability. The importance of a developmental framework for understanding the impact of learning disabilities on adolescents has been highlighted by several authors who suggest that learning disabilities may interact with social, emotional and environmental factors to disrupt healthy development across several domains of functioning (Rosenthal, 1992; Pickar & Tori, 1986; Brown, Hedinger & Mieling, 1995).

The study of the social-emotional development of adolescents with LD is important for a number of reasons. First, research has indicated that the social-emotional development of adolescents with LD may be more severely impaired during adolescence than was previously indicated (Huntington & Bender, 1993; Spafford & Grosser, 1993). Further, research suggests that adolescents with LD are at greater risk of depression and/or suicide than other students (Huntington & Bender, 1993; Heath, 1995). Other research has indicated that adolescents with LD have impaired social relations (Mithaug, Horiuchi & Fanning, 1985). Second, deficits in cognitive processing are probably sufficient to cause major learning problems in other areas of functioning such as difficulties interpreting social events (Spafford & Grosser, 1993). Third, the relative lack of academic success of adolescents with LD during secondary school coupled with the moderate effects of social skills training interventions suggest that a focus on interventions in other areas, such as social-emotional concerns may be needed (Deshler, Schumaker & Lenz, 1984; Forness & Kavale, 1996).
This section synthesizes research on peer relations, loneliness, self-concept and behavioral functioning in adolescents with LD. While extensive review of all the available studies is not included, the general conclusions and available information on intervention research is addressed to highlight the importance of this work in identifying additional treatment needs of adolescents with LD.

**Peer Relations of Adolescents with LD**

The importance of assessing peer relations of adolescents with LD, so that adequate interventions can be developed and implemented, is found in the strong and consistent link between early difficulties in peer relationships and later life problems (Vaughn, McIntosh, Schumm, Haager & Callwood, 1993). Peer relationship research includes concerns such as social acceptance, sociometric status and friendship development.

Approximately fifty percent of students with LD are identified as being poorly accepted by their peers (Stone & La Greca, 1990; Vaughn et al., 1993; Wiener, Harris & Shirer, 1990). More specifically, research has shown that adolescents with LD are less accepted by their peers than adolescents without LD (Perlmutter, Crocker, Cordray & Garstecki, 1983). Both children and adolescents demonstrate problems in interpersonal relationships and are less socially accepted than students without LD (Vaughn & Haager, 1994; La Greca & Stone, 1990; Wiener, Harris & Shirer, 1990). Some research has shown that these deficits increase during the preadolescent years as the peer group becomes more important and are a significant cause of maladjustment in post-secondary years (Mellard & Hazel, 1992).
The literature on friendships of adolescents with LD is scarce. Although current research on friendship has distinguished between peer acceptance and friendship (Bukowski & Hoza, 1989), there are only a few studies that have systematically studied the dimension of friendship (i.e., reciprocal, mutual friendships) in a population of children and early adolescents with LD. Wiener and Sunohara (1998) investigated the quality of friendship of 10 to 14 year old children with LD, who were clients of a children's mental health centre. Results from this study indicated that when selecting friends, children with LD frequently replaced regular school classmates with younger children, special education classmates and children outside of the school. As well, the children with LD reported relationships of lower quality compared to children without LD, especially in the area of conflict resolution and intimacy. Wenz-Gross and Siperstein (1997) examined the friendship quality of 106, 4th-, 5th-, and 6th grade children either receiving special education services for learning problems or general education. Results from this study indicated no differences in negative features of friendship (e.g., conflict and competition) between children with and without LD. Children with LD, however, experienced less positive features (e.g., intimacy, loyalty, self-esteem and contact) as compared to children without LD. Although no studies were found investigating the quality of friendships of older adolescents with LD, these studies suggest that children with and without LD may differ in their quality of friendship patterns (Wiener & Sunohara, 1998; Wenz-Gross & Siperstein, 1997).

A number of social skills interventions for social competence have been developed for children and adolescents with LD. Although some research indicates that students with LD can be trained on selected social skills (Kohler & Strain, 1993; Sugai, 1992), Vaughn and Haager (1994) recommend interventions that are more intensive, involving peer dyads. While some
intensive interventions have been described in the literature (Vaughn & La Greca, 1992), there
are no long term findings considering other important social-emotional variables.

**Loneliness in Adolescents with LD**

A number of studies have explored loneliness among children with LD, and to a lesser
extent, adolescents with LD, through comparisons to populations of children without LD
(Margalit, 1991; 1993; Margalit & Efrati, 1996; Pearl & Bryan, 1992; Williams & Asher, 1992;
Stone & La Greca, 1990; Vaughn & La Greca, 1992). Overall, children and youth with LD are
more likely to demonstrate higher levels of loneliness than youth without LD.

In a study of loneliness among seventy-six 12-15 year old youth with LD from seven
Israeli schools, Margalit (1991) found four subtypes of lonely students. A small group of
extremely lonely students was found, with a subgroup of more socially competent students with
lower levels of loneliness. The remaining two groups were differentiated along their
externalizing and internalizing difficulties. Non-aggressive students felt much more lonely than
the aggressive students, although neither differed in terms of social skills. Several recent studies
of subgroups of students with LD have shown that the majority of these students experience high
levels of loneliness (Margalit & Levin-Alyagon, 1994; Parkhurst & Asher, 1992).

Research on the social difficulties of children and adolescents with LD has indicated that
one of the greatest needs for interventions is within the area of making friends, particularly the
aspect of becoming socially involved to avoid loneliness (Gresham, 1985; Margalit, 1991). No
published intervention studies targeting loneliness for adolescents with LD were found.
Self-Concept of Adolescents with LD

There is little agreement about theoretical or operational terms regarding self-esteem or self-concept. Self-concept has been described as self-awareness, self-perception, self-understanding, self-esteem and self-image (Axelrod & Zvi, 1993; Damon & Hart, 1982; Priel & Leshem, 1990). This review has focused on the broader meaning of the term. Specifically, self-perception will be used to refer to the overall view that children and adolescents have about themselves, as well as their view of how well they function in specific roles.

Adolescents' self-esteem and self-concept have been linked to numerous behavioral, academic and psychological outcomes (see Haney & Durlak, 1998, for a review). For example, higher levels of self-concept have been linked to better social and interpersonal relations (Delugach, Bracken, Bracken & Schicke, 1992). Conversely, lower levels of self-concept have been correlated with a wide range of negative outcomes including loneliness, depression, anxiety and alienation (Lipka & Brinthaupt, 1992). Harter (1990) has found increasing differentiation in the domains of self-concept with advancing age. With factor analytic studies she has demonstrated that by adolescence it is possible to distinguish nine separate domains of self-concept, with global self-worth one of the separate domains.

Research has documented that children and adolescents with LD often exhibit both academic and behavioral problems (Vaughn et al., 1992). It is not surprising, then, that children with LD have been found to have poor self-perceptions in these two areas (Bear, Clever & Procotor, 1991). Low global self-worth among children with LD, however, has not been a consistent finding in the literature (Bear & Minke, 1996). In their review of self-perceptions of social competence in students' with LD, Vaughn and Haager (1994) indicate that little is known
about the nature of this relationship. Several studies have compared the self-concept of students with and without LD (Vaughn et al., 1992), using instruments which have been designed to differentiate domain-specific self-evaluations of children (e.g., Harter, 1990). Results seem to differ on the basis of whether the assessment of self-concept measures feelings about academic competence or feelings of general self-worth (Vaughn et al., 1992). Grolnick and Ryan (1990) reported that students with LD perceived themselves more negatively than students without LD on dimensions of academic competence but indicated no differences between the groups on general self-worth.

Particularly within the field of learning disabilities, the examination of domain-specific self-perceptions and affective variables has relied almost exclusively on self-perceptions of academic competence (Grolnick & Ryan, 1990; Heath & Wiener, 1996). The literature reports a very strong relationship between self-concept and achievement. Students who do well at school tend to rate themselves higher on tests of self-esteem than do those who do not perform well (Morvitz & Motta, 1992). Since many of the studies investigating social relationships and peer acceptance of students with LD do not use low achieving contrast groups, the effects of achievement need to be further explored (Vaughn et al., 1992).

In light of research indicating that children and adolescents with low peer acceptance are at greater risk for poor adjustment (Parker & Asher, 1987), research needs to focus more specifically on adolescents’ self-perceptions of their social acceptance. Future research needs to focus on subtypes of students with LD and their self-concepts and peer acceptance across a range of age groups (Vaughn, Haager, Hogan & Kouzekanani, 1992).
Interventions to improve the self-concept of students with LD have included school-based counselling, rational-emotive therapy and cognitive strategies training (Mulcahy, 1990; Omizo, Cubberly & Omizo, 1985). These studies have yielded mixed results, indicating moderate effects with group counselling and rational-emotive therapy.

**Behavioral Functioning in Adolescents with LD**

A review of the behavioral functioning research and learning disabilities reveals several variables of study (e.g., adaptive behaviour, conduct problems, social skill deficits and attention difficulties). There is a tendency in the literature, however, to treat social or behavioral problems and social skills deficits as the same variable (Forness & Kavale, 1991). This confusion makes it difficult to distinguish between studies of social or behavioral problems of youth with LD and specific social skills deficits in learning disabilities. Nevertheless, there is considerable agreement that both behavioral and social difficulties and social skills deficits occur in children and adolescents with LD (Bender & Wall, 1994; Vaughn & Hogan, 1994).

Research indicates that children and adolescents with LD demonstrate significant deficits in adaptive functioning (Bender & Smith, 1990; Kavale & Forness, 1996; Handwerk & Marshall, 1998) which may continue into later adult years (Weller, Watteyne, Herbert & Crelly, 1994). For example, students with LD demonstrate significant deficiencies in the areas of shy/withdrawn and externalizing/internalizing behaviours (Bender & Smith, 1990; Fuerst, Fisk & Rourke, 1990), expressing feelings (Gresham & Reschly, 1986), conversational skills (Wiener & Harris, 1993), on-task behaviour (Bender & Smith, 1990) and role-taking or perspective-taking (Stiliadis & Wiener, 1989).
A number of studies have evaluated interventions to improve behavioral and social difficulties and specific social skill deficits in children and adolescents with LD. Briefly, some of these interventions have included: behaviour management to increase task orientation, collaborative counselling, self-monitoring, classroom-based social skills training, and peer-mediated evaluation (Agran, Martin & Mithaug, 1989; Misra & Welsh, 1992; Wiener & Harris, 1997; Salend, Whittaker & Reeder, 1992). The effectiveness of social skills training interventions with children with LD has been reviewed in several meta-analyses (Schneider, 1992; Kavale & Forness, 1996; McIntosh, Vaughn & Zaragoza, 1991) and has shown varying degrees of success. There is a small but growing literature on effective interventions in social skills training with children and adolescents with LD (Vaughn et al., 1991; Blackburn, 1989; Larson & Gerber, 1987). While some of these interventions are moderately successful for alleviating the problems of children and adolescents with LD, future interventions need to develop a broader context than simply isolating social skills as targets for change (Forness & Kavale, 1991; Bender & Wall, 1994; Vaughn & Hogan, 1994).

Treatment of social skills deficits in children and adolescents with LD has focused almost exclusively on educational rather than therapeutic interventions (Forness & Kavale, 1991), namely, direct instruction of specific social skills rather than psychotherapy (Nelson, 1988). Forness and Kavale (1991) highlight the potential difficulty of isolating social skills as a target for change, at the exclusion of therapeutic or psychological treatment. They report that children and adolescents with LD, who have social skills deficits are also more likely to have co-morbidity issues (i.e., depression, anxiety, hyperactivity) that require a broader context for treatment. The review of the literature on social skill deficits suggests that treatment needs for
many children and adolescents with LD are indeed more complex than what is typically offered in social skills training programs.

Summary

A number of research implications may be derived from a review of the social-emotional development of adolescents with LD and current treatment interventions. First, evidence indicates that some adolescents with LD are at risk for a wide array of social-emotional problems. Second, the literature documents that social-emotional problems result in negative outcomes for adolescents during school and during the early adult years (Sitlington & Frank, 1990). Third, there is a need to expand the traditional interventions to facilitate successful outcomes. Fourth, the study of the correlates and interactive effects of these social-emotional variables is needed. For example, does loneliness in adolescents with LD inhibit efforts in social skills instruction? Perhaps adolescents with LD interact less with their peers, resulting in less opportunity to practice appropriate social skills. To date, the literature has offered only a limited number of interventions for adolescents with LD that concentrate on improving social relationships or general social interaction skills.

Research on Psychotherapy

Current Issues and Evolving Trends

Understanding treatment and the multitude of conditions that may affect processes and outcomes is a daunting task when one considers how to define therapy, how and to whom it is
applied, and the methods of evaluating its impact (Kazdin, 1995b). The scope of treatments, client characteristics and the methods of evaluating their impact are vast. First, over 200 psychotherapy techniques are used for children and adolescents (Kazdin, 1995a). Second, there are approximately 300 different forms of psychological syndromes or symptom patterns recognized by the Diagnostic and Statistical Manual of Mental Disorders (4th ed. [DSM-IV]; American Psychiatric Association, 1994) and a large number of daily life stressors (e.g., school stress, life conditions, family functioning). Finally, the methods of assessing treatment-outcome are numerous and include a variety of measures obtained from different informants (e.g., client, clinician, significant other), assessment formats (e.g., paper and pencil, direct observation) and domains of functioning (e.g., behaviour, cognition, affect).

As a group, researchers in this field have begun to systematically examine factors influencing the transportability of psychotherapy from one setting to another, methodological or measurement factors that need to be considered and types of new studies that will help to address conceptual and methodological deficiencies (Hoagwood & Hibbs, 1995; Clarke, 1995; Kazdin & Weisz, 1998).

Hoagwood, Hibbs, Brent and Jensen (1995) make an important distinction between studies of efficacy and effectiveness, offering strategies to bridge the gap between laboratory and clinic-based research. Efficacy studies (clinical trials conducted in laboratory research) refer to studies in which considerable control has been exercised by the investigator over sample selection, delivery of intervention and conditions under which treatment occurs (i.e., randomized clinical trial conducted in laboratory setting). Effectiveness studies (clinic-based research) are examined with more heterogeneous samples, within a more naturalistic setting and are provided
by service providers. In their model of efficacy and effectiveness research, Hoagwood et al., (1995) advocate beginning with clinic-based research which potentially allows for ecological validity to be established first, followed by refinement or differentiation of populations, techniques or strategies.

In his review of the effectiveness of psychotherapy, Seligman (1995) argues that laboratory based interventions are the wrong method for empirically validating psychotherapy as it is actually done in the field because too many crucial elements are omitted. Weisz, Donenberg, Han and Weiss (1995) also suggest exporting treatments from labs to clinical practice sites (see Fehling, Roberts, Humphries & Dawe, 1991) to inform lab-clinic collaboration. This has led to marked changes in the field of psychotherapy research along dimensions such as the nature and focus of psychotherapies, the types of clients and the complexity of the research design (Kovacs & Lohr, 1995).

The Effectiveness of Psychotherapy with Children and Adolescents

There are many connotations regarding the term 'psychotherapy'. Researchers are encouraging the use of the phrase 'psychological therapies' in place of 'psychotherapies' in an attempt to include all forms of psychological treatment (Kendall, 1998). Psychotherapy, as usually defined includes any intervention intended to alleviate psychological distress, reduce maladaptive behaviour, or enhance adaptive behaviour through counselling, structured or unstructured interaction, a training program, or a predetermined plan (Kazdin & Johnson, 1994; Weisz, Huey & Weersing, 1998). The definition is sufficiently generic to include interventions related to behaviour therapy, cognitive-behavioral therapy, psychodynamic therapy, family
therapy and multi-modal therapies.

Three general meta-analyses encompassing a range of treatment methods and diverse child problems have indicated that the overall impact of child psychotherapy is positive (Weisz, Weiss, Han, Granger & Morton, 1995). Casey and Berman (1985) reported a mean effect size of 0.71 for treatment-outcome studies with children 12 years of age and younger. Weisz, Weiss, Alicke and Klotz (1987) reported a mean effect size of 0.79 for outcome studies of youth 4-18 years old. Kazdin, Bass, Ayers and Rodgers (1990) reported mean effect sizes of 0.88 for treatment versus no-treatment comparisons and 0.77 for treatment versus active control comparisons, on youth 4-18 years old. Overall, the reviews on psychotherapy with children and adolescents indicate that psychotherapy is better than no treatment, that the magnitude of improvement in children parallels treatment gains reported for adults and that differences between treatments appears to favour behavior therapy (Kazdin, 1991; Kovacs & Lohr, 1995; Weisz et al., 1995).

The development and empirical validation of children's mental health services which treat serious clinical problems in real-world settings is laden with difficulties (Hoagwood, Hibbs, Brent & Jensen, 1995). Weisz, Donenberg, Han, and Weiss (1995), for example, have noted that the efficacy of child psychotherapies observed in research settings has rarely transferred to effectiveness when implemented in community/clinical settings. In fact, they found that positive outcomes demonstrated in laboratory settings were not representative of outcomes achieved in clinical practice settings. Possible reasons for the lack of reported effectiveness in mental health centres include the increased severity and heterogeneity of problems presented by real-world clinical cases, a lack of focused treatments, a limited use of behavioral methods, limited
preplanning and structure of the intervention, high caseloads of practitioners and a lack of attention to treatment integrity (Henggeler et al., 1997; Weisz et al., 1995). As well, the scarcity of rigorous evaluations is partly due to the inherent difficulties of conducting randomized trials in clinical settings (Peterson & Bell-Dolan, 1995). These researchers suggest that more attention needs to be paid to the type of methods used, the degree of specificity in the treatment and the preliminary structuring of the intervention, for studies in clinic settings to be effective.

The Effectiveness of Group Therapy with Adolescents

Reviews of group psychotherapy research with adolescents are extremely limited; nonetheless, meta-analytic reviews of group therapy with children and adolescents generally support group treatment efficacy (Hoag & Burlingame, 1997). Collectively, these meta-analyses suggest that psychotherapy with children and adolescents is moderately effective (ES = .61) and that group and individual therapies do not differ in their overall effectiveness. However, these meta-analyses lack both specificity of variables related to treatment and sophistication in design (Dagley, Gazda, Eppinger & Stewart, 1994). For example, findings from these meta-analyses indicate that only 7% of the studies were conducted in clinical settings, 20% failed to identify a theoretical orientation, 25% failed to report the credentials of individuals conducting treatment and 33% failed to describe how the clients entered treatment. In a critical review of the usefulness and efficacy of group psychotherapy with adolescents, Beeserman and Orvaschel (1994) indicate an overall failure of the studies to regulate or specify the actions of the group leaders along with a number of other methodological inconsistencies resulting in poor generalizability, decreases in ecological validity and difficulty replicating and interpreting
Despite these methodological problems, there are some positive examples documenting the effectiveness of group therapy for adolescents. For example, Block and Crouch (1985) found that in group psychotherapy with adolescents, interactions with others and self-disclosure were beneficial aspects of treatment. Brandes and Mossberger (1985) suggest that the adolescent group therapy environment allows "a creative learning situation in which awareness and sensitivity are experienced" (p.96). Fine, Forth, Gilbert and Haley (1989), in a therapeutic support group and social-skills training program, utilized an unstructured 12 session protocol with 10 depressed adolescents. Findings indicated that the group provided an environment for adolescents to share and understand common concerns, learn how to deal with difficult situations and provide support for each other. Efficacy studies examining Lewinsohn, Hoberman and Clarke's (1989) Adolescent Coping with Depression Course found significant post-treatment decreases in Beck Depression Inventory scores and in post-treatment, all previously depressed participants no longer met criteria for clinical depression (Calhoun, Moras, Pilkonis & Rehm, 1998; Kazdin & Weisz, 1998).

Group Therapy Research with Adolescents with LD

A limited number of published reports indicate for the most part that group psychotherapy provides effective treatment for adolescents with learning disabilities. For example, three studies based on the interpersonal group therapy approach indicated progress in self-esteem and friendship relationships after intervention with low-achieving elementary school children (Shechtman, 1993; Shechtman, Vurembrand & Hertz-Lazarowitz, 1994; Shechtman,
Unfortunately, few of these studies have included sufficient detail (e.g., documenting the group procedures used) to allow adequate evaluation and replication. This section will include a review of the available literature on group treatments with adolescents with LD, explore some of the shortcomings inherent in these reports, highlight some of the important findings and suggest alternatives for future studies that might overcome the deficiencies to be noted.

The articles reviewed include studies published from 1981 to the present. Sources of the article search included a literature search of journals in the fields of regular education, psychology, exceptional child education and learning disabilities, as well as an ERIC and PSYCLIT search. The literature review yielded 13 studies. Table 1 provides a summary of the findings from these studies, including a brief description of type of treatment, subjects, design, measures and results.

Three articles were position papers advocating specific types of theory without evaluation (Ostrander & Silver, 1993; Rosenberger, 1988; Rosenthal, 1992). Two articles were reviews of the literature (Berg & Wages, 1982; Brown, Hedlinger & Mieling, 1995). Seven articles reported on case studies using qualitative research methods (Brown & Papagno, 1991; Cook, 1994; DuPlissis & Lochner, 1981; McKibbin & King, 1983; Mishna, 1996; Mishna, Kaiman, Little & Tarshis, 1994; Pickar, 1988). Two of these studies investigated the same treatment (i.e., interpersonal group therapy) within the same agency as the present study, and therefore will be described.

First, Mishna (1996) interviewed four adolescent boys and 4 girls diagnosed with LD, following a 17-week group therapy intervention to obtain their perspectives of the group.
### Table 1

#### Summary of Studies: Group Therapy Interventions for Adolescents with Learning Disabilities

<table>
<thead>
<tr>
<th>Author(s) / Title</th>
<th>Subjects/ Design</th>
<th>Measures</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Berg &amp; Wages (1982) group counselling</td>
<td>adolescents with LD review paper</td>
<td>critical review</td>
<td>rationale for use of group therapy with adolescents with LD</td>
</tr>
<tr>
<td>2 Brown, Hedinger &amp; Mesling (1995) social skills groups</td>
<td>children and adolescents with LD review paper</td>
<td>critical review</td>
<td>discussion of how groups can facilitate individual growth</td>
</tr>
<tr>
<td>3 Brown &amp; Papagno (1991) verbal-orientation group psychotherapy</td>
<td>children and adolescents with LD, ADD, ADHD and behavioral disturbance qualitative description</td>
<td>case analyses</td>
<td>description of benefits of group psychotherapy for this population</td>
</tr>
<tr>
<td>4 Cook (1994) interpersonal group psychotherapy</td>
<td>7 adolescent boys, case study, video tape analysis</td>
<td>interviews, social skills ratings</td>
<td>inconsistent findings across measures</td>
</tr>
<tr>
<td>5 Dul·ssms &amp; Lochner (1981) group psychodrama</td>
<td>4 boys with LD, age 12, case study</td>
<td>personality questionnaire, observation, parent feedback</td>
<td>boys showed improvement in communication, attitudes and general adjustment</td>
</tr>
<tr>
<td>6 McKibbin &amp; King (1983) Activity group</td>
<td>4 boys with LD &amp; behavior problems, case study</td>
<td>observations made during group sessions</td>
<td>group members showed more improved and cooperative behavior; greater independence &amp; increased verbal expression of anger</td>
</tr>
<tr>
<td>7 Mishna (1994) Interpersonal Group Therapy</td>
<td>4 boys &amp; 4 girls with LD, age 13-17, case study</td>
<td>interview</td>
<td>qualitative analysis indicated enhanced self-understanding &amp; self-esteem, less anxiety &amp; less feelings of isolation</td>
</tr>
<tr>
<td>8 Mishna, Kauffman, Little &amp; Tarsha (1994) interpersonal group therapy</td>
<td>1 boy &amp; 1 girl with LD, age 13-17, review and case study</td>
<td>case analyses</td>
<td>description of group process with reference to subjects' reactions during group</td>
</tr>
<tr>
<td>9 Omizo &amp; Omizo (1987) group counselling</td>
<td>55 students with LD, almost all boys, age 12-15, pre-post test control group, with random assignment of boys to exp. &amp; control group. No placebo control</td>
<td>Locus of Control Inventory for Three Achievement Domains; Cooperant Self-Esteem Inventory</td>
<td>self-esteem measure &amp; several subscales (success-intellectual domain, failure-intellectual domain &amp; failure-social domain) of the locus control measure were significant discriminators between experimental &amp; control groups</td>
</tr>
<tr>
<td>10 Ostroader &amp; Silver (1993) Psychological Therapies</td>
<td>adolescents with LD anecdotal review</td>
<td>description</td>
<td>discussion of appropriate group therapy; models for adolescents with LD</td>
</tr>
<tr>
<td>11 Peckar (1988) Group Therapy</td>
<td>2 male adolescents with LD, age 13 &amp; 15, case study</td>
<td>anecdotal review</td>
<td>clinical case vignettes</td>
</tr>
<tr>
<td>12 Rosenberger (1988) self-psychology &amp; group therapy</td>
<td>not described fully, adolescents with LD theoretical paper</td>
<td>review</td>
<td>theoretical description of self-psychology as base for therapy</td>
</tr>
<tr>
<td>13 Rosenthal (1992) Self-Psychology</td>
<td>late adolescent, LD review</td>
<td>overview of self-psychology constructs and application to counselling</td>
<td></td>
</tr>
</tbody>
</table>
Results of this study described several key variables common to group therapeutic interventions within the general group therapy literature (e.g., cohesiveness, catharsis, altruism, universality and interpersonal learning) and identified a unique relational manner in which therapeutic factors were found to be operative termed 'mutual recognition' (e.g., participants recognize themselves in others and others in themselves). Participants' perceptions indicated that as a result of the group, they reported "feeling better about themselves and more able to understand and relate to others" (p. 256).

Second, Cook (1994) analyzed video-tapes, interviews and social skills questionnaires of three male adolescents with LD upon completion of a 20-week interpersonal group intervention conducted at Integra. Video-tape analysis and interview data suggested that one adolescent clearly benefitted from the group. This outcome, however, was not supported by ratings on a social skills questionnaire. Recommendations based on these findings included possible modifications in goal setting, the use of behavioral strategies and adaptation of the leadership style. Since the qualitative findings in both these studies were promising, this leads to the need for a controlled empirical study.

Only one article was a description of an empirical study evaluating a group intervention for adolescents with LD (Omizo & Omizo, 1987). In this study, Omizo and Omizo (1987), using a cognitive therapy model, investigated the effects of eliminating self-defeating behaviour of 55 adolescents with LD, through a seven week, school-based, group counselling program. A pre-post test control group design, with random assignment of adolescents to either an experimental or control group was used. Results indicated that self-esteem and locus of control were significant discriminators between the experimental and control group. The study included a
randomized control group, a rarity for outcome research studies. This study, however, failed to include an adequate description of the different treatment conditions, used untrained group leaders and did not test maintenance effects.

The remaining studies provide an initial base for understanding the theoretical relevance and impact of group therapy on adolescents with LD, however, due to the lack of methodological rigour in the remaining studies, summarizing the findings of these studies is not productive.

A review of the research pertaining to group therapy with adolescents with LD highlights numerous gaps and methodological flaws in the literature. These studies reflect a lack of attention to specifying theoretical models, inadequate sampling, setting limitations, age variances, poor descriptions of interventions, no attempt at manual development, limited design structure (e.g., no controls, no random assignment), questionable dependent and outcome measures and limited information on therapist training (see Kazdin, 1994; 1998b; Weisz et al., 1995 for an in-depth review of exemplary practices). As well, empirical evidence in support of interpersonal group therapy in general, and specifically for adolescents with LD is completely lacking.

**Interpersonal Group Therapy for Adolescents with LD**

Research has documented that adolescents with LD experience social and emotional difficulties as a result of their disabilities. A review of the literature addresses a need to research the social functioning of adolescents with LD in order to develop strategies for helping these adolescents overcome their social and emotional problems. The demand to develop effective
treatments for adolescents with LD is especially important when their problems are seen from a long term perspective (Lamminmaki et al., 1997). In this section, a description of Yalom's (1985) interpersonal group therapy model will be provided. Next, a rationale for adapting the procedures of interpersonal group therapy to the developmental and psychosocial needs of adolescents with LD will be presented.

**Interpersonal Group Psychotherapy**

Despite the paucity of efficacy research on interpersonal group therapy, this model has received extensive theoretical attention (Bloch & Crouch, 1985; Yalom, 1985; 1995). A primary rationale for group therapy with adolescents is that it provides a context in which interpersonal learning occurs (Yalom, 1985). In the interpersonal tradition of Sullivan (1953), Yalom has defined the goal of therapy as "enabling the individual to participate collaboratively with others and to obtain interpersonal satisfaction in the context of realistic, mutually gratifying relationships" (Vinogradov & Yalom, 1989, p. 8). The interpersonal model is based on a number of assumptions (Yalom, 1985; Leszcz, 1992). First, each individual has a central human drive for interpersonal relationships. The group setting can provide a safe and protective environment where the adolescent can feel connected and share common feelings and experiences with other group members. Second, psychological disturbance is viewed as a consequence of disturbed interpersonal relationships. This disturbance is manifested in disturbed interpersonal communication and interaction. Pickar (1988) underscored the impact of years of frustration and failure on adolescents with LD suggesting that the group provides an arena whereby the adolescents' problems can be exposed, confronted and worked on, with the
careful attention of supportive therapists. The emphasis placed on peers providing feedback to each other is consistent with the developmental importance and power of the peer group during adolescence (Sullivan, 1953; Erickson, 1980). Third, a central concept of interpersonal group therapy is the focus on the patient-therapist relationship. The therapist is both participant and observer. Particularly for adolescents with LD, therapists must use techniques to accommodate for the adolescents' disabilities. Techniques to foster the group process include clarifying verbal and nonverbal messages, monitoring discussions to ensure that members follow the conversations, facilitating interactions in which group members talk to and acknowledge one another and making time allowances to process information (Brown & Papagno, 1991; Mishna, 1996; Ostrander & Silver, 1993). Fourth, the group represents a social microcosm that makes it likely that group members will display maladaptive behaviours that resulted in them being referred to the group. Berkowitz and Sugar (1986) suggest that it is the miniature real-life situation from which adolescents with LD can learn about and modify behaviour. Fifth, group cohesiveness is identified as one of the more complex and integral features of successful group therapy. The members of a cohesive group are accepting and supportive of one another. Cohesiveness in a group favours self-disclosure, risk-taking and the expression of conflict. For adolescents with LD, this experience may be the first time they feel like they belong (Berg & Wages, 1982) and this may facilitate increased self-esteem through both being accepted by the group and by the capability to help others (Scheidlinger & Aronson, 1991). Sixth, the corrective emotional experience is crucially important to altering behaviour. It is expected that members of the group will act out their maladaptive behaviours and receive negative reactions from the group. For adolescents with LD, self-disclosure, given within a positive therapeutic climate,
allows problems, anger and frustrations to be dealt with in an acceptable and meaningful way (Azima & Richmond, 1989). Seventh, the model is based on experiences that occur in the here-and-now. The group's proximity to real life permits group members to repeat and discuss issues relevant in their current lives. For adolescents with LD, a here-and-now focus may provide a context for discussion of topics that are immediate, concrete and personally relevant.

Vinogradov and Yalom (1989) summarize the therapeutic process of change in the following sequence: (a) the members' display of their characteristic maladaptive behaviours and interpersonal interactions emerge in the group; (b) members share observations of each other's behaviour and discover interpersonal distortions; (c) members point out these distortions and share feelings in reaction to each other's interpersonal behaviour; (d) each member begins to have a more objective view of his/her behaviour and the impact it has on others; (e) each member becomes aware of how his/her behaviour influences the opinions of others and, thus, their own influence; (f) as a result of understanding how interpersonal behaviour influences one's sense of self-worth, members become more aware of their responsibility for correcting their interpersonal distortions and establishing healthier functioning; (g) with the acceptance of responsibility, each member begins to realize that he/she has the ability to change; and (h) the more affectively driven the events in the sequence, the greater the potential for change.

Thus, the principles of interpersonal group therapy suggest a model that emphasizes peer relatedness, the correction and disconfirmation of maladaptive interpersonal schema and opportunities to teach members interpersonal skills to break maladaptive interpersonal schema within a context that promotes acceptance.
A Rationale for the Use of Interpersonal Group Therapy with Adolescents with LD

Due to its emphasis on the enhancement of self-esteem and interpersonal relationships, interpersonal group therapy developed by Yalom (1985) seems highly appropriate for the treatment of adolescents with LD. Reviews of the interpersonal model suggest that this intervention combines several promising aspects for adolescents with LD. First, the marked importance of peer interaction and devaluation of parent roles in this developmental phase makes this a sensible choice for this age group. As well, the crucial role that the adolescent peer group serves in the promotion of self-esteem and social maturation has been well documented (Sullivan, 1953; Hartup, 1996). Second, several review articles on group therapy provide a theoretical framework suggesting that interpersonal group therapy is targeted to meet the psychosocial needs of the adolescent with LD (e.g., acceptance by a peer group, opportunities for friendship, flexibility in delivery of therapeutic elements). Third, several authors have identified and outlined relevant modifications to this intervention required for adolescents with LD (Coche & Fisher, 1989; Mishna, 1996; Pickar, 1988). Fourth, speculation on the phenomenology of social skills deficits within learning disabilities raise hypotheses that highlight specific advantages of group therapy for treatment of learning disabilities compared to social skills training (Forness & Kavale, 1991). The first of these hypotheses involves social learning theory in which adolescents with LD fail to acquire and or perform social skills due to the lack of environmental opportunity (Gresham, 1988). Perlmutter (1986) suggests that teaching youth social skills they already possess can be harmful. The second hypothesis relates to the possibility of a dysfunctional family system in dealing with the stress of an adolescent with LD (Wilchesky & Reynolds, 1986). Group therapy can provide a peer group from which additional
supports can be given and emotional concerns addressed. The third hypothesis concerns comorbidity. There is clearly an overlap between learning disabilities and other disorders (San Miguel, Forness & Kavale, 1996; Handwerk & Marshall, 1998). Group therapy models may be broad enough to consider and address some of the multiple meanings of comorbidity in adolescents with LD (Kendall & Clarkin, 1992). For example, therapeutic techniques can be modified for particular patient characteristics, current problems relating to family interactions can be addressed within the group setting and treatment focus can be individually tailored. Finally, in the general field of adolescent therapy some promising psychosocial group treatments have been applied with different populations in varied settings. These include coping skills training for adolescents with depression (Lewinsohn, Clarke, Hops & Andrew, 1990), alternative group therapies for delinquent youth (Feldman, Caplinger & Wodarski, 1983), school-based group counselling programs for externalizing/internalizing problems (Durlak, 1992) and psychotherapeutic interventions administered in school settings (Prout & DeMartino, 1986).

The key rationale for group treatment is based on the chronic and persistent difficulties adolescents with LD have relating to peers. Group therapy provides a peer group which is essential for development and is typically lacking for this clinical population. Descriptions of the enabling effects of interpersonal group therapy have been summarized by several authors and include: opportunity to express clinically relevant concerns, builds self-esteem through acceptance and helping of others, improves socialization skills, decreases adolescents' sense of isolation, develops new skills in relating to others and provides a needed peer group (Berkowitz & Sugar, 1982; Mishna, 1996; Pickar, 1988; Brown & Pagagno, 1991; Ostrander & Silver, 1993).
The Structure and Conceptual Framework of Integra's Group Therapy Model

At the time of this study, an operationalized form of the treatment (i.e., protocol or manual describing the treatment components) was not available. Guidelines for the researcher and therapists in regard to details of the theoretical framework, what behaviours to target for change, by what set of strategies and at which point in the treatment had been communicated through training sessions at the agency and particularly for the researcher, through personal communication with agency staff. To remedy the lack of attention to comprehensive descriptions of group dimensions within the agency and in the empirical literature in general (Dagely et al., 1994), thorough descriptions are provided where relevant. This section will describe the conceptualization of treatment focus, techniques implemented, relevant domains of process and outcome and treatment goals of Integra's group therapy model.

Description of Clinical Setting

Integra, is a Children's Mental Health Centre in Toronto, Ontario, that serves children and adolescents between the ages of 8 and 18, who have learning disabilities and related social/emotional problems. Adolescents and their families may receive a range of services including individual, family, and group counselling. Groups are an integral part of the adolescent's treatment and they may participate in several through out their involvement with the
Integra provides the following description of its client population:

Integra serves children or adolescents who are experiencing social/emotional difficulties and who present with age appropriate cognitive development but specific moderate to severe deficits in one or more of the basic psychological processes affecting the encoding, processing, organization and/or manipulation of information. Processing deficits may be present in some aspect or aspects of attention, receptive or expressive language functioning or visual-perceptual skills. The specific learning disability must be associated with decreased academic performance, as reflected in a significant delay in one or more of the following academic areas: oral expression, listening comprehension, written expression and organization, phonetic decoding, reading comprehension, mathematics calculation or reasoning and attention/concentration. Although the cognitive and academic disabilities may occur concurrently, they cannot be the direct result of a primary visual or hearing disability.

Before placement in a group, adolescents and their families are interviewed in a two-phase intake assessment. Interviews consist of two sessions, where the client's and family's history is carefully taken and clinical assessment is done. Following initial assessment, each adolescent is assigned to a case manager who further probes the clinical concerns through case conferences. When decisions for a group placement are made, crucial information is conveyed to the group therapist in order to develop appropriate individual goals. Group treatment consists of 8-30 weekly sessions of one and a half hours duration. Each session includes a 15 minute mid-break. Therapists are certified social workers, experienced undergraduate staff, or interns. All sessions are video-taped and stored. All the group sessions have live supervision, via a two-way mirror, by an experienced supervisor.

The majority of the groups at Integra are composed of adolescents of the same gender. The rationale is that these adolescents require assistance to find appropriate ways of relating with same sex peers. The outcome of previous attempts to combine boys and girls in a group has suggested that the presence of members of both sexes raises the adolescents' anxiety to
overwhelming and unmanageable levels (Mishna, 1996).

**Description of Interpersonal Group Therapy**

Although the group therapy model at Integra lacks specific and articulated guidelines for their clinical population, there is a growing research base within the agency, which has begun to more systematically investigate and articulate their model of group therapy. Qualitative case study analyses by Mishna (1994; 1996) and Mishna et al. (1994) have provided guidelines for Integra's modification of traditional group therapy with its specialized clinical population of adolescents with LD. Integra provides the following description of its group therapy treatment:

The cognitive deficits that learning disabled adolescents experience, combined with their chronic academic and social failures, may interfere with emotional and social development. This understanding underlies the model of group therapy used in the Integra programs. The groups combine principles derived from psychodynamic group theory, with techniques in which the leaders actively facilitate group process to accommodate the teenagers' learning disabilities (Mishna et al., 1994, p. 122).

The group therapy model in this study is described as interpersonal psychodynamic group therapy. According to the interpersonal perspective of group theory (Yalom, 1975), the prime therapeutic factor in group therapy occurs through the interactions that take place in the group, among the members, in the "here and now". It is thought that through repeated episodes within the group, the members learn about their maladaptive interpersonal responses and perceptions, which repeatedly evoke negative and unwanted reactions from others. Insight and transference are seen as facets of interpersonal learning but are considered to be less therapeutic than the "corrective emotional experience" of the actual interchanges among the members in the group, including feedback to one another (Rutan & Stone, 1984) (Mishna, 1996, p. 250).

Integra's group therapy model is grounded in the following set of beliefs: 1) the manner in which the adolescents manifest their behaviours within the context of the group is most relevant to change; 2) the group, not the therapist, is the agent of change; 3) through a process of mutual exploration, the adolescents engage in self-disclosure and feedback, leading to greater self-acceptance and feelings of self-worth; and 4) the group process assists adolescents in acquiring strategies for dealing with life stressors (Mishna, 1994, p. 47).

The group-as-a-whole tasks include finding commonalities and developing a sense of trust. In light of the absence of appropriate social skills among this population,
the groups must deal with problematic interactions by encouraging them to support and challenge one another. A key objective is to enable the members to assume greater responsibility for the group's functioning over time, and thereby reduce their dependency upon the leaders.

We make adjustments to accommodate particular learning disabilities and levels of social functioning. Leaders assess and respond to the needs of individual group members. In doing so, a leader might clarify verbal statements and nonverbal cues; monitor group discussions to ensure that members follow the conversations and recall what others have said; offer connections between inappropriate behaviours and underlying feelings; and provide active direction and assistance to enable members to acknowledge and talk to each other. Further adjustments due to the adolescents' learning disabilities and social isolation include having contact with parents while the adolescents are involved in groups, and encouraging members to socialize with one another outside of group.

The groups can be understood along a continuum of social functioning. At one end are adolescents who need help to make basic social contacts; at the other end are adolescents who display some social competence but need help to develop self-awareness and internalized coping strategies. The extent to which leaders intervene in each group varies along this continuum. With members who need help in making basic social contacts, the leaders actively direct, guide and provide structure for the group members. With those who need help in developing self-awareness, the leaders offer non-directive facilitation and interpretation. Parental involvement also varies according to where the groups fall along the continuum of social competence, decreasing as the adolescents' competence increases. For example, in groups where socialization is just beginning and the adolescents are less able to speak for themselves, contact with parents can enhance the adolescents' participation. Parents can suggest relevant issues for the adolescents to deal with in group, can encourage reluctant adolescents to attend group and can assist adolescents to socialize outside of group (Mishna et al., 1994, p. 123).

In the first group session the leaders identify that all of the group members have learning disabilities and related social/emotional problems. They review the group's purpose, which is to help the group members deal with their problems and review the rules, such as confidentiality, safety and no violence. The leaders assume a role in which they encourage the members to raise issues, and they facilitate interaction. It is the group members who make decisions regarding matters such as where they sit and what they discuss. Interactions within the group are used by the leaders to explore their meaning for the members, as well as the ways the members respond and deal with each other. A group member might raise an issue or initiate conversation. If the members do not initiate, the leaders facilitate discussion. The nature of this facilitation varies according to each group. For example, the leaders might comment on the silence, ask if members have issues to discuss, or refer to an issue from the previous week. Each group session concludes with a 'wrap-up', in which the group members and leaders comment on their responses to the particular group session (Mishna, 1996, p. 251).
Description of Treatment Goals

Mishna et al. (1994) provide the following description of Integra's group therapy treatment goals:

The group's aim is to improve the adolescents' social and emotional functioning. Relationships within the group provide the context for growth and change. The goals and objectives for all the members include: (a) greater ability to express themselves and to verbalize their feelings; (b) increased self-esteem; (c) increased ability to take risks; (d) increased social competence, which includes the ability to understand and relate to others and to perceive verbal and nonverbal cues; (e) decreased social isolation; (f) increased ability to initiate social interaction, assume responsibility, and in a beginning way, deal with issues of independence; and (g) increased social interactions outside of the group (p. 122).

Summary of the Literature Reviewed and Objectives of the Present Study

The present study was designed to evaluate the effectiveness of a 10-week group therapy intervention for adolescents with LD within a clinic setting. An increased awareness of the scope of the emotional, behavioral and social problems of adolescents with LD has brought the need for effective intervention research into focus. Adolescents with LD often display lower self-esteem, loneliness and social difficulties (Tur-Kaspa, 1995; Handwerk & Marshall, 1998; Smith & Nagle, 1995). The majority of available interventions for adolescents with LD fail to recognize that problems in the cognitive and affective domains are the result of a combination of factors (Epstein, 1994; Kazdin & Johnson, 1994). In view of the multiplicity of these adolescents' problems, some researchers have concluded their studies with recommendations to treat children and adolescents in small groups (Margalit, 1989; 1993; Bleuer, 1987).

Several relevant areas of research documenting the psychosocial problems of adolescents with LD appear to converge with group therapy's sphere of influence. In a general
sense. a case can be made for the use of group therapy for adolescents with LD, particularly in light of the documented psychosocial problems in areas of self-esteem, loneliness, social competence and interpersonal relationships.

An argument for the suitability of group treatment for adolescents with LD, with its emphasis on interpersonal relationships, has been advanced by several authors. Psychosocial developmental theory has been applied to adolescents with LD demonstrating how learning disabilities may interact with social, emotional and environmental factors (Pickar, 1986; Pickar & Tori, 1986; Shechtman et al., 1996) to compromise both the development of self-esteem and formation of adequate interpersonal relationships (Berg & Wages, 1982). A growing literature documents the developmental appropriateness (i.e., separation from parents, power of the peer group, independence) of this intervention for adolescents (Scheidlinger & Aronson, 1991; Berkowitz & Sugar, 1986). As well, group therapy may provide the first opportunity for adolescents with LD to experience a close friendship, share personal feelings and challenge their perceptions of close relationships (Scheidlinger & Aronson, 1991). The group context may provide a peer group which is essential for healthy adolescent development and is typically lacking for this clinical population. Relationships established within the group may provide a context for growth and change in the adolescents' social and emotional functioning (Mishna, 1994).

Several studies based on the interpersonal group therapy approach with elementary children have indicated progress in self-esteem and friendship relationships after intervention (Shechtman, 1991; 1993; Shechtman, Vuremband & Hertz-Lazarowitz, 1994). Although well-controlled studies of group therapy for adolescents with LD are limited, several researchers have
indicated that with modifications, adolescents with LD can benefit from group therapy (Shechtman et al., 1994; Yalom, 1995). Additionally, these authors offer encouragement for group therapy as a viable intervention for adolescents with LD (Azima & Dies, 1989; Rosenthal, 1991). Despite these findings, there are virtually no studies evaluating the efficacy of this treatment for adolescents with LD.

The present study was the first treatment-outcome study conducted at Integra to evaluate the effectiveness of an on-going group intervention for adolescents with LD and psychosocial problems. As well, it was one of a limited number of methodologically sound, clinically-based studies in the existing literature.

This study examined group differences in self-esteem, loneliness and behavioral and psychological adjustment using empirically validated measures. Secondary analyses based on additional goals specified by the agency (i.e., development of friendship understanding, feelings of belonging, greater awareness of the impact of having an LD) were conducted to enhance ecological validity through selection of agency defined, clinically relevant measures. For this purpose, a semi-structured interview and friendship questionnaire were administered to explore adolescent friendship networks and friendship understanding. To further enhance the clinical relevance of the outcomes, a measure of clinical significance and social impact was administered.

The source of these outcome measures included the participants' own performance along with parent and teacher reports, at three measurement points, on empirically validated measures and semi-structured interviews. Thus, this design achieved some balance between self-reports and independent judgements of outcome, with real-world functional outcomes and a test of
maintenance effects.

Although not yet standard practice in intervention research, this study included a check of treatment integrity (Kazdin, 1998 a & b; Waltz, Addis, Koerner & Jacobson, 1993). A treatment integrity test provides some assurance that the intervention being investigated is conducted in a manner that is consistent with its philosophy and practices (i.e., by examining the behaviour of the therapists and group members directly). The simplest method of assessing adherence was used in this study and included using a checklist of techniques and rating the occurrence or non-occurrence of items that were prescribed by the treatment protocol.

Hypotheses

The development of the hypotheses was based on a variety of research and theoretical findings in the areas of adolescent development, group therapy and learning disabilities. The hypotheses were divided into two sections: primary hypotheses and secondary research questions. The primary hypotheses were derived from a synthesis of the literature documenting both the needs of adolescents with LD and highlighting the beneficial goals of group therapy. Specifically, the primary hypotheses addressed assertions in the literature and findings from Integra's research base (Mishna, 1994; Mishna 1996; Mishna et al., 1994) that group therapy helps to improve behaviour, builds self-esteem and decreases one's sense of isolation through a group environment that fosters acceptance and helping.

In addition to the primary outcome measures, three clinically meaningful domains (i.e., friendship network, friendship understanding, and awareness of the impact of one's learning
disability) identified mutually be the agency and researcher were included in exploratory analyses. As standardized measures were not available to address these specific goals formulated by the agency, a semi-structured interview was developed by the researcher to explore both the adolescents' understanding of their LD along with various friendship variables. As well, a friendship questionnaire was administered to explore the friendship network of these adolescents. Thus, exploratory analyses utilizing these secondary outcome measures were undertaken to address within-clinic empirical questions. Each measure was assessed at pre-, post- and follow-up testing.

Primary Hypotheses

Outcome measures defining adolescent psychological and behavioral adjustment included the: Child Behaviour Checklist (Achenbach, 1991a); Youth Self-Report (Achenbach, 1991b); Self-Perception Profile for Adolescents (Harter, 1988) and Loneliness and Social Dissatisfaction (Asher, Hymel & Renshaw, 1984).

Consistent with the literature on group therapy and learning disabilities, it was hypothesized that the therapeutic group process would lead to a decrease in problematic behaviours and other areas of adolescent dysfunction. Since social and emotional therapeutic factors were emphasized in the current treatment program, it was expected that, after treatment, adolescents would behave better socially, have more positive self-perceptions and report less loneliness. It was predicted that the effects at post-test would be sustained at follow-up.
Hypothesis 1.

It was hypothesized that adolescents in the treatment group would report fewer psychological adjustment and behavioral problems from pre- to post- testing to a two month follow-up relative to the control group.

Hypothesis 2.

It was hypothesized that parents of adolescents who participated in the treatment group would report fewer psychological adjustment and behavioral problems in their adolescents from pre- to post-testing to a two month follow-up relative to the control group.

Hypothesis 3.

It was hypothesized that adolescents in the treatment group would report higher self-perceptions of global self-worth, social acceptance and close friendship from pre- to post-testing to a two month follow-up relative to the control group.

Hypothesis 4.

It was hypothesized that adolescents in the treatment group would report lower levels of loneliness and social dissatisfaction from pre- to post-testing to a two month follow-up relative to the control group.
Secondary Research Questions

Exploratory outcome measures defining friendship network, friendship understanding and the impact of having a learning disability included: a Friendship Questionnaire (adapted from Wiener, 1995) and a semi-structured interview. Each measure was assessed at pre-, post- and follow-up testing.

Research Questions.

Relative to the control group, did the adolescents in the treatment group report:

1. an increase in number of friends?
2. an increase in interactions with friends?
3. a more in-depth understanding of friendship?
4. a better understanding of their LD and its effects on their life?
CHAPTER 3

METHOD

Participants

Participant Characteristics

Thirty-one male adolescents with learning disabilities (LD) who had been receiving treatment for problems related to learning disabilities and social-emotional issues, their parents and teachers participated in the study. All of the adolescents were receiving treatment from Integra, a children's mental health centre specializing in the emotional and social needs of children and adolescents with LD in Toronto, Canada. In order to receive treatment, the adolescents had to have been diagnosed as having a learning disability by a psychologist. The criteria included at least average intellectual ability as measured by Verbal, Performance and/or Full-Scale IQ greater than 85 on the Wechsler Intelligence Scale for Children (WISC-R or WISC-III; Wechsler, 1974; 1991), and below-average academic achievement as measured by a percentile score at or below the 16th percentile (e.g., standard score below 85) on at least one subtest of a standardized achievement test. Documentation of psychological processing difficulties and social emotional difficulties was required.

Obstacles in the clinic setting, such as the limited availability of collecting eligible study participants, administrative constraints (e.g., time frame for running the groups, staffing), along with clinical concerns (e.g., treatment needs of control participants), required a hierarchy of
criteria for selection. Only males participated because adolescent groups are same-sex and there were not enough females to meet the sample size requirement. As well, to maintain an appropriate cell size for statistical comparisons, a same-sex subject group was needed. Inclusion criteria for the study were (a) 12-18 years of age; (b) no previous group experience if possible and (c) eligible for a non-activity based, discussion group (i.e., can identify personal feelings, tolerate emotional conflict, describe and discuss a range of personal feelings, can attend to the group process with minimal distractions). These adolescents received a variety of types of treatment at the agency. All of them were assigned a case manager who provided counselling to the parents and adolescent, provided consultation to the school, and/or monitored other treatment provided within the agency and through outside mental health professionals. The other forms of treatment provided by Integra during the research study year were family therapy, individual therapy, group therapy and case management. At the time of data collection the participants had been in treatment from one to five years.

Sample characteristics in terms of age, grade, family characteristics, school information and socioeconomic status (SES) (Blishen, Carroll & Moore, 1987) are shown in Table 2. The Blishen Scale, which is based on Canadian census data, assigns a number (ranging from 17 to 101), to the occupation of the parent with the higher socioeconomic status. Socio-economic status of the sample was overwhelmingly middle income. Of the total sample 97% were Caucasian. At the time of recruitment, age of adolescents ranged from 12 to 18 years (M=15.3 years) with grade placement ranging from Grade 6 to OAC (M= 10). The majority of parents were married (61%) and 90% of the sample spoke only English. Of the total sample only one participant did not receive some form of special education.
### Table 2

**Description of the Sample**

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<th>SD</th>
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<td>15.3</td>
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<td>16-18</td>
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<td>10-12</td>
<td>18</td>
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<td>13.0</td>
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<tr>
<td><strong>Family's Marital Status</strong></td>
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<tr>
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</tr>
<tr>
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<td>67.8</td>
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<tr>
<td>other</td>
<td>3</td>
<td>9.7</td>
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</tbody>
</table>
Table 3 shows demographic data related to agency information. At the time of recruitment, 84% of the participants were receiving some form of treatment services. Following pre-testing, 29% (n=9) of the participants required additional services as a result of clinical information revealed during testing with the researcher (e.g., suicidal indications, thought disorders, depressive symptoms and obsessive-compulsive disorder). Participants' group experience prior to the study was almost equally divided among those who had participated in a similar group to the research study (29%), those with no previous group experience (32%) and those who were involved in a different form of group treatment (39%). Of the total sample, 40% were on medication. The majority of participants' learning disabilities, according to agency data, fell within attention (26%), perception (36%) and language problems (23%). IQ and achievement testing results met agency requirements, with the exception of one participant with an IQ in the 70's.

Participant characteristics represented a heterogeneous set of factors that were likely to influence treatment outcome. One of the salient domains that is a candidate for inclusion in treatment research is comorbidity (Kazdin, 1998b), which was not included as a variable in this study. However, post-hoc analysis of individual differences and client characteristics revealed that at least 21 out of the 31 participants (68%) had a comorbid diagnosis with their LD. In order of frequency, these included: ADD/HD, depression, Asperger's Syndrome, Tourette's Syndrome, Obsessive-Compulsive Disorder, thought disorders and conduct disorder. Within the treatment group, individual differences related to excessive conduct disorder (n=1), extreme anxiety for the group (n=1) and low motivation for treatment (n=1) by these adolescents may have influenced treatment process and outcome.
<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>%</th>
<th>X</th>
<th>(SD)</th>
</tr>
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<tr>
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<tr>
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<tr>
<td>no</td>
<td>19</td>
<td>60.0</td>
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</table>

*-Percentile

* -Mean of each Ss' lowest academic achievement score.
Recruitment and Interviewing Procedures

Eligible participants were selected in two ways. First, the Integra Clinical Director reviewed the one year waiting list at the agency (n=52), selecting those files which included adolescents ages 12-18, who also fit criteria for the study treatment group. This was the preferred mode of selection since it would minimize effects from previous experience at the agency. These cases followed the agency's protocol for assessment (i.e., two family and adolescent assessment sessions, team discussions and evaluation of suitability for the group). This process took an average of 2-4 months and was continued until the deadline for the study was met. This process resulted in three participants from the waiting list. The second selection procedure involved clinical staff selecting current cases which were in need of a group. In order to meet the demands of 32 candidates needed for the research study, some participants were selected who, although they could benefit from a group, may not have received the group if the study was not being done. Once a list of 35 youth who met the study criteria was obtained, the Clinical Director and/or clinical case managers attempted to recruit the family for study participation and obtained informed consent from the parent and informed written assent from the adolescent (Appendix 1). Thirty-three of the 35 families meeting inclusion criteria were successfully recruited for participation.

Eligible participants (n=33) were randomly assigned, stratified by Attention subscale scores on the Child Behavior Checklist (CBCL; Achenbach, 1991a) and previous group experience, to two experimental groups, A (n=8) and B (n=8), and two control groups, C (n=8) and D (n=9) (see Table 4). The participants were matched on the basis of Attention scores to guarantee a close approximation to one of Integra's inclusion criteria for the study which
Table 4

**Stratified Randomization for Original Sample**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Treatment A (n=8)</th>
<th>Control C (n=8)</th>
<th>Treatment B (n=8)</th>
<th>Control D (n=9)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Combined Characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Attention (T ≥ 70)
  Previous Group Experience   | n=1               | n=1             | n=0              | n=0            |
| Attention (T ≥ 70)
  No Previous Group Experience| n=3               | n=2             | n=2              | n=2            |
| Attention (T < 70)
  Previous Group Experience   | n=2               | n=2             | n=2              | n=1            |
| Attention (T < 70)
  No Previous Group Experience| n=2               | n=3             | n=4              | n=6            |

**Note.** Treatments A & B received the group intervention and Controls C & D received 'usual care conditions' which included any preexisting intervention or any additional treatment with the exclusion of the group therapy intervention conducted in this study.

**Note.** For the purposes of randomization, 'other group experience' was collapsed with 'no previous group experience', since in both cases there was no involvement with the group therapy treatment to be conducted in this study.

**Note.** Following the randomization procedures, 2 subjects dropped out of the study. Therefore, Treatment B and Control C decreased in subject size to n=7, with a total sample size of n=31.

* Achenbach T scores greater than or equal to 70 were used as a marker of the clinical range, at the 98th percentile.
indicated the participants' ability to attend to the group process with minimal distractions. To be considered as exhibiting attentional difficulties on the CBCL, adolescents were required to score at or above the 98th percentile on the Attention syndrome scale (T>70). Achenbach (1991) suggests that this cut-off minimizes the number of false positives. Treatment and control groups were matched on amount of exposure to previous groups. Treatment for Group A was carried out in the fall and for Group B in the spring. The control conditions did not receive group therapy for the duration of the study and were assessed along with the treatment groups: Group C, in the fall and Group D, in the spring. Over the course of the study, two families dropped out, leaving 31 participants in the final sample: treatment A (n=8); treatment B (n=7); control C (n=7) and control D (n=9).

Following consent and assignment to the groups, the Clinical Director and/or case managers informed the participants of their treatment or control condition. Families were assured that placement in the control group would not interfere with other treatment, with the exception of no group therapy treatment for the duration of the study. If needed, control participants were offered a group at the conclusion of the study.

Compliance Rates

Response rates were calculated for adolescents, parents and teachers across pre-, post- and follow-up testing. Adolescent response rates were 100% at pre-and post-testing and 97% at

---

1Under these circumstances, the control group (usual-care participants) were free to continue with any preexisting intervention or to seek any new assistance during the study period if required. To equate the base level of nonexperimental intervention across both treatment and control conditions, treatment group participants were also permitted to continue any preexisting treatment and to seek out any additional treatment (see Clarke, Hawkins, Murphy, Sheeber, Lewinsohn & Seely, 1995, for a description of a randomized usual-care condition).
follow-up (n=1 drop out). Over the three testing periods, parent compliance rates dropped from 100% at pre-testing to 87% at post-testing and 77% at follow-up. Teachers (84% were special education teachers) were initially contacted by telephone and 30/31 indicated that they would participate for the duration of the study. Teacher compliance rates dropped from 81% at pre-testing to 65% at post-testing and 58% at follow-up. As a result of low response rate by teachers, only pre-test data were analyzed.

**Treatment Program**

**General Description**

The group therapy treatment evaluated in the present study incorporates interpersonal psychodynamic theory (Yalom, 1985; 1995) but alters techniques to achieve the specified goals of this clinical population. The framework of Integra's group therapy model includes:

1) identification and defining of goals for individuals and the group; 2) use of theoretically derived therapeutic techniques; 3) context of a miniature real-life situation; 4) access to constructive feedback on performance by therapists and/or members of the group; and 5) transfer of learning to other situations. Therapist roles include a variety of techniques: labelling, modelling, explicit reinforcement, empathic confrontation, bridging, interpretation and developing socializing techniques. The treatment was designed to enhance the social and emotional functioning of the participants by therapeutic factors brought out in the group context (e.g., alliance, support, self-disclosure, understanding, insight, positive feelings and ability to
express or experience a changed self).²

The group therapy treatment consisted of 10 weekly sessions, each lasting for 1.5 hours and containing the same structure. Upon arrival to the first group meeting, the adolescents were brought together in the group room at the agency by the two co-leaders/therapists, introduced to the Clinical Director behind the two-way mirror and told that each session was video-taped. Confidentiality and safety issues were addressed. Each group session was followed by a 'wrap up', an explanation of participants' and leaders' feelings about the session's central themes.

The 10 group sessions were organized in three phases: a building phase, a middle phase and a final phase. In the building phase (Sessions 1-3), the primary goals focus on clarifying expectations, familiarizing the group members with group process and addressing issues of engagement. In the middle phase (Sessions 4-6), the co-leaders encourage increasing trust which provides opportunities for members to examine and explore themselves. In the final phase (Sessions 7-10), the adolescents are more able to self-disclose, provide feedback and acknowledgement to the group members and practice specific skills. In the last session, therapists may begin with a recognition of the difficulty of saying good-bye and encourage members to discuss whether their experiences in the group are unresolved, taking a more active role in assisting the adolescents to work through these issues.

During group sessions, the supervisor (behind the mirror) would 'phone in' to the leaders, offering suggestions and providing direction when necessary. When required (e.g., safety issues, clinical concerns), the Clinical Director would speak directly with members of the group, either

² At the time of this study, no standardized, 'operationalized' treatment manual was available. Guidelines for the therapist in regard to what behaviour or symptom to target for change, by what set of strategies and at which particular point in the treatment had been communicated through training sessions at the agency.
immediately before or following a group session. Over the course of treatment, if warranted, meetings were held to inform case managers about the progress of their client.

**Therapists, Treatment Administration and Integrity**

Each treatment group was led by the same two female co-leaders/therapists. One of the original group leaders, however, was replaced due to illness following the fifth session of treatment Group A. The new leader (matched on type of group therapy training, years of practice, style of leadership and gender) remained as a co-leader for both treatment Group A and B. All leaders were experienced professional social workers, and all had at least four years experience with this particular group therapy treatment. Live supervision for each treatment session was provided by the Clinical Director of the agency, who has a Ph.D. in Social Work. The similar background in training and supervision of the leaders coupled with live supervision by the same supervisor, largely guaranteed the similarity of the interventions across the groups. Following each session, leaders completed a 'summary group form', outlining the goals, specific behaviours of members and other group content. Weekly discussions took place between the leaders and supervisor to discuss the group outcome and next session plans.

A post-hoc compliance review of treatment integrity (i.e., checking adherence to the treatment by examining actual events) was carried out using the video-taped group sessions (Kazdin, 1998a; Clarke, 1995). After viewing a randomly-selected 50% of the tapes, an integrity check form was developed for the group treatment which included both specific features (e.g., role of leaders and supervisor) as well as abstract features (e.g., therapeutic cohesion) (Appendix 2). From the group therapy sessions, 25% were randomly selected (e.g., sessions 3 & 8/
treatments 1 & 2) and checked independently by two raters to provide an interobserver reliability estimate of the treatment integrity data. Coders were trained by the principal investigator; this was followed by practice and feedback until acceptable reliability was attained. Coders received feedback through the duration of coding to prevent criterion drift. Each session was rated as to the occurrence (e.g., agree, strongly agree) or non-occurrence (e.g., disagree, strongly disagree, undecided) of four characteristics in the areas of (a) group discussions, (b) leader/therapist qualities, (c) supervisory role, and (d) cohesiveness. For each of the four categories there was 100% agreement that the treatment was implemented as described by agency criteria, with all endorsements rated as 'occurrence' of the characteristics (e.g., 15 of the 18 coding decisions endorsed 'strongly agree' and 3 of the 18 endorsed either 'agree' or 'strongly agree'). Across the tapes, no instances were observed that met the criteria for non-occurrence; thus it was not necessary or possible to compute kappa reliability estimates. These endorsements convey strong agreement between raters that treatment was conducted as intended.

Based on Kazdin's (1998a) methodological test of treatment integrity, the design of this study (i.e., same leaders and supervisor, experienced staff, continued case supervision) reduced 'therapist drift', meeting one of the chief criteria for reliable and standardized outcome results of brief therapy methods (Crits-Christoph, 1992). Strength of the study design supports the high percent agreement on the treatment integrity checklist.
Measures

**Demographic Measures**

*The Wide Range Achievement Test-3 (WRAT-3; Jastak & Wilkinson, 1993).* The WRAT-3 measures single word reading, spelling to dictation and computational arithmetic skills. Two equivalent forms (Blue and Tan) have been developed for ages 5-75 years of age. The Blue form was administered to those subjects who had not been administered an achievement test within 2 years from the study date (n=30).

*Wechsler Intelligence Scale for Children-3 (WISC-III; Wechsler, 1991).* A short version of the WISC-III consisting of the Block Design and Vocabulary subtests was used to obtain an estimated IQ score for those participants who IQ testing was done more than 5 years prior to the study date (n=7). This IQ estimate has been found to correlate .90 with the full scale IQ (Sattler, 1988).

*Wechsler Adult Intelligence Scale-Revised (WAIS-R; Wechsler, 1981).* A short version of the WAIS-R consisting of the Block Design and Vocabulary subtests was used to obtain an estimated IQ score for those participants 17 or older, whose IQ testing was done more than 5 years prior to the study date (n=4).

*Demographic Information Sheet:* Demographic information was collected through parent interviews and perusal of file records. Information included: age, grade, SES, family background, employment, past and present special education placement, school attended, IQ scores, achievement scores, current medication, previous treatment and ongoing treatment.
Primary Outcome Measures

*Child Behavior Checklist (CBCL; Achenbach, 1991a).* The CBCL is a widely used, standardized parent-report measure of child behaviour problems. It consists of 118 behavioral and emotional problems that parents rate using 0 (*not true*), 1 (*somewhat or sometimes true*), and 2 (*very true or often true*). The scale is intended for students between the ages of 4 and 18 years of age. In addition to a Total Score, factor analytic studies yield two broad-band summary scales (Internalizing and Externalizing) and eight narrow-band syndrome scales: Withdrawn, Somatic Complaints, Anxious/Depressed, Social Problems, Thought Problems, Attention Problems, Deviant Behavior and Aggressive Behavior. The first three narrow-band syndrome scales constitute the Internalizing summary scale, and the last two narrow-band scores make up the Externalizing summary scale. Scores on both summary scales and the Total are computed as normalized T scores (mean=50, SD=10). Achenbach (1991a) distinguished three categories: (a) a level of dysfunction within the clinical range or high level of dysfunction (i.e., a level of dysfunction above the 90th percentile), (b) a borderline clinical range or mild level of dysfunction (i.e., a level of dysfunction between the 83rd and 90th percentile) and (c) a level of dysfunction that does not imply a clinical or borderline clinical level (i.e., a subclinical level of dysfunction). Psychometric analyses and extensive research use have shown these scales to be of excellent technical quality in terms of test-retest reliability, interparent agreement and construct validity (Mitchell, 1985; Achenbach, 1991b). The alpha reliability internal consistency coefficient for the CBCL in this study was .82 at pre-test, .85 at post-test and .84 at follow-up.
Youth Self Report (YSR; Achenbach, 1991b). The YSR is designed to measure children's reports about their own behaviour and parallels the format used in the CBCL. The instrument was normed for children ages 11 to 18 and assumes a mental age of 10 years. Each of the 112 problem items was read by the experimenter and in some cases read by the adolescent, and the participant's response was obtained. The measure parallels the CBCL, except for an additional syndrome scale (self-destructive identity) which is included as a separate syndrome scale (i.e., 9th syndrome scale). The YSR generates the same raw and T-scores as the CBCL, and its reliability and validity evidence are equally extensive (Achenbach, 1991). The alpha reliability internal consistency coefficient for the YSR in this study was .77 at pre-test, .84 at post-test and .81 at follow-up.

Teacher's Report Form (TRF) of the Child Behaviour Checklist (Achenbach, 1991c). With parental consent, one teacher (chosen by participant and parent) of participating adolescents were asked to complete the TRF. The measure parallels the CBCL, except that problems likely to be seen only at home (e.g., insomnia) are replaced by problems likely to be seen only at school (e.g., makes odd noises in school). The TRF generates the same raw and T-scores as the CBCL, and its reliability and validity evidence are equally extensive (Achenbach & Edelbrock, 1983). The alpha reliability internal consistency coefficient for the TRF in this study was .72 at pre-test.

Self-Perception Profile for Adolescents (SPPA; Harter, 1988). This 45-item questionnaire assesses adolescents' perceptions of competence in eight areas: social acceptance, romantic appeal, behavioral conduct, close friendship, scholastic competence, athletic competence, physical appearance and job competence (Appendix 3). Each subscale contains six
items; adolescents first determine which of two statements is most like them (e.g., "Some teenagers find it hard to make friends, BUT for other teenagers it's pretty easy"), and then rate how true that statement is for them. Each item receives a score of 1 to 4, and responses are averaged within each subscale. Harter (1988) reported good internal consistency for each of the SPPA subscales (Cronbach's alpha ranged from .74 to .93). In the present study, the Social Acceptance, Close Friendship and Global Self-Worth subscales were analyzed. Using the three subscales, the alpha reliability internal consistency coefficient for the SPPA in this study was .85 at pre-test, .91 at post-test and .95 at follow-up.

Loneliness and Social Dissatisfaction (Asher, Hymel & Renshaw, 1984). The instrument is designed to assess children's feelings of loneliness and social dissatisfaction (Appendix 4). There are 16 primary items relating to feelings of loneliness (e.g., I'm lonely), feelings of social adequacy (e.g., I'm good at working with others), and subjective estimates of peer status (e.g., I have lots of friends). The remaining 8 items focus on hobbies and are not included in the analysis. For each item, a five point scale is used to indicate how much each statement is a true description of themselves, ranging from 'always true' to 'not true at all'. The psychometric properties of the 16 item scale are good with an internal consistency reliability coefficient of .91. Consistent with the literature, the alpha internal consistency reliability coefficient in this study was .94 at pre-test, .96 at post-test and .96 at follow-up.
Secondary (Exploratory) Outcome Measures

Friendship Questionnaire (adapted from Wiener, 1995). Each adolescent was interviewed individually at Integra in order to establish a list of friends. They were asked to provide the first name and initial of last name of each of their friends and some demographic information about these friends including gender and age of friend, where they met, how long they have known them, how long they have been friends, where they interacted, how often they got together outside of school, and how often they telephoned each other (Appendix 5). The parents of the adolescents were also given a parallel questionnaire on which they were asked to list their adolescents' close friends and provide similar demographic information. These questionnaires were administered to participants and parents on three occasions, pre- post- and following the group treatment.

Semi-Structured Interview: A pilot study was completed to test the efficacy of the semi-structured interview. Three adolescents with LD were interviewed and feedback was obtained from them regarding the order and wording of questions, length of interview and content. All participants were interviewed pre- and post group treatment on an individual basis along with a two-month follow-up interview. Control group participants were not asked any questions relating to the group experience. With this exception, all participants were asked the same set of questions, in the same sequence. Responses were recorded verbatim by the researcher at the time of interviewing and each interview was audio-taped. Some participants needed questions to be re-phrased and/or required further assistance with interpretation of questions. The interview content included: background information on previous group treatment, current feelings about participating in a group, understanding of their learning disabilities and specific questions
related to friendship (Appendix 6).

Coding techniques recommended by Strauss and Corbin (1990) were utilized to determine recurrent themes or phrases in adolescents' perception of their LD and friendship. Four variables were tested: 1) understanding of their LD; 2) friend/best friend distinctions; 3) how they choose a friend; and 4) problems in friendship. The constant-comparative method was used to review narrative data. Responses were grouped into mutually exclusive categories, with as many categories generated as were needed to capture the content of responses. Relations among these categories were examined further, new responses were constantly compared with previous responses, allowing for revision of the categories concurrent with the data collection. The themes were recorded in a coding manual, a coding schedule was developed (Appendix 7) and all responses were coded by the researcher into these themes and/or descriptors. A second rater coded a randomly selected set of 25% of the participants' responses, following review of specific criteria and practice on six interview protocols. Interrater reliability was calculated using the percentage of agreement. The calculated reliability for the 4 variables was 91%.

Supplemental Measures

Clinical Significance Measures: Two methods based on Kazdin and Kendall (1998) were used to evaluate the extent to which changes over the course of group treatment were clinically meaningful and/or beneficial for the treatment group participants and their parents. First, post- and follow-up evaluation by participants and parents was completed, asking each to rate overall satisfaction and judge whether the changes in the group treatment were important or made a difference (Appendix 8). Second, changes on a social impact measure (i.e., determining
whether the change is one that affects functioning in everyday life) were assessed immediately after the group and at a two-month follow-up, by asking participants if they had plans to 'telephone' or 'socialize' with any other group member.

**Procedures for Administration of Measures**

All measures were administered at three times: pre- and post- intervention, and at a two-month follow-up, over a ten month span (September to June). Prior to the initial testing session, parents and adolescents met at Integra, with the researcher, for an introductory meeting to explain the format of testing, schedule interview times and decide on the appropriate teacher for participation in the study. The researcher then spoke with each designated teacher via the telephone, receiving verbal consent and explaining the protocol for testing. Two to four weeks prior to beginning the 'group treatment' or the corresponding 'no group treatment' for control participants, adolescent, parent and teacher measures were administered individually. Adolescents were interviewed individually by the researcher at Integra, over two sessions of approximately one and a half hours each, resulting in a total of nine hours for each participant over the course of the study. In session one, each adolescent was administered the WRAT-3 and/or the short-form of the WISC-111/WAIS-R if required, along with the Loneliness and Social Dissatisfaction Scale (Asher, Hymel & Renshaw, 1984) and Youth Self-Report (Achenbach, 1991b). In session two, the Self-Perception Profile for Adolescents (Harter, 1988), Friendship Questionnaire (Wiener, 1995) and semi-structured interview were completed. To ensure participants' understanding of questionnaire items, the researcher provided explanations
and assistance with specific difficulties (e.g., explaining vocabulary, rephrasing questions, repeating instructions, re-doing certain questions). When required, items from the questionnaires were read orally to the participant. Some respondents preferred to respond verbally, while the examiner circled the appropriate choice on the protocol. Participants were assured that there were no wrong answers and that their responses were confidential unless serious concerns were discussed. The Clinical Director was on-call to interface with the researcher if clinical concerns related to responses on the outcome measures arose (9 of the 31 participants required immediate discussion). Parents were given the Parent Friendship Questionnaire and Child Behaviour Checklist (Achenbach, 1991a) to complete. Parents either completed these questionnaires in the waiting room at Integra, mailed-in their responses or had their adolescent return the questionnaire at the next session. Teachers were mailed the Teacher Report Form along with instructions for completing the questionnaire and a return stamped envelope. One month after mailing the questionnaires, each teacher was sent a letter indicating either receipt or non-receipt of the protocol. Teachers who did not respond to the follow-up letter were contacted via telephone by the researcher. All dependent measures were administered/collection within two weeks post-treatment and approximately 5-8 weeks upon completion of the group treatment, using the same administration procedure as at pretest.

Debriefing of participants took place at the conclusion of the final follow-up session to correct for any misinformation and to examine the degree to which the adolescents ascertained relevant information that could have influenced their data acquisition. The parents and therapists were debriefed in the same fashion as the participants. After the final de-briefing session, the researcher viewed the video-tapes of the group sessions to assess treatment integrity.
CHAPTER 4

RESULTS

Analysis of the data is presented in three sections: preliminary data analysis including differences between groups, a description of normal, borderline and clinical ranges at pretesting, agreement between raters, and general considerations used in the approach to analysis: testing the research hypotheses and secondary research questions and supplemental analyses.

Preliminary Analyses

Differences between Groups on Demographic Factors

Two groups were included in the sample: treatment and control participants. Groups were matched on the basis of two criteria: attention and previous group experience. Analyses were conducted to test the initial group equivalence on all relevant demographic variables.

T-tests for independent-samples revealed no significant differences with respect to age, IQ, achievement and SES. Mean differences between the two groups are presented in Table 5. Chi-square analyses revealed no significant differences between the groups with respect to grade, group experience, special education placement, attention, marital status, siblings, languages spoken, race, medication usage, LD descriptor and current services utilized. Results approached significance, however, in the proportion of participants receiving extra service
Table 5

**Means of Demographic Variables as a Function of Group Condition**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Treatment (n=15)</th>
<th>Control (n=16)</th>
<th>T-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td></td>
</tr>
<tr>
<td>Demographic Variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (yr/mth)</td>
<td>15.6 (1.4)</td>
<td>14.9 (1.8)</td>
<td>t(28)= 1.14</td>
</tr>
<tr>
<td>IQ</td>
<td>93.9 (11.3)</td>
<td>100.7 (12.1)</td>
<td>t(29)= -1.61</td>
</tr>
<tr>
<td>Achievement WRAT-3&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>reading</td>
<td>43.8 (20.8)</td>
<td>42.4 (24.3)</td>
<td>t(29)= .18</td>
</tr>
<tr>
<td>spelling</td>
<td>37.7 (24.4)</td>
<td>40.8 (31.3)</td>
<td>t(28)= -.31</td>
</tr>
<tr>
<td>math</td>
<td>30.3 (19.7)</td>
<td>27.4 (25.4)</td>
<td>t(28)= .35</td>
</tr>
<tr>
<td>lowest academic score&lt;sup&gt;b&lt;/sup&gt;</td>
<td>22.5 (15.8)</td>
<td>19.5 (19.0)</td>
<td>t(29)= .48</td>
</tr>
<tr>
<td>SES</td>
<td>49.7 (15.3)</td>
<td>46.4 (15.2)</td>
<td>t(29)= .59</td>
</tr>
</tbody>
</table>

**Note:** Treatment Condition (Treatments A & B); Control Condition (Controls C & D)

<sup>a</sup>-Percentile
<sup>b</sup>-Mean of each Ss' lowest academic achievement score

*-p< .05; **p< .01
following pretesting ($X^2 (1, N= 31) = 3.48, p < .06$). Specifically, more control participants (n=7) received extra service following pretesting than did the treatment participants (n=2). Otherwise, t-tests and chi-square analyses confirmed the equivalence of the groups on demographic variables prior to the onset of treatment and following group assignment.

**Group Pretest Comparisons on Dependent Measures and Description of Range of Functioning.**

Table 6 presents the means and standard deviations for externalizing and internalizing symptoms, on the parent, self and teacher form of the Achenbach rating scales (Achenbach, 1991a, b & c). No significant differences were found between groups for parent and self reports. A significant difference between groups was found on the Externalizing scale, as reported by teachers ($t (21) = -2.67, p < .01$). Specifically, teachers reported significantly more externalizing problems in the control group, compared with the treatment group. This finding, however, was not corroborated by parent and youth results. Since teacher data were not analyzed at post and follow-up, there was no need to account statistically for this effect when examining group difference in subsequent analyses. The means were in the normal to borderline clinical range for both types of behavioral symptoms ($M = 52$ to $61$), with parent ratings of internalizing problems approaching the lower borderline clinical range ($M = 60$). Despite the relatively small sample, there was also considerable variability in symptoms ($SD = 6$ to $11$).

The subscale means and standard deviations of the Self-Perception Profile for Adolescents (Harter, 1988) are presented in Table 7. T-tests revealed no significant differences between groups. In general, the means fluctuated around the value of $2.9$, which is above the midpoint of the scale, in the normal range and is consistent with the manual norms.
Table 6

Means and Standard Deviations Across Groups for Externalizing and Internalizing Behaviours at Pretest

<table>
<thead>
<tr>
<th>Scale</th>
<th>Treatment Mean (SD)</th>
<th>Control Mean (SD)</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Child Behaviour Checklist</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(n=31)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internalizing</td>
<td>60.78 (9.16)</td>
<td>61.29 (10.79)</td>
<td>t(28)=.17</td>
</tr>
<tr>
<td>Externalizing</td>
<td>52.89 (6.47)</td>
<td>53.14 (10.75)</td>
<td>t(27)=.03</td>
</tr>
<tr>
<td><strong>Youth Self-Report</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n=31)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internalizing</td>
<td>53.62 (9.30)</td>
<td>58.40 (10.99)</td>
<td>t(28)=1.51</td>
</tr>
<tr>
<td>Externalizing</td>
<td>53.31 (8.10)</td>
<td>54.67 (8.13)</td>
<td>t(29)=.58</td>
</tr>
<tr>
<td><strong>Teacher Report Form</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n=25)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internalizing</td>
<td>58.00 (8.39)</td>
<td>58.31 (9.45)</td>
<td>t(22)=.08</td>
</tr>
<tr>
<td>Externalizing</td>
<td>52.18 (6.32)</td>
<td>59.00 (6.12)</td>
<td>t(21)=2.67*</td>
</tr>
</tbody>
</table>

*Note: Treatment Condition (Treatments A & B); Control Condition (Controls C & D)

* These scores are T scores and have means of 50 and standard deviations of 10.

*p < .01, with Bonferroni adjustment (alpha = .025).
Table 7

Means and Standard Deviations on the Self-Perception Profile for Adolescents (Harter, 1988) by Group at Pretest

<table>
<thead>
<tr>
<th>Pretest Condition</th>
<th>Treatment(^a) Mean (SD)</th>
<th>Control(^b) Mean (SD)</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Acceptance (SA)</td>
<td>2.7 (.81)</td>
<td>2.3 (.92)</td>
<td>t(29)=1.39, n.s.</td>
</tr>
<tr>
<td>Close Friendship (CF)</td>
<td>2.8 (.87)</td>
<td>2.9 (.73)</td>
<td>t(28)= -1.17, n.s.</td>
</tr>
<tr>
<td>Global Self-Worth (GSW)</td>
<td>3.2 (.75)</td>
<td>2.8 (.65)</td>
<td>t(28)= 1.69, n.s.</td>
</tr>
</tbody>
</table>

Note. Treatment Condition (Treatments A & B); Control Condition (Controls C & D)
\(^a n=15 \quad ^b n=16.\)
* p < .05; ** p < .01
The majority of standard deviations fell between .65 and .92, somewhat higher than the Harter norms (e.g., .50 - .75), indicating considerable variation among individuals.

No significant difference was found between groups on the Loneliness and Social Dissatisfaction measure (Asher, Hymel & Renshaw, 1984) \( (t(28) = -1.33, \text{n.s.}) \). In this sample, loneliness scores ranged from 18 to 65, with a mean score of 39.06 and a standard deviation of 14.28. Mean scores for this sample were in the normal range, although somewhat higher than those reported in the instrument manual \( (M=32.51) \), with slightly higher standard deviations \( (SD=11.82) \).

Mean scores for this sample, across all the dependent measures at pre-testing, fell within the borderline to normal range of functioning. Relatively high standard deviations, however, indicated considerable variation among individuals.

**Agreement Between Raters for Parent, Self and Teacher (Achenbach, 1991a,b& c)**

Correlation matrices for externalizing and internalizing symptoms are presented in Tables 8 and 9, respectively. For ratings of both symptoms, parent-self agreement correlations were significant, while self-teacher agreement was not significant. Parent-teacher agreement correlations were significant for externalizing symptoms only. These correlational patterns indicate the presence of both individual and shared view.
Table 8

Pretest Correlation Matrix for Externalizing Symptoms

<table>
<thead>
<tr>
<th></th>
<th>Parent (CBCL)</th>
<th>Self (YSR)</th>
<th>Teacher (TRF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent (CBCL)</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self (YSR)</td>
<td>.37&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Teacher (TRF)</td>
<td>.44&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.21</td>
<td>1.0</td>
</tr>
</tbody>
</table>

<sup>a</sup> N = 24 to 31; Mean N = 28.
<sup>b</sup> p<.05

Table 9

Pretest Correlation Matrix for Internalizing Symptoms

<table>
<thead>
<tr>
<th></th>
<th>Parent (CBCL)</th>
<th>Self (YSR)</th>
<th>Teacher (TRF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent (CBCL)</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self (YSR)</td>
<td>.63&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Teacher (TRF)</td>
<td>0.02</td>
<td>-0.17</td>
<td>1.0</td>
</tr>
</tbody>
</table>

<sup>a</sup>N = 24 to 31; Mean N = 28.
<sup>b</sup>p<.05
Approach to Analyses

Data analyses were conducted in two stages. T-tests, chi-square analyses and ANOVAs confirmed the equivalence of the two treatment groups (treatment A and B) and two control groups (control C and D) on the dependent measures. Thus, the data were combined into two data sets: treatment condition and control condition. Due to the number of analyses, the Bonferroni alpha adjustment procedure (Huck & Cormier, 1996) was used to control for Type 1 errors. This involved grouping the variables into meaningful families of tests and then dividing .05 by the number of tests to arrive at a new significance value for each group of tests. This allowed the investigator to hold the alpha level to a constant of significance less than .05 for the collection of tests, regardless of how many tests were conducted. For example, the three Harter variables were considered one set; therefore, the alpha was adjusted from .05 to .016.

Repeated measures analyses of variance (ANOVA) was the principal method of analysis. It was felt that the sample size was too small to allow multivariate analyses involving multiple dependent measures. Interview data were analyzed using percentages, proportions and frequencies along with nonparametric tests. Post- and follow-up treatment conditions were evaluated on measures of clinical significance and social impact, using response frequencies.

Analyses of Hypotheses

A priori, the investigator took care to maintain distinctions among variables during data analysis due to the measures' differing levels of importance. Three primary outcome measures
and two more exploratory, secondary measures were analyzed separately. Alpha correction procedures were used with primary outcome measures.

**Primary Analyses**

The measures included in the primary analyses were: the Youth Self-Report and Child Behaviour Checklist (Achenbach, 1991); Self-Perception Profile for Adolescents (Harter, 1988) and Loneliness and Social Dissatisfaction (Asher, Hymel & Renshaw, 1984).

To explore group differences in behavioral and psychological functioning, all dependent measures were analyzed by means of a 2 x 3 [Condition: treatment vs. control x time: pretest, posttest, follow-up] ANOVA, with repeated measures across factors. The hypotheses were tested on the basis of a Group x Time interaction effect.

**Behavioral Outcome in Treatment and Control Adolescents and Parental Reports.**

The present study addressed in its first set of hypotheses differences in patterns of psychological adjustment and behavioral functioning among treatment and control participants and differences in parental reports of adolescents' functioning. Overall, contrary to the hypotheses, adolescents in the experimental and control conditions differed very little in terms of the changes in their behaviour. As well, parental reports of adolescent behaviour differed very little across treatment and control conditions.
**Hypothesis 1: Self-Reported Externalizing, Internalizing and Social Problem Behaviours on the Youth Self-Report**:

It was hypothesized that the participants in the treatment group would show fewer adjustment and behavioral problems from first to second and third measurement relative to the control group.

On the Youth Self-Report, the Group x Time interaction was not significant for Externalizing, Internalizing, Social Problem or Total Behaviour. Therefore, the hypothesis was not supported. In addition, there were no significant differences between the treatment and control group. There was, however, a significant main effect for time, which was not maintained with a .013 Bonferroni alpha adjustment. Mean scores and standard deviations for the Youth Self-Report are presented in Table 10.

**Hypothesis 2: Parental Reports of Adolescents' Externalizing, Internalizing and Social Problem Behaviour on the Child Behaviour Checklist**:

It was hypothesized that parents of those adolescents who participated in the treatment group would report fewer adjustment and behavioral problems from first to second and third

---

1. Original analyses were performed for the Total, Internalizing, and Externalizing summary scales and for the nine syndrome scales. No interactions or main effects were significant on the nine syndrome scales at the .05 level, with Bonferroni corrections. Therefore, only analyses performed on the summary scales and Social Problem syndrome scale (not included in the broad-band summary scales) will be presented.

2. Although the main effect for time was not maintained by a Bonferroni correction, analyses revealed that the adolescents' internalizing symptoms decreased from pre-test to post-test $F(1.26)= 7.06, p < .013$.

3. Original analyses were performed for the Total, Internalizing, and Externalizing summary scales and for the eight syndrome scales. No main effects or interactions were significant on the eight syndrome scales at the .05 level, with Bonferroni corrections. Therefore, only analyses performed on the summary scales and Social Problem syndrome scale (not included in the broad-band summary scales) will be presented.
Table 10
Means and Standard Deviations of Selected Subscales of The Youth Self-Report for Treatment and Control Groups at Pre-, Post-, and Follow-up Testing

<table>
<thead>
<tr>
<th>Subscale T Scores</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Externalizing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>M</td>
<td>53.3</td>
<td>53.0</td>
<td>53.1</td>
</tr>
<tr>
<td></td>
<td>(SD)</td>
<td>(8.1)</td>
<td>(9.8)</td>
<td>(12.6)</td>
</tr>
<tr>
<td>Control</td>
<td>M</td>
<td>54.7</td>
<td>53.1</td>
<td>51.3</td>
</tr>
<tr>
<td></td>
<td>(SD)</td>
<td>(8.1)</td>
<td>(8.6)</td>
<td>(7.8)</td>
</tr>
<tr>
<td><strong>Internalizing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>M</td>
<td>53.6</td>
<td>49.8</td>
<td>51.8</td>
</tr>
<tr>
<td></td>
<td>(SD)</td>
<td>(9.3)</td>
<td>(11.1)</td>
<td>(11.7)</td>
</tr>
<tr>
<td>Control</td>
<td>M</td>
<td>58.4</td>
<td>53.6</td>
<td>54.6</td>
</tr>
<tr>
<td></td>
<td>(SD)</td>
<td>(11.0)</td>
<td>(12.6)</td>
<td>(11.0)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>M</td>
<td>55.4</td>
<td>54.0</td>
<td>53.7</td>
</tr>
<tr>
<td></td>
<td>(SD)</td>
<td>(8.9)</td>
<td>(10.3)</td>
<td>(12.7)</td>
</tr>
<tr>
<td>Control</td>
<td>M</td>
<td>58.6</td>
<td>54.0</td>
<td>54.0</td>
</tr>
<tr>
<td></td>
<td>(SD)</td>
<td>(10.3)</td>
<td>(12.6)</td>
<td>(10.6)</td>
</tr>
<tr>
<td><strong>Social Problems</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>M</td>
<td>61.2</td>
<td>57.9</td>
<td>57.5</td>
</tr>
<tr>
<td></td>
<td>(SD)</td>
<td>(9.1)</td>
<td>(8.5)</td>
<td>(6.5)</td>
</tr>
<tr>
<td>Control</td>
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<td>63.5</td>
<td>61.5</td>
<td>60.4</td>
</tr>
<tr>
<td></td>
<td>(SD)</td>
<td>(11.6)</td>
<td>(10.4)</td>
<td>(11.0)</td>
</tr>
</tbody>
</table>

*Note* Treatment Condition (Treatments A & B); Control Condition (Controls C & D)
*Note* N=15 at pre-test, N=15 at post-test, N=14 at follow-up for Treatment Condition
*Note* N=16 at pre-test, N=15 at post-test, N=15 at follow-up for Control Condition

Note M Mean and (SD) Standard Deviation
G (Group Effect), G x T (Group x Time Interaction), T (Time Effect)
* Group Effect, df (1,26)
* Group x Time and Time Effect, df (2,25)
* p<.03; not significant with Bonferroni adjustment (alpha = .013)
measurement relative to the control group.

On the Child Behaviour Checklist, the Group x Time interaction was not significant for Externalizing, Internalizing, Social Problem or Total Behaviour. Therefore, the hypothesis was not supported. In addition, there were no significant differences between parent reports of the treatment and control group. There was a significant main effect of time for both Internalizing and Social Problem Behaviour. With a Bonferroni adjustment of .035, however, only a significant main effect for time for Social Problems was maintained. Analyses revealed that parental reports of adolescents' social problems decreased from pre-test to post-test $F(1,21) = 12.46, p < .002$. This significant time effect was maintained with a .013 Bonferroni alpha adjustment. Therefore, the time effect for Social Problems is significant. Mean scores and standard deviations for the Child Behaviour Checklist are presented in Table I.

**Hypothesis 3: Self-Reports of Global Self-Worth, Social Acceptance and Close Friendship on the Self-Perception Profile for Adolescents:**

It was hypothesized that the participants in the treatment group would show higher self-perceptions from first to second and third measurement relative to the control group.

On the Self-Perception Profile for Adolescents, the Group x Time interactions were not significant for Global Self-Worth, Social Acceptance and Close Friendship. Therefore, the hypothesis was not supported. In addition, there were no significant differences between the

4 Although the main effect for time was not maintained by Bonferroni correction, for Internalizing Behaviour, analyses revealed that parental reports of adolescents' internalizing symptoms decreased from pre-test to post-test $F(1,21) = 5.08, p < .035$. 
Table 11
Means and Standard Deviations of Selected Subscales of The Child Behaviour Checklist for Treatment and Control Groups at Pre-, Post-, and Follow-up Testing

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Scores</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Treatment</td>
<td>Control</td>
<td>Treatment</td>
<td>Control</td>
</tr>
<tr>
<td>Externalizing</td>
<td></td>
<td>M</td>
<td>52.9</td>
<td>53.1</td>
<td>51.3</td>
</tr>
<tr>
<td></td>
<td>(SD)</td>
<td>(6.5)</td>
<td>(10.8)</td>
<td>(10.4)</td>
<td></td>
</tr>
<tr>
<td>Internalizing</td>
<td></td>
<td>M</td>
<td>60.8</td>
<td>61.3</td>
<td>54.9</td>
</tr>
<tr>
<td></td>
<td>(SD)</td>
<td>(9.2)</td>
<td>(10.8)</td>
<td>(13.6)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>59.2</td>
<td>56.8</td>
<td>58.0</td>
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<tr>
<td></td>
<td>(SD)</td>
<td>(9.0)</td>
<td>(13.7)</td>
<td>(12.7)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>M</td>
<td>62.2</td>
<td>60.5</td>
<td>56.2</td>
</tr>
<tr>
<td></td>
<td>(SD)</td>
<td>(4.6)</td>
<td>(9.0)</td>
<td>(12.0)</td>
<td></td>
</tr>
<tr>
<td>Social Problems</td>
<td></td>
<td>M</td>
<td>67.8</td>
<td>68.1</td>
<td>59.8</td>
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<tr>
<td></td>
<td>(SD)</td>
<td>(5.8)</td>
<td>(10.1)</td>
<td>(10.1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>63.2</td>
<td>64.5</td>
<td>63.9</td>
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<tr>
<td></td>
<td>(SD)</td>
<td>(9.0)</td>
<td>(11.9)</td>
<td>(10.4)</td>
<td></td>
</tr>
</tbody>
</table>

Note. Treatment Condition (Treatments A & B); Control Condition (Controls C & D)
Note. N=16 at pre-test, N=15 at post-test, N=9 at follow-up for Treatment Condition
Note. N=16 at pre-test, N=15 at post-test, N=14 at follow-up for Control Condition
Note: M Mean and (SD) Standard Deviation
G (Group Effect); G x T (Group x Time Interaction); T (Time Effect)
* Group Effect, df(1.21)
+p < .05; not significant with Bonferroni adjustment (alpha = .013)
** p < .009; significant with Bonferroni adjustment (alpha = .013)
treatment and control group. The analyses, however, revealed a significant main effect for time on the Social Acceptance subscale, which was maintained with a .016 Bonferroni alpha adjustment. Analyses revealed that the adolescents' perceptions of social acceptance increased from pre-test to post-test $F(1,28)=9.43, p<.005$. Therefore, this time effect is significant. Mean scores and standard deviations for the Self-Perception Profile for Adolescents are presented in Table 12.

**Hypothesis 4: Self-Reports of Loneliness on the Loneliness and Social Dissatisfaction Measure:**

It was hypothesized that the participants in the treatment group would show lower levels of loneliness and social dissatisfaction from first to second and third measurement relative to the control group.

On the Loneliness and Social Dissatisfaction measure, the Group x Time interaction was not significant. Therefore, the hypothesis was not supported. In addition, there were no significant differences between the treatment and control group. There was, however, a significant main effect for time in that the adolescents' loneliness scores decreased from pre-test to post-test $F(1,28)=6.87, p<.014$. Therefore, this time effect is significant. Mean scores and standard deviations for Loneliness and Social Dissatisfaction are presented in Table 13.
Table 12
Means and Standard Deviations of Selected Subscales of the Self-Perception Profile for Adolescents for Treatment and Control Groups at Pre-, Post-, and Follow-up Testing

<table>
<thead>
<tr>
<th>Subscale Measures</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global Self-Worth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>3.20</td>
<td>3.14</td>
<td>3.11</td>
<td>G=1.29</td>
</tr>
<tr>
<td>(SD)</td>
<td>(.77)</td>
<td>(.73)</td>
<td>(.76)</td>
<td></td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.76</td>
<td>2.98</td>
<td>2.94</td>
<td>G x T=1.09</td>
</tr>
<tr>
<td>(SD)</td>
<td>(.65)</td>
<td>(.58)</td>
<td>(.72)</td>
<td></td>
</tr>
<tr>
<td>Social Acceptance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.69</td>
<td>2.83</td>
<td>2.93</td>
<td>G=1.09</td>
</tr>
<tr>
<td>(SD)</td>
<td>(.83)</td>
<td>(.96)</td>
<td>(.87)</td>
<td></td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.28</td>
<td>2.63</td>
<td>2.56</td>
<td>G x T=.83</td>
</tr>
<tr>
<td>(SD)</td>
<td>(.91)</td>
<td>(.97)</td>
<td>(.96)</td>
<td></td>
</tr>
<tr>
<td>Close Friendship</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.79</td>
<td>2.97</td>
<td>2.74</td>
<td>G=.01</td>
</tr>
<tr>
<td>(SD)</td>
<td>(.88)</td>
<td>(.78)</td>
<td>(.79)</td>
<td></td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.88</td>
<td>2.88</td>
<td>2.68</td>
<td>G x T=.18</td>
</tr>
<tr>
<td>(SD)</td>
<td>(.77)</td>
<td>(.71)</td>
<td>(.97)</td>
<td></td>
</tr>
</tbody>
</table>

Note. Treatment Condition (Treatments A & B); Control Condition (Controls C & D)
Note. N=15 at pre-test, N=14 at post-test, N=14 at follow-up for Treatment Condition
Note. N=16 at pre-test, N=16 at post-test, N=16 at follow-up for Control Condition
Note: M Mean and (SD) Standard Deviation
G (Group Effect); G x T (Group x Time Interaction); T (Time Effect)
* Group Effect, df (1,28)
+ Group x Time and Time Effect, df (2,27)
* p < .016; Bonferroni adjustment (alpha = .016)
Table 13

**Means and Standard Deviations of Loneliness and Social Dissatisfaction for Treatment and Control Groups at Pre-, Post-, and Follow-up Testing**

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>35.43</td>
<td>32.64</td>
<td>33.79</td>
<td>G=1.52</td>
</tr>
<tr>
<td>(SD)</td>
<td>(12.89)</td>
<td>(13.68)</td>
<td>(12.20)</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>42.31</td>
<td>39.31</td>
<td>38.88</td>
<td>T=4.11*</td>
</tr>
<tr>
<td>(SD)</td>
<td>(15.50)</td>
<td>(14.72)</td>
<td>(15.87)</td>
<td></td>
</tr>
</tbody>
</table>

**Note**: Treatment Condition (Treatments A & B); Control Condition (Controls C & D)

**Note**: N=15 at pre-test, N=14 at post-test, N=14 at follow-up for Treatment Condition

**Note**: N=16 at pre-test, N=16 at post-test, N=16 at follow-up for Control Condition

Note: M Mean and (SD) Standard Deviation

G (Group Effect); G * T (Group x Time Interaction); T (Time Effect)

* Group Effect, df (1,28)

* Group * Time and Time Effect, df (2,27)

* p< 0.028
Secondary Analyses of Research Questions

As discussed in Chapter 2, some of the goals of group therapy intervention included: (a) increased number of friends; (b) increased interactions with friends; (c) a more in-depth understanding of the concept of friendship; and (d) a better understanding of the participants' LD and its effect on their life. Consequently, two measures were designed for this purpose and the treatment and control groups were compared from pre- to post- to follow-up testing on these measures. The Friendship Questionnaire (Wiener, 1995) was adapted to explore questions related to friendship network variables (e.g., number of friends) and a semi-structured interview was developed to address questions related to the adolescents' understanding of friendship and the impact of their LD on their life. A number of exploratory analyses were conducted on participants' responses5. No alpha adjustment procedures were employed for the exploratory analyses.

For the purpose of group comparison, research questions are presented as hypotheses. To explore group differences in friendship network and the impact of having a learning disability, all dependent measures were subjected to repeated measures ANOVA. For some variables, data from the Friendship Interview were collapsed into categories and responses were changed to proportions. Transformed data (proportions) were analyzed with repeated measures ANOVA, across factors. These hypotheses were tested on the basis of a Group x Time interaction effect.

---

5 Parents were also administered a Friendship Questionnaire; however, due to a high drop out rate at follow-up, parent data were not included in the analyses.
Friendship Network in Treatment and Control Participants.

The first research question in the exploratory analyses addressed differences in patterns of friendship nomination and friendship network (e.g., number of friends, age and gender of friends) among treatment and control participants. Overall, contrary to the hypothesis, adolescents in the experimental and control conditions differed very little in their responses.

Exploratory Hypothesis 1: Number of Friends and Selected Friendship Attributes:

Friendship Nominations:

It was hypothesized that the participants in the treatment group would show increases in friendship nomination from first to second and third measurement relative to the control group. To examine the number of friends a participant nominated, groups were compared on the total number of friends each nominated at pre-, post-, and follow-up. The Group x Time interaction effect was not significant. Therefore, the hypothesis was not supported. In addition, there was no significant difference between the treatment and control group. The main effect for time was not significant. Mean scores and standard deviations for Number of Nominated Friends are presented in Table 14.

Selected Friendship Network Attributes:

A number of friendship network variables were used to explore differences in patterns of behaviour among treatment and control participants. These variables were: age and gender of nominated friends, school identified friends, talking on the telephone with nominated friends and visiting of friends. The exploratory nature of these analyses did not warrant the use of a
Table 14

Means and Standard Deviations of Friendship Interview: Number of Nominated Friends for Treatment and Control Groups at Pre-, Post-, and Follow-up Testing

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up</th>
<th>F-value(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n=15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>5.9</td>
<td>5.0</td>
<td>4.5</td>
<td>G(^a)=1.87</td>
</tr>
<tr>
<td>(SD)</td>
<td>(3.0)</td>
<td>(2.6)</td>
<td>(2.8)</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n=15</td>
<td></td>
<td></td>
<td></td>
<td>(G \times T)=2.16</td>
</tr>
<tr>
<td>M</td>
<td>3.7</td>
<td>4.2</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td>(SD)</td>
<td>(2.4)</td>
<td>(2.7)</td>
<td>(2.5)</td>
<td>T(^a)=1.77</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n=30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>4.8</td>
<td>4.6</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td>(SD)</td>
<td>(2.9)</td>
<td>(2.7)</td>
<td>(2.6)</td>
<td></td>
</tr>
</tbody>
</table>

Note. Treatment Condition (Treatments A & B); Control Condition (Controls C & D)

Note. Mean and (SD) Standard Deviation

\(G\) (Group Effect); \(G \times T\) (Group x Time Interaction); \(T\) (Time Effect)

\(^a\) Group Effect, df (1, 28)

\(^b\) Group x Time and Time Effect, df (2, 27)

\(^c\) no reported F-values are significant
Bonferroni correction. Due to the number of variables under investigation, caution is needed when interpreting significant findings.

The Group x Time interaction effect was not significant for same age and same gender friends, school identified friends and visiting friends. There was, however, a significant Group x Time interaction effect for talking on the telephone with friends in that the treatment adolescents' talking with friends increased from post-test to follow-up, while control adolescents' talking with friends decreased over these time periods $F(1,29)=6.82, p<.014$. Main effects for time were not significant for same age and same gender friends, school identified friends or talking on the telephone. There was, however, a significant main effect for time for visiting friends in that the adolescents' visiting of friends increased from post-test to follow-up $F(1,29)=4.78, p<.04$. Most of the participants finished the school year in the middle of June just before the follow-up data were collected. Perhaps this allowed time for more visits with friends before the follow-up testing. Mean scores and standard deviations of Proportions of Selected Friendship Attributes for Participants are presented in Table 15.

Friendship Understanding in Treatment and Control Participants.

The second research question in the exploratory analyses addressed differences in patterns of friendship understanding among treatment and control participants.

Exploratory Hypothesis 2: Friend/Best Friend Distinction. Choosing a Friend and Handling Problems with Friends:

It was hypothesized that participants in the treatment group would show increases in
Table 15
Means and Standard Deviations of Proportions of Selected Friendship Attributes for Treatment and Control Groups at Pre-, Post-, and Follow-up Testing

Proportions Reported by Participants

<table>
<thead>
<tr>
<th>Friendship Attributes</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Same age friends</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment M</td>
<td>.85</td>
<td>.88</td>
<td>.89</td>
<td>G=.50</td>
</tr>
<tr>
<td>(SD)</td>
<td>(.19)</td>
<td>(.17)</td>
<td>(.18)</td>
<td></td>
</tr>
<tr>
<td>Control M</td>
<td>.86</td>
<td>.86</td>
<td>.77</td>
<td>G&lt;.04</td>
</tr>
<tr>
<td>(SD)</td>
<td>(.18)</td>
<td>(.19)</td>
<td>(.32)</td>
<td></td>
</tr>
<tr>
<td><strong>Same gender friends</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment M</td>
<td>.87</td>
<td>.84</td>
<td>.83</td>
<td>G=.50</td>
</tr>
<tr>
<td>(SD)</td>
<td>(.18)</td>
<td>(.17)</td>
<td>(.16)</td>
<td></td>
</tr>
<tr>
<td>Control M</td>
<td>.84</td>
<td>.84</td>
<td>.87</td>
<td>G&lt;.04</td>
</tr>
<tr>
<td>(SD)</td>
<td>(.17)</td>
<td>(.19)</td>
<td>(.23)</td>
<td></td>
</tr>
<tr>
<td><strong>School friends</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment M</td>
<td>.78</td>
<td>.78</td>
<td>.78</td>
<td>G=1.01</td>
</tr>
<tr>
<td>(SD)</td>
<td>(.21)</td>
<td>(.25)</td>
<td>(.28)</td>
<td></td>
</tr>
<tr>
<td>Control M</td>
<td>.71</td>
<td>.77</td>
<td>.59</td>
<td>G&lt;.04</td>
</tr>
<tr>
<td>(SD)</td>
<td>(.35)</td>
<td>(.29)</td>
<td>(.37)</td>
<td></td>
</tr>
<tr>
<td><strong>Talk regularly on telephone</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment M</td>
<td>.51</td>
<td>.39</td>
<td>.53</td>
<td>G=2.73</td>
</tr>
<tr>
<td>(SD)</td>
<td>(.33)</td>
<td>(.26)</td>
<td>(.31)</td>
<td></td>
</tr>
<tr>
<td>Control M</td>
<td>.64</td>
<td>.70</td>
<td>.54</td>
<td>G&lt;.04</td>
</tr>
<tr>
<td>(SD)</td>
<td>(.35)</td>
<td>(.30)</td>
<td>(.40)</td>
<td></td>
</tr>
<tr>
<td><strong>Visit regularly</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment M</td>
<td>.64</td>
<td>.54</td>
<td>.82</td>
<td>G=.03</td>
</tr>
<tr>
<td>(SD)</td>
<td>(.29)</td>
<td>(.31)</td>
<td>(.22)</td>
<td></td>
</tr>
<tr>
<td>Control M</td>
<td>.59</td>
<td>.65</td>
<td>.72</td>
<td>G&lt;.04</td>
</tr>
<tr>
<td>(SD)</td>
<td>(.34)</td>
<td>(.29)</td>
<td>(.31)</td>
<td></td>
</tr>
</tbody>
</table>

Note. Treatment Condition (Treatments A & B); Control Condition (Controls C & D)
Note. Sample size for treatment condition at pre-, post and follow-up, N=15; for control condition, N=16.
M Mean and (SD) Standard Deviation G (Group Effect); G x T (Group x Time Interaction); T (Time Effect)
* Group Effect, df (1,29)
* Group x Time and Time Effect, df (2,28)
Talk regularly: Yes (everyday, once a week or more, once/twice a month); No (never, once/few times a year)
Visit regularly: Yes (once a week, once/twice a month); No (never, few times a year, once/few times a year)
\* p<.04, ** p<.05
levels of friendship understanding from first to second and third measurement relative to the control group.

Initially, a content analysis of the variables was performed (refer to Appendix 7). Overall, the adolescents had a coherent concept of friendship. Interview responses revealed their understanding by referring to key features of friendship in the adolescent period (e.g., intimacy, stability, companionship, support); describing what they look for in a friend (e.g., shared activities, prosocial behaviour, recreation, trust); and identifying a variety of conflict resolution skills (e.g., power and assertion, negotiation and compromise, disengagement). For the purposes of statistical comparison, however, data from the content analysis was collapsed to related dichotomous variables: What is the difference between a friend and a best friend? (Don't Know/Provides Differences); How do you choose a friend? (No Active Strategies/Uses Strategies) and How would you handle problems in a friendship? (No Conflict Resolution Skills/Uses Conflict Resolution Skills). Although such a conversion may have resulted in a loss of information, there is published research documenting friendship patterns with Integra's population (Wiener & Sunohara, 1998). As the purpose of this research question was to explore group differences in friendship understanding over time, a Cochran Q test was used for comparisons of a dichotomous dependent variable over three time periods. This procedure tests whether the distribution of values of each related dichotomous variable was the same across the three time periods (Huck & Cormier, 1996). Finally, since there were no significant differences in consistency of responses on the Cochran Q test, a post-hoc analysis was not necessary.

No significant differences were found between groups on the three variables. Results indicated approximately the same degree of consistency in the classification made by members
of the treatment and control group. The majority of participants provided definitions of a best friend, identified strategies for choosing a friend and reported the use of conflict resolution strategies. Table 16 shows the frequency distribution for each dichotomous variable and the Cochran Q value.

The Impact of a Learning Disability in Treatment and Control Participants.

The third research question in the exploratory analyses addressed differences in patterns of understanding the impact of having a learning disability among treatment and control participants. Overall, contrary to the hypothesis, adolescents in the experimental and control conditions differed very little in their responses.

Exploratory Hypothesis 3: Self-Awareness of the Impact of a Learning Disability:

It was hypothesized that participants in the treatment group would show an increase in self-awareness of their learning disability from first to second and third measurement relative to the control group.

First, participants responded to the open-ended question, 'What is your LD?'. Initially, a content analysis of the responses was performed (Appendix 7). Responses fell within the following categories: process/conceptual; academic/school; social-emotional/attitude and naming an exceptionality. For the purposes of comparison, the data from the content analysis was collapsed to a related dichotomous variable: What is your LD? (Don't Know/Provides Definition). To explore group differences in defining of a LD, data were analyzed using a
Table 16

Frequency Distribution of Interview Responses on Participant Questionnaire for Treatment and Control Groups at Pre-, Post-, and Follow-up Testing

<table>
<thead>
<tr>
<th>Selected Categories</th>
<th>Treatment (n=15)</th>
<th>Cochran Q Value*</th>
<th>Control (n=16)</th>
<th>Cochran Q Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T1</td>
<td>T2</td>
<td>T3</td>
<td>T1</td>
</tr>
<tr>
<td>What is your LD?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don't Know</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Provides Definition</td>
<td>15</td>
<td>14</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>Conflict Resolution</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses Strategies</td>
<td>13</td>
<td>14</td>
<td>11</td>
<td>15</td>
</tr>
<tr>
<td>No Strategies</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Choosing a Friend</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses Strategies</td>
<td>13</td>
<td>11</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>No Strategies</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>What is a best friend?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don't Know</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Provides Definition</td>
<td>14</td>
<td>14</td>
<td>13</td>
<td>15</td>
</tr>
</tbody>
</table>

Note. Treatment Condition (Treatments A & B); Control Condition (Controls C & D)
* no reported values of Cochran Q are significant.
Cochran Q test, which tested whether the distribution of values of each related dichotomous variable was the same across the three time periods. No significant difference was found between groups on this variable. Results indicated approximately the same degree of consistency in the classification made by members of the treatment and control group. The majority of participants were able to provide a definition of their LD. Response frequencies, means and standard deviations are also shown in Table 16.

Second, participants responded to three variables on a five- or six- point Likert scale: (a) To what extent does your LD affect your life?; (b) Do you feel different from others?; and (c) Do you feel that others understand how you feel? Numerical responses were averaged across subjects to produce a Likert mean score for each variable (e.g., a score of 3 indicates 'sometimes' or 'somewhat'). The data were analyzed with repeated measures ANOVA, across factors. Response frequencies, means and standard deviations are shown in Table 17.

As shown in Table 17, the hypothesized Group x Time interaction was not significant for any of the variables. There were also no significant differences between the treatment and control group and no significant main effects for time were found. Overall, the majority of participants indicated that their LD affected their life 'somewhat'; they 'sometimes' felt different from others; and felt 'fairly well' understood by others.
Table 17
Means and Standard Deviations on Participant Interview for Treatment and Control Groups at Pre-, Post-, and Follow-up Testing

<table>
<thead>
<tr>
<th>Interview Questions</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up</th>
<th>F-Value(^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. To what extent does your LD affect your life?*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>M 3.3</td>
<td>3.7</td>
<td>3.9</td>
<td>(G=3.32)</td>
</tr>
<tr>
<td></td>
<td>(SD) 1.4</td>
<td>(1.4)</td>
<td>(1.4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n 15</td>
<td>15</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>M 3.6</td>
<td>3.6</td>
<td>3.3</td>
<td>(G* x T^*=.93)</td>
</tr>
<tr>
<td></td>
<td>(SD) 1.3</td>
<td>(1.3)</td>
<td>(1.6)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n 16</td>
<td>16</td>
<td>15</td>
<td>(T^*=.34)</td>
</tr>
<tr>
<td>Q2. Do you feel different from others?**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>M 3.4</td>
<td>3.8</td>
<td>3.9</td>
<td>(G^2=1.97)</td>
</tr>
<tr>
<td></td>
<td>(SD) .91</td>
<td>(1.0)</td>
<td>(1.0)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n 15</td>
<td>14</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>M 3.3</td>
<td>3.1</td>
<td>3.3</td>
<td>(G* x T^*=.50)</td>
</tr>
<tr>
<td></td>
<td>(SD) 1.2</td>
<td>(1.1)</td>
<td>(1.1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n 16</td>
<td>14</td>
<td>16</td>
<td>(T^*=.90)</td>
</tr>
<tr>
<td>Q3. Do others understand you?^c</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>M 3.5</td>
<td>3.2</td>
<td>3.1</td>
<td>(G^3=0.01)</td>
</tr>
<tr>
<td></td>
<td>(SD) 1.2</td>
<td>(1.4)</td>
<td>(1.1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n 15</td>
<td>15</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>M 3.3</td>
<td>3.4</td>
<td>3.4</td>
<td>(G* x T^*=.35)</td>
</tr>
<tr>
<td></td>
<td>(SD) 1.5</td>
<td>(1.4)</td>
<td>(1.5)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>n 15</td>
<td>14</td>
<td>16</td>
<td>(T^*=.86)</td>
</tr>
</tbody>
</table>

| Note. Treatment Condition (Treatments A & B); Control Condition (Controls C & D) |
| M=mean score based on participants' selection of a Likert rating number |
| \(G\) (Group Effect); \(G* x T\) (Group x Time Interaction); \(T\) (Time Effect) |
| * Q1 ratings ranged from 1 (yes, totally) to 6 (not sure). |
| ** Q2 ratings ranged from 1 (all the time) to 5 (never). |
| ^c Q3 ratings ranged from 1 (completely) to 6 (not sure). |
| 1 Group Effect, df (1.28), Group x Time and Time Effect, df (2.27) |
| 2 Group Effect, df (1.26), Group x Time and Time Effect, df (2.25) |
| 3 Group Effect, df (1.25); Group x Time and Time Effect, df (2.24) |
| 4 No reported F-values are significant |
Summary

Both primary and secondary analyses reported a lack of positive and discriminative results between the experimental and control comparisons of pre-, post- and follow-up assessments. However, all reported differences were in the expected directions. There were no other effects, aside from main effects of time. The time effects suggest that whether or not adolescents participated in the treatment group, both groups tended to perform better over time.

Supplemental Analyses: Clinical Significance of the Intervention

In addition to examining whether the changes in participants' functioning are statistically significant, a critical question when evaluating any therapeutic intervention is the clinical significance of the changes produced. Clinical research has attempted to assess the extent to which changes in behaviour are important for the client and others. An evaluation of the clinical or applied importance of this treatment intervention will be presented as a supplement to statistical methods of determining whether group differences or changes over time are reliable.

Behavioral Change

To evaluate whether changes in behaviour were important or made a difference for participants and parents, response frequencies were calculated for satisfaction and specific and global improvement ratings. Eighty percent of participants (12/15) indicated 'high' levels of specific improvement immediately following the intervention, with a drop to 64% (9/14) at follow-up. 'High' ratings of global improvement were stable for participants with a 60% (9/15)
endorsement at post-testing and 65% (9/14) at follow-up. Forty percent of participants (6/15) indicated 'high' levels of satisfaction immediately following the group, while 47% (7/15) of the adolescents reported being 'fairly satisfied'. Parents reported considerably lower scores across all three questions compared with the adolescents. Only 27% (3/11) of the parents reported 'high' ratings of satisfaction immediately following the group, dropping to 22% (2/11) at follow-up. Five of the parents stated that they had difficulty accurately reporting on improvement because their sons did not discuss the group with them. Response frequencies for ratings of satisfaction and specific and global improvement are shown in Table 18.

Participant Satisfaction with the Intervention

Response frequencies on two Likert scale items related to satisfaction with the group experience: 'How did you feel about joining the group?' and 'Do you feel that you fit in the group?', are presented in Table 19. Responses reflecting 'high' satisfaction about joining the group dropped from 60% (9/15) at pre-testing, to 40% (7/14) at post-testing. Dissatisfaction increased from 13% (2/15) at pre-testing, to 26% (4/14) at post-testing. Roughly two-thirds of the participants indicated 'mid to high' satisfaction with respect to fitting into the group across all three time periods.
### Table 18

**Response Frequencies of Clinical Significance Measures for Treatment Group Participants and Their Parents at Post- and Follow-up Testing**

<table>
<thead>
<tr>
<th>Questions</th>
<th>Participant (Freq.)%</th>
<th>Parent (Freq.)%</th>
<th>Participant (Freq.)%</th>
<th>Parent (Freq.)%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Post Treatment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1. Satisfaction&lt;sup&gt;1&lt;/sup&gt;</td>
<td>n=15</td>
<td>n=11</td>
<td>n=14</td>
<td>n=9</td>
</tr>
<tr>
<td>High</td>
<td>(6) 40%</td>
<td>(3) 27%</td>
<td>(7) 50%</td>
<td>(2) 22%</td>
</tr>
<tr>
<td>Mid</td>
<td>(7) 47%</td>
<td>(2) 18%</td>
<td>(5) 36%</td>
<td>(1) 11%</td>
</tr>
<tr>
<td>Low</td>
<td>(2) 13%</td>
<td>(6) 55%</td>
<td>(2) 14%</td>
<td>(6) 67%</td>
</tr>
<tr>
<td>Q2. Specific Improvement&lt;sup&gt;2&lt;/sup&gt;</td>
<td>n=15</td>
<td>n=13</td>
<td>n=14</td>
<td>n=9</td>
</tr>
<tr>
<td>Better</td>
<td>(12) 80%</td>
<td>(6) 46%</td>
<td>(9) 64%</td>
<td>(6) 67%</td>
</tr>
<tr>
<td>No Difference</td>
<td>(1) 7%</td>
<td>(7) 54%</td>
<td>(4) 29%</td>
<td>(2) 22%</td>
</tr>
<tr>
<td>Worse</td>
<td>(2) 13%</td>
<td>( )</td>
<td>(1) 7%</td>
<td>(1) 11%</td>
</tr>
<tr>
<td>Q3. Global Improvement&lt;sup&gt;3&lt;/sup&gt;</td>
<td>n=15</td>
<td>n=11</td>
<td>n=14</td>
<td>n=9</td>
</tr>
<tr>
<td>High</td>
<td>(9) 60%</td>
<td>(4) 36%</td>
<td>(9) 65%</td>
<td>(3) 33%</td>
</tr>
<tr>
<td>Mid</td>
<td>(5) 33%</td>
<td>(7) 64%</td>
<td>(3) 21%</td>
<td>(6) 67%</td>
</tr>
<tr>
<td>Low</td>
<td>(1) 7%</td>
<td>( )</td>
<td>(2) 14%</td>
<td>( )</td>
</tr>
</tbody>
</table>

**Note:** Treatment Condition (Treatments A & B)
- Satisfaction ratings were collapsed to high (completely and very satisfied), mid (fairly satisfied) and low (somewhat and very dissatisfied).
- Specific improvement ratings were collapsed to better (great deal of improvement and some improvement); no difference (no difference, not sure) and worse (worse and a lot worse).
- Global improvement ratings were collapsed to high (quite good and very good), mid (so-so) and poor (very and fairly poor).
Table 19

Means, Standard Deviations and Response Frequencies on Participant Interview for Treatment Group at Pre-, Post-, and Follow-up Testing

<table>
<thead>
<tr>
<th>Question</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Followup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. Feel about joining group*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>2.3</td>
<td>2.8</td>
<td>2.9</td>
</tr>
<tr>
<td>(SD)</td>
<td>(1.4)</td>
<td>(1.7)</td>
<td>(1.3)</td>
</tr>
<tr>
<td>n</td>
<td>15</td>
<td>14</td>
<td>14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Collapsed Rating Categories*</th>
<th>Freq.</th>
<th>%</th>
<th>Freq.</th>
<th>%</th>
<th>Freq.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>(9)</td>
<td>60%</td>
<td>(7)</td>
<td>40%</td>
<td>(6)</td>
<td>43%</td>
</tr>
<tr>
<td>Mid</td>
<td>(4)</td>
<td>27%</td>
<td>(4)</td>
<td>27%</td>
<td>(5)</td>
<td>36%</td>
</tr>
<tr>
<td>Low</td>
<td>(2)</td>
<td>13%</td>
<td>(4)</td>
<td>26%</td>
<td>(3)</td>
<td>21%</td>
</tr>
</tbody>
</table>

| Q2 Fitting into the group*                   |         |          |          |
| M                                            | 2.8     | 2.3      | 2.8      |
| (SD)                                         | (1.4)   | (1.4)    | (1.7)    |
| n                                            | 15      | 15       | 14       |

<table>
<thead>
<tr>
<th>Collapsed Rating Categories*</th>
<th>Freq.</th>
<th>%</th>
<th>Freq.</th>
<th>%</th>
<th>Freq.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>(5)</td>
<td>33%</td>
<td>(10)</td>
<td>67%</td>
<td>(7)</td>
<td>50%</td>
</tr>
<tr>
<td>Mid</td>
<td>(6)</td>
<td>40%</td>
<td>(2)</td>
<td>13%</td>
<td>(3)</td>
<td>21%</td>
</tr>
<tr>
<td>Low</td>
<td>(4)</td>
<td>27%</td>
<td>(3)</td>
<td>20%</td>
<td>(4)</td>
<td>29%</td>
</tr>
</tbody>
</table>

Note: Treatment Condition (Treatments A & B)
M = mean score based on participants' selection of a Likert rating number
* Joining the group ratings, ranged from 1 (completely satisfied) to 6 (completely dissatisfied)
* Joining the group ratings were collapsed to high (completely and very satisfied), mid (fairly well satisfied) and low (somewhat, very and completely dissatisfied)
* Fitting into the group ratings, ranged from 1 (completely) to 6 (not at all)
* Fitting into the group ratings were collapsed to high (completely and very well), mid (fairly well) and low (somewhat well, not very well and not at all)
Social Impact of the Intervention

Results on a social impact measure which assessed changes from post-treatment to follow-up, in participants' plans to 'telephone' or 'socialize' with other group members, indicated that five of the 15 participants reported having plans to contact other group members at post-testing. However, at follow-up, only one participant indicated that they had made contact with a group member. Results suggest that the group intervention did not alter adolescents' ability or willingness to contact other group members.

Clinical Caseness\(^6\)

One measure of the extent to which the treatment intervention could produce clinically important changes would be the demonstration that at the end of group, the treatment participants were well within the range of a normative, well-functioning sample on the Achenbach scales. However, means from the Achenbach scales (refer to Tables 10 and 11) revealed that responses from parent and participant groups were in the borderline to normative range at pretesting, with the exception of Social Problems. Although responses on the Social Problems subscale revealed an improvement from Time 1 to Time 2 reported by participants (M=61.2 to M=57.9) and their parents (M= 67.8 to M=59.8), this difference was not clinically significant (i.e., two standard deviations away from the original group mean, Kazdin (1998a), p.384).

\(^6\) Clinical caseness refers to a clinical versus non-clinical status.
To afford some clinical insight into the overall 'normative functioning' indicated by the means on the Achenbach scales, the frequency of clinical caseness was computed for the entire sample of participants and parents. Table 20 presents the frequency of clinical and non-clinical scores on the Achenbach.

Clinical markers at different cutpoints (e.g., 83rd to 90th percentile) were compared to determine the range which would most effectively discriminate clinical from non-clinical cases. According to Achenbach (1991a), there is no well-validated criterion for categorically distinguishing between children in the normal to abnormal range across syndromes. If maximum discrimination is sought between deviant and nondeviant children without regard to the increase in false positives, cutpoints below T=67 may improve discrimination in some samples (Achenbach, 1991a, p. 56). For this analysis, T-scores less than 60 (i.e., one standard deviation above the mean) were considered in the normal range, 60 to 63 in the borderline clinical range and greater than 63 in the clinical range. At pretesting, on the Youth Self-Report, proportionally more adolescents fell in the clinical range for Social Problems (52%). Roughly one-third of the participants reported clinical ranges on the Internalizing (29%), Attention (36%) and Total T (32%) subscales. On the Child Behaviour Checklist, parent responses were comparable, with higher percentages of responses in the clinical range: Internalizing (53%), Externalizing (17%), Social Problems (73%), Attention (60%) and Total T (43%). Overall, chi-square analyses comparing the treatment and control groups, revealed no significant differences in the frequency of adolescent and parent reports of clinical scores from first to second and third measurement.

Since mean scores failed to reflect the performance of individual adolescents, chi-square
Table 20
Frequency of Clinical Versus Non-Clinical Scores on Selected Subscales of the Achenbach for Treatment and Control Groups at Pre-, Post-, and Follow-up Testing

<table>
<thead>
<tr>
<th>Achenbach Scale*</th>
<th>Youth Self-Report</th>
<th>Child Behaviour Checklist</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T1 n=31</td>
<td>T2 n=30</td>
</tr>
<tr>
<td><strong>Externalizing Behaviour</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Non-clinical</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Non-clinical</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td><strong>Internalizing Behaviour</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Non-clinical</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Non-clinical</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total Behaviour</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Non-clinical</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Non-clinical</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td><strong>Social Problems</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Non-clinical</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Non-clinical</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td><strong>Attention Problems</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td></td>
<td></td>
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<tr>
<td>Clinical</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Non-clinical</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Non-clinical</td>
<td>9</td>
<td>11</td>
</tr>
</tbody>
</table>

Note: Treatment Condition (Treatments A & B); Control Condition (Controls C & D)
* Achenbach T scores greater than 63 were used as a marker of the clinical range, at the 90th percentile.
tests were used to evaluate the proportion of treatment group members who fell within the clinical/non-clinical range on selected subscales of the Achenbach. No significant differences in clinical versus non-clinical status were evident at post-testing and follow-up.

Cross tabulations were performed to investigate the relationship between parents' ratings of specific improvement for their adolescent and parental endorsement of clinical caseness. No significant relationships were found, in part due to the limited range of clinical cases at pre-testing.

**Dropping Out of the Intervention**

Kazdin (1994) suggests that an analysis of drop outs can be clinically informative. However, too few cases (n=2 participants) were available to assess factors related to individual dropout.

**Summary**

Supplemental data analysis evaluated the extent to which the effects of the intervention, which were not statistically significant on the primary or secondary outcome measures, could be readily noticed by participants and others. Overall, the subjective ratings of participants and parents did not reflect noticeable changes in behaviour.
Descriptive Summary: Clinical Impressions and Interviews With Adolescents

This chapter will consider briefly some salient domains that are relevant to treatment to supplement what is reported in the chapter of quantitative analyses. Many of the factors that influence delivery and effectiveness of treatment are not encompassed by the central diagnostic features of learning disabilities. From a treatment perspective, learning disabilities represent a very broad domain involving adolescent, parent, family and contextual conditions. Thus, it is important to delineate the study population as it was presented clinically. Next, descriptive features of the adolescents' interviews will be presented in order to understand some of the distinctive features and challenges which characterize these adolescents and provide a context for interpretation and discussion of findings.

This type of descriptive summary has a distinctive place in evaluation research (see Yinn, 1989), with at least two direct applications. The most important is to describe the real-life context in which the intervention has occurred. A second application, again in a descriptive mode, is the provision of information which can be used to explore those situations in which the intervention being evaluated has no clear, single set of outcomes. That is, it may also serve to illustrate some of the no-difference findings.
Central Features and the Range of Functioning

The general pattern of learning disabilities and defining criteria for Integra's population has been reported earlier in the thesis (Chapter 3). There is widespread agreement and evidence that a constellation of behaviours related to learning disabilities extend beyond those recognized in diagnosis (e.g., comorbidity, family functioning, psychosocial functioning). Clinical features of this study population were the persistent pattern of social isolation, being teased, peer problems and interpersonal relationship difficulties.

The characteristics of the adolescents, parents, families and contexts that are associated with learning disabilities and psychosocial functioning serve as a backdrop for later comments on treatment. A brief description of some of the salient characteristics will be highlighted.

Adolescent Characteristics

Several features consistent with a diagnosis of LD are relevant to the treatment intervention. For example, this study population exhibited academic deficiencies, as reflected in achievement level, grades, being left behind in school, special education placement and deficiencies in specific skills areas such as reading, mathematics and written expression. Learning disabilities included problem areas such as organization, motor skills, memory, time and space concepts, comprehension and expression. Participants also revealed a range in cognitive processing. Deficits in cognitive problem-solving skills, concrete reasoning, inflexible thinking processes and expressive language difficulties, illustrate a few cognitive features associated with the study population.
Several other associated features of LD are relevant to the treatment intervention. Roughly two-thirds of the study population met criteria for other disorders or were in the referral process for comorbid diagnoses. These comorbid diagnoses included: Attention Deficit Disorder, Asperger's Syndrome, Tourette's, Conduct Disorder, Obsessive Compulsive Disorder, Depression and Schizoid Affective Disorder. This study population revealed poor interpersonal skills, as reflected in diminished social skills in relation to peers and adults along with higher levels of peer rejection. The adolescents reported incidents of being bullied, which ranged from verbal attacks to physical abuse. Their behaviour often reflected immaturity with respect to issues of sexuality, dating and friendships with girls. The developmental shift in early adolescence from a social life with mixed groups of friends to pairing off, and a shift to more self-disclosure and intimate relationships was not exhibited by the majority of the participants, as might be expected from their chronological age. They often acted in ways that could be described as "silly" or "inappropriate" (e.g., making inappropriate gestures or sounds, crude jokes).

Parent and Family Conditions

The characteristics of adolescents and their families raise a number of considerations that are central to treatment. Parental attitudes and behaviours reflected a range in the domains of acceptance, supportive communication, warmth and emotional support of their adolescents. Parent disciplinary practices and attitudes ranged from consistent to erratic. A range of functioning in the domains of family, marital and interpersonal relations characterized this study population (e.g., divorce, parental death).
**Contextual Conditions**

It is likely that a family referred for treatment to Integra will experience a subset of characteristics related to financial hardship, difficult living conditions, transportation obstacles, stress related to a significant other, psychiatric impairment of one of the parents and/or adversarial contact with an outside agency. Other contextual factors that may be relevant to treatment outcome for this study population include: socio-economic status, culture, race, sexual orientation, drug/alcohol related problems, abuse, parental death and divorce.

**Descriptive Summary of the Interviews with Adolescents**

This section summarizes some of the content of the interviews with the adolescents. This process was facilitated by the researcher's experience as a teacher of adolescents with very similar profiles to those who participated in the study and as a clinician who has worked with both children, adolescents and families with these problems. The interview notes collected by the researcher during interactions with the participants over a ten month span provide additional information which can contribute to a comprehensive evaluation of the intervention. Content of the interviews was organized into five general categories.

**Rapport and Interview Atmosphere**

Initially, many of the adolescents required additional sensitivity, patience and reassurance when told that they would be responding to questionnaires and academic tasks. Rapport was easily established and maintained as evidenced by keeping of appointments, full
participation and personal self-disclosure. In fact, during the first session, 9 out of the 31 participants discussed issues which required immediate attention (i.e., suicidal intention, depression, loneliness, thought disorder, obsessive-compulsive behaviours). Most participants identified problems (social, emotional, behavioral, learning) that led them to take part in group therapy or other treatment at Integra. Many treatment participants, however, had difficulty providing specific goals they felt should be worked on during the course of group therapy. The overwhelming majority of adolescents also discussed psychosocial problems related to being teased, misunderstood and difficulty making and keeping friends. The participants' interest during the interview process ranged from boredom and minimal dialogue to absolute enjoyment and sharing of private feelings.

Clinical Impressions

The adolescents presented as an 'at risk' group. Behaviours ranging from excessive emotional neediness, acting out behaviours, loneliness, sadness and mood swings characterized this study population. At least two-thirds of the study population had a comorbid diagnosis which impeded the interviewing process. For example, nine of the participants discussed information which required immediate follow-up by the Director of Child and Clinical Services (e.g., disclosures leading to psychiatric diagnoses and individual counselling with a case manager). Given the clinical nature of many of the items within the test battery, a number of adolescents wished to discuss personal problems that were triggered by some of these questions. There was a constant effort by the researcher to direct responses to the questionnaire items while still attending to the emotional needs of the adolescents.
There was a wide range of cognitive functioning, from adolescents who were able to read materials on their own and understand vocabulary and content to others who could not read, and had great difficulty interpreting the content and meaning of a question despite probes. A majority of the adolescents were concrete thinkers, had limited attention spans, attempted to change topics, had difficulty expressing themselves and had memory difficulties (e.g., forgot questions, required reminders about the purpose of the study). Difficulties in test administration illustrate some of the learning difficulties of these adolescents. For example, the term 'satisfaction' had to be defined in different ways before an adequate understanding was shown by many of the participants. Many of the adolescents had difficulty interpreting and following instructions and required prompt and direct feedback. Open-ended questions were quite difficult for the majority of participants, requiring the researcher to restructure and rephrase many items. This is best illustrated with the following example. When participants were asked to elaborate on a response to a Likert scale question, with the probe: "What were you thinking about when you answered this question?" or "Could you tell me more about what you were thinking when you answered this question?", several participants responded with comments similar to, "I was thinking about what I was going to eat when I get home."

**Friendship**

The majority of participants discussed difficulties 'making and keeping friends' and expressed a strong desire for 'having a friend'. All participants indicated having at least one friend (ranging from 1 to 9), with the exception of one adolescent who reported no friends. This adolescent also reported suicidal ideation to the researcher during the first session. At least one-
third of the adolescent participants indicated that they had many best friends, but upon further probing indicated that they "never see them or infrequently see them." A striking comment made by at least one-third of the participants illustrates the extent of teasing and bullying that some of these adolescents have endured. Specifically, when asked, "What do you look for in a friend?" responses were similar to "someone who is kind to me, doesn't tease me or pick a fight with me."

Adolescents' Perceptions of the Group Experience

Upon completion of the group, participants responded to a rating scale indicating their level of satisfaction and perception of specific and global improvement. They were also asked to describe the group experience, specifically detailing how the group helped or did not help with their problems. The following comments were typical of their perceptions: (All of the participants' responses are represented).

Identification of Personal Goals: (n=4)

"learned to talk more."

talk with more enthusiasm, less monotone, understand jokes more."

"it helped me to be more dependent, trust people more. Know right away, if they are good or bad, I knew right away, these guys were good people, tested out their personalities, they are good apples."

"sometimes I talk."
Friendship and Social Interaction: (n=3)

"helped me figure out what kind of friend is okay for me to be friends with. I liked the extra $15.00 to buy food on the way to group."

"it is a good experience for me to meet other kids from around Toronto and to talk to them and ask them what their life is like."

"for specific problems not great, but had a good time socially."

Similarities with Others: (n=3)

"didn't do all that I wanted to but I did understand that a lot of other kids did have the same problems."

"I wasn't the only one."

Negative, Ambivalent or No Comment: (n=5)

"nothing was good about it, they forced me to go to group."

"I learned about myself and other people. The group itself, I hated it, I despised it. I disliked it, didn't want to continue, had a hard time getting out of it, it made it worse."

"don't think that they're in my league, feel like I was held back a little, didn't find their jokes funny, their approach was different, I enjoyed going there."

Participants' Thoughts About the Study

Four of the control participants indicated that they would have liked to be in the treatment group (i.e., "mildly disappointed"," would have been neat", "someone to talk to in a group"), the remaining control participants reported no problems. When asked about how they felt participating in the study, the majority of participants' responses were similar to comments such as "it was fun" and "I liked being with you". Five of the participants indicated comments
similar to "it was sort of boring because we had to keep doing it over and over, too many times for doing the same thing", referring to the pre-, post-, and follow-up testing.

Summary

At the outset, it is important to recognize the context in which treatment was entered for these adolescents. A categorical diagnosis, such as learning disability is a useful landmark for defining those who come to a clinic setting, but this diagnosis is limited in conveying the nature of the pathways and reasons for needing care. Interviews with the adolescents revealed a heterogeneous group composition, with a mix of personality, behaviour and learning styles. These adolescents are in treatment because of a confluence of factors: adolescent's behaviour, family, school, social support. Parent, family and contextual conditions varied widely within the study population. As a group, these adolescents consistently reported high levels of peer rejection and unsatisfactory peer relationships. These adolescents are having problems that reflect several sources of stress. Participants' and parents' anecdotal comments about the group experience provided mixed results. Indications of successful group process, however, on dimensions such as cohesion of the groups, quality of the interactions and satisfaction of members with group process was reported by group leaders. Finally, many of these adolescents have suffered for years, with one or more problems and therapy of several types is ongoing, for a long duration. All of these issues must be considered in thinking about the no-difference findings and the pathways toward successful implementation of psychosocial therapies.

Appendix 9 provides excerpts from agency treatment reports written by the group therapists at the conclusion of each treatment group. The reports provide a description of group composition, major themes and process outcomes for both Treatments A and B.
CHAPTER 6

DISCUSSION

Introduction

This treatment-outcome study failed to demonstrate that interpersonal group therapy for adolescents with LD, who were clinically referred for concomitant social-emotional problems, was effective in improving psychological adjustment and behavioral functioning when compared to a control condition. Main effects for time on a few variables indicated that both treatment and control groups tended to do better over time regardless of group condition. Furthermore, the effects of interpersonal group therapy on various exploratory measures which were designed to assess aspects of functioning identified by agency staff as likely to change as a result of therapy failed to demonstrate effectiveness in improving peer relationships and dimensions related to friendship.

Consistent with the no-difference findings on the dependent measures, both adolescents and parents independently reported mixed levels of satisfaction with the group experience and global and specific improvement. In addition, adolescents reported no increase in the number of friends they contacted following the group intervention.

The pattern of results in the present study offered no support for the effectiveness of a 10-week group intervention for adolescents with LD. An evidence-based approach to treatment,
however, acknowledges that therapy which has not been demonstrated effective in a controlled study does not mean that it is ineffective; it may be quite helpful for a few individuals (Persons & Silberschatz, 1998). Nevertheless, unless it has been investigated in a controlled study, researchers have no compelling evidence that it is effective. A central task of this outcome study will be to understand the impact of treatment, particularly in light of the no-difference findings. The interpretative framework for this discussion focuses on how we can extend knowledge from this research study to assist in the development, implementation and modification of real-world clinical interventions, within the clinical reality of the multifaceted lives of adolescents with LD.

A Pattern of No-Difference Findings Across Intervention Studies

In some respects, the absence of a differentially positive effect for the treatment group is not at all surprising. There is evidence, not well integrated or reviewed, in which some forms of therapy have been shown to produce no change or deleterious effects (see Kazdin & Weisz, 1998, for a review). Although there are too few effectiveness studies, authors have reached different conclusions; namely, that treatment is less effective in clinical settings than when evaluated in research (Weisz et al., 1995) or that treatment is equally effective in both contexts (Shadish & Ragsdale, 1996). Cohen's (1995) comment that in general, treatments work best "in the hands of the developers and less well in the complex, muddled world of clinical reality" (p. 147) is supported in meta-analytic studies. A recent review of several hundred treatment outcome studies published up to 1997, which investigated the clinical efficacy or effectiveness
of interventions for children and adolescents, found only three studies that used a minimal standard of scientific criteria: a randomized design, adequate control group and test of maintenance effects (see Hoagwood, 1997, for a listing). Out of 21 studies that investigated effectiveness in a clinical setting, only one-third found any positive effects at the level of child improvement. Researchers have documented that group treatment may not be as helpful when nonbehavioral approaches such as non-directive and psychodynamic models are used (Weisz et al., 1995: Shirk & Russell, 1992). In the search for empirically supported treatments, however, it is worthwhile to delineate those treatments that may not work or may not work well. Perhaps the effects can be improved by drawing lessons from the success of research therapy along with real-world functional outcomes in clinic settings.

**Interpreting Null Findings**

The absence of differences between the groups obviously raises problems because interpretation of support for the null hypothesis is hazardous. If anything there is a prejudice against research that fails to reject the null hypothesis, especially in psychological research (Wampold, Davis & Good, 1990). In the search for positive findings, the implicit view is that group differences, whatever drawbacks of the experiment, were not sufficient to cancel the effects of the independent variable. In contrast, no-difference (negative) results often imply that the independent variable was weak or that the dependent variable was a poor test of the treatment. In fact, it may be that conceptualization and methodological adequacy rather than statistical significance should be adopted as a more important criterion for evaluating the
contribution of an investigation (Kazdin, 1998a; Kupfersmid, 1988). Strong methodological standards protect against erroneous conclusions and direct attention to the most accurate interpretation of the data. When the need for treatment evaluation is high, flawed support of a given method may be preferable to no support at all, particularly when the problems with interpretation are fully acknowledged and serve as inspiration for future research (Peterson & Bell-Dolan, 1995). It is in this context that the no-difference findings will be discussed.

This study design has incorporated many of the desirable characteristics cited by prominent researchers and clinicians in the intervention field (Kazdin, 1998a; Chambless & Hollon, 1998; Weisz et al., 1998). These characteristics include group design, randomized control trials, multimethod outcome, maintenance effects, check of treatment integrity, measurement reliability and validity, treatment provided by expert clinicians who were trained, research from real patients, and broad-based assessments which were clinically relevant to specific symptoms and functioning of the adolescents. The full range of additional treatments was documented; however, their effects were not considered (medication, individual counselling). A multidisciplinary team view of how treatment was experienced by the adolescent and family was included. The study is exemplary in several ways. First, clinical cases, based on standardized assessment procedures, and cases involving comorbid conditions were part of the sample. Second, the clinical trials were randomized. Third, treatment integrity was assessed. Fourth, the study included assessment of clinical significance. This illustrates the possibility of strong ecological validity while retaining the precision and control of the design and implementation of the study.
On the basis of the results, there is some confidence that the paucity of differences between the treatment and control group are not due to methodological and design problems. In fact, the pattern of no-difference findings across the multiple measures, perspectives and time periods is more convincing than a single finding of no difference (Yeaton & Sechrest, 1987 a & b).

Several explanations for the no-difference findings are apparent from the discrepancy between what is revealed by the assessment of treatment integrity (intervention implemented as intended) and the dependent measures (no outcome differences). There is some assurance that the absence of effects on the dependent measures can not be attributed to diffusion of treatment or variability in implementation. Thus, the intervention was well manipulated but the original hypotheses were not supported. It is possible that the intervention was strong enough to alter responses on the measure of treatment integrity but not strong enough to alter performance on the dependent measures. Some measures may be extremely sensitive to even weak interventions and others only to very strong interventions. This pattern, however, may indicate that there is no relation between the independent and dependent variable. It may also indicate that the potency of the manipulation was not sufficiently strong. Each of these will be discussed in turn.

One explanation for the no-difference findings suggests that the framework which led to the hypotheses may need revision or may be an incorrect formulation of the theory. Alternatively, the theoretical framework may be suspect. As currently practiced, Integra's group therapy is guided by a conceptual model that has come to signify the theoretical explanation and language the therapists use to formulate the descriptive material provided by the client. This is useful for identifying relevant process variables (e.g., therapist qualities, group cohesion,
leadership dimensions) but what may be needed is more specification of the processes and mechanisms that lead to change. Integra has established evidence that treatment sessions affect the processes that are considered critical to the treatment model (e.g., group cohesion, mutual recognition, safety) (Mishna, 1994). The contribution of therapeutic alliance and the development of a relationship in group therapy has been demonstrated in other process studies (Brent & Kolko, 1998). A supportive relationship, however, may be necessary but not sufficient to treat clinically referred adolescents. One would think that 'successful' group process should lead to a therapeutic alliance, which, in turn, should lead to improvement in self-behaviours. But in just what way strong outcome depends on good group process is not certain. Better outcome may not be related to group process in a very direct way. What is needed is a theoretical model showing exactly how group process results in better outcomes. Placing group treatment on a firmer theoretical ground may allow for greater specificity of the expected behaviour change and intended outcomes for adolescents with LD (Kazdin, 1998a). A possible theoretical explanation for the no-difference findings is discussed below.

Figure 1 shows a schematic model of the interpersonal group therapy process, with the potential mechanisms of change mediated or moderated through the here-and-now group experience, leadership qualities, the adolescents' attitudes, affect, skills and behaviour and contextual issues. The interpersonal model posited by Yalom (1985) addresses maladaptive interaction patterns as they emerge between group members in the 'here-and-now' of the therapy group. The group experience evolves into a social microcosm (i.e., the adolescent's interpersonal behaviour will eventually be exhibited). Once identified, the group members
A Theoretical Explanation of Therapeutic Change: Interpersonal Group Therapy and Adolescents with Learning Disabilities

Therapeutic Change

Here-and-now (Group Experience)

Self-reflective loop (Process Examination)

(Not Powerful)

(Break in Cycle)

(Powerful experience!!)
become potentially accessible to therapeutic intervention and change. A series of therapeutic "bare-boned mechanisms of change" may occur and function interdependently in the group (Ballinger & Yalom, 1995, p. 192.) to facilitate feedback, catharsis and meaningful disclosure. Members may become deeply involved, experience emotional intensity and be a part of a 'powerful experience'. The effectiveness of the 'here-and-now' experience, however, is dualistic: coupled with the here-and-now experience is a 'self-reflective loop' which examines the here-and-now behaviour that has just occurred and also doubles back on itself. To set the powerful experience into therapeutic change, the group members must be able to recognize, examine and understand the process. The power source of therapeutic change is the 'self-reflective loop' which is aided by input from the leaders, group members and the adolescent's ability to examine the process. Adolescents with LD may not have the cognitive framework that permits them to retain the group experience, organize and understand information, generalize from the experience and apply what they have learned to outside situations. This model represents an adaptive spiral; namely, the more self-reflection, the more affect, the more depth and meaningfulness of these understandings, the greater potential for therapeutic change. It may be that most adolescents with LD lack the requisite skills to engage in meaningful communication with other group members, give valid feedback and examine hidden feelings. Adolescents with LD may lack the required amount of psychological mindedness to accurately perceive their views and those of others and as a result are unable to effectively engage in the 'self-reflective' component necessary for therapeutic change.

The model depicted in Figure 1 presents three possible outcomes. First, if the adolescents do not engage in the group experience from the outset (e.g., absenteeism, deviancy,
severe pathological disturbance, severe communication problems) the group experience is 'not powerful'. Second, participation in the group may lead to intense feelings. This 'powerful group experience' may be necessary but not sufficient to evoke a therapeutic change. The intensity of the group experience will reach the limits of its usefulness without the 'self-reflective loop', which is the examination of the process. On the other hand, if only the 'self-reflective loop' is present then the group loses its vitality and unique meaningfulness. Third, the group experience, to be effective, consists of two tiers (i.e., the 'here-and-now group experience' and the 'self-reflective loop'), neither of which results in therapeutic change without the other.

The theoretical framework described in Figure 1 can aid further refinements in both theories of interpersonal group therapy and improvement in treatments for adolescents with LD. Some examples to illustrate these issues are presented from this study. First, this model helps to distinguish the illusory relationship between observations of participants' and therapists' expression of emotionally-laden, powerful experiences and the essential self-reflection component required for therapeutic change. Second, this model may challenge the prerequisite skills required for adolescents with LD to benefit from group therapy, further suggesting modifications to selection criteria (e.g., subtypes of LD, comorbidity). Third, group therapists may need to incorporate additional techniques (e.g., modelling, metacognitive strategies) to promote self-reflection in the adolescents. Fourth, the addition of specific social skills training components (e.g., video-feedback, role playing, coaching, verbal rehearsal) may encourage self-observation, make the self-reflective loop more salient and assist in the adolescents' ability to obtain an accurate view of their behaviour. Fifth, generalization strategies (e.g., multiple examples, homework, behavioral rehearsal) need to be considered at each stage of the group's
Finally, this model can explain how individual differences may interact with differential outcome (i.e., not powerful, powerful, powerful and therapeutic change). For example, does absenteeism, lack of clear goal identification and severe psychopathology lead to experiences that are not powerful? How do specific personality traits (e.g., anxious, obsessive, depressive) relate to a powerful experience versus a powerful and therapeutic experience? The psychodynamic interpersonal framework (Yalom, 1985) adapted for these adolescents with LD requires further consideration in terms of the clinical impact of this disability on the theory's structure.

A second explanation for the no-difference findings may be the need to better shape goals appropriate to the clinical situation and achievable in the available time frame. Adolescents' comments across the three measurement periods, when asked about their personal goals for the group, reflected their confusion in the identification of clear pre-set goals and strategies for goal achievement. Cook's (1994) case analysis of Integra's group therapy found that two of the three participants entered the group with vague goals. Yalom (1995) emphasized that goals must be limited, achievable and tailored to the capacity and potential of the group members, particularly in time-limited and specialized groups. Intervention researchers have identified specific strategies for setting appropriate goals. Some of these strategies include establishing social goals prior to instruction (Griffiths, 1995), pre-intervention meetings with clients, significant others and support staff (Kazdin, 1993) and clarifying to members of the group how the procedure of the therapy group will help them to attain their goals (Yalom, 1985; 1995). The majority of successful treatment outcome studies indicate that goal oriented
therapies such as behaviour modification and use of cognitive-behavioral strategies are more effective than psychodynamic interventions (Weisz, Donenberg et al., 1995).

Third, the discrepancy between the assessment of treatment integrity and the dependent measures may indicate that the potency of the manipulation was not sufficiently strong or sufficiently different from other services provided at Integra. This explanation is consistent with the findings of the main effects for time on both participant and parent variables. Commonalities among different forms of service within a clinic setting is one way to account for the preponderance of similar findings in the research on psychotherapy outcome (Garfield, 1998). Thus, it is possible that the group intervention does not promote additional change compared to the other treatment modalities offered at Integra. Questions of the relative benefit of group treatment versus individual therapy or case management may also explain the lack of group differences.

Fourth, through collection of data and discussions with staff, it became apparent that parents and staff were not regularly informed about the progress of group treatment. Perhaps the effects of group treatment can be maximized with a more integrated and monitored delivery of feedback to parents, case managers and other relevant staff.

Fifth, the absence of group differences may have resulted from the short duration of treatment. Research has documented that more therapy sessions are associated with greater patient improvements (Howard et al., 1986). Although a 10-week group treatment is standard practice at Integra, it may be unrealistic to expect such a time-limited intervention to have an effect on enduring personality traits such as self-concept. A few studies have shown changes in self-concept over short durations of group therapy for school identified children with LD
(Crosbie-Burnett & Newcomer, 1990; Omizo et al., 1984), however, the range of clinical problems does not match the participants in the present study.

Sixth, a major question surfaced: Is this treatment appropriate for all of the participants? Another explanation for the no-difference findings may be that the intervention is helpful to only a few participants. Participants were selected according to criteria for a LD and many met criteria for one or more other disorders, in addition to the target disorder. As a result, these adolescents selected for research on treatment of a LD, may have varied in their responses to treatment. Since the data were highly variable (large standard deviations), it may be that only a subset of participants responded to the independent variable as predicted. Consistent with this explanation are the findings from the interview and the measure of clinical significance which indicated that several participants were not satisfied with the group experience and reported little improvement. There were also some participants who expressed resistance to treatment, anxiety, absenteeism and lack of interest.

Seventh, effect size estimates ranging from .013 to .264 revealed a surprisingly large number of no effect differences (9 out of 12 variables) compared to a few small effect size differences (3 out of 12). These effect size estimates indicate that the majority of the variables were not reliably different from zero. Thus, a post hoc estimate of power indicates that it is improbable that more extensive and sensitive statistical analyses would have uncovered clinically important differences between results in the treatment and control. That is, such differences if they exist, must be of quite small magnitude. In light of small effect size expectancies, Kazdin (1995a) calls for the use of a high-strength treatment. In an effort to maximize therapeutic change, one would test the strongest feasible version of treatment to see if
the problem could be altered (i.e., longer duration or intensity).

Bridging the Gap between Research and Practice

Research findings often do not influence clinicians (Kazdin, 1998b). In small sample research, clinical judgement has usually been the basis to decide what the client 'needs', what treatment needs to be applied and whether therapeutic changes have been achieved. Modifying clinical procedures based on preliminary outcomes might be considered a threat to internal validity in clinical settings such as Integra. Integra's clinical setting is embedded within a community setting. Similar to other clinical agencies, priority is given to practical and external validity. This raises fundamental questions about how to disseminate the study findings in a manner that is relevant to the clinical staff at Integra and in turn, informs future research practices.

The purpose of this section is to describe barriers experienced in the implementation of a randomized-control study, conducted at the agency, and possible strategies which can be used to overcome these barriers. There is real informational value in addressing within-clinic empirical questions. Some critical examples from this study are offered.

Randomization

Several authors believe that the randomized clinical trial is an equally appropriate method for efficacy and effectiveness studies alike (Jacobson & Christensen, 1996; Kazdin, 1998a) and cite the lack of randomization as the major flaw of clinical intervention studies.
Seligman (1995), however, believes that assignment of participants to treatment undercuts the nonrandom decisions of therapists in choice of the group for a participant. In this study, although all participants were selected as needing the group intervention, it is possible that group composition may have been negatively affected by random assignment. Random assignment clearly increases the confidence that can be placed in reducing between-group differences after treatment. No difference findings, however, are more difficult to interpret when the intervention does not fully correspond to the real-world counterpart at the agency. Steps need to be taken to increase the ecological validity of the randomized control trial, to make them more acceptable and useful to clinicians. Perhaps, random assignment of intact groups to either condition, following selection of group members would be more suitable.

Use of a Control Group

In the usual-care control condition implemented in this study, to equate the base level of nonexperimental intervention across both conditions, participants assigned to the treatment condition were also permitted to continue any preexisting treatment and to seek out any additional treatment. Weiss and Weisz (1990) reported little impact in the use of usual-care controls over more traditional controls in term of outcome effect sizes. In fact, several researchers have suggested that it represents a more generalizable test of the intervention, reduces ethical concerns about delaying treatment, decreases attrition and serves as a control of mitigating factors (Clarke, 1995; Weiss & Weisz, 1990). The usual-care condition, however, makes it more difficult to characterize the services received by the control condition and document how this affects outcome. The impact of additional services received by the seven
control participants, following pre-testing is unknown. It may be that the usual-care condition was not as therapeutically neutral as thought (i.e., immediate social contact, further counselling).

Operationalized Treatment in Manual Form

Although videotaping and coding reflected a high compliance rate for treatment integrity, a more thorough analysis using a treatment manual would have been more appropriate. In a clinical sense, the agency has standardized their treatment and determined the type of patient who responds well to this treatment. Unfortunately, typical to clinical settings cited in the literature (Clarke, 1995), Integra has not developed a treatment manual. There are clear benefits to the use of manuals (e.g., permits therapist training, minimizes variability in treatment, enhances interpretation of outcomes and replication). Researchers, however, have reported mixed views on the use of manuals, citing concern that a manual may make treatment inflexible or miss critical treatment process (Henry, Strupp, Butler, Schacht & Binder, 1993) or enhance treatment delivery (Chorpita et al., 1998). Evidence is accumulating that manuals or protocols designed to be flexible can enhance treatment evaluation (Chorpita et al., 1998).

The findings of this study suggest that an operationalized treatment manual or protocol may assist in refining Integra's conceptualization of group treatment by expanding on the explicit views about what group treatment is designed to accomplish and through what processes.
Measures

A common belief held by clinicians suggests that current clinical practice works well, but in ways that outcome research cannot measure (Kazdin, 1995a; Goldfried & Wolfe, 1998). The addition of exploratory questions in this study, derived from Integra's statement about group goals was an attempt to include agency defined criteria. In the future, researchers and clinicians need to work together to identify mutually acceptable measures of treatment outcome.

Comorbidity

Although a potential strength of Integra's group intervention is the flexibility to deal with a broad range of needs, the presence of multiple disorders raises questions about which disorder should be treated first, whether each disorder should be treated separately, whether a single treatment can be directed at all disorders and whether outcomes should be assessed only for the target disorder or for all the problems. Some evidence suggests that cases with comorbid conditions differ from single-disorder cases in clinically consequential ways (Newman, Moffitt, Caspi & Silva, 1998) and may confound clinical trials designed to test the efficacy of treatments for specific disorders (Sher & Trull, 1996). There is research indicating that combinations of symptoms require different therapies (e.g., family and multi-systemic for ADHD/conduct disorder: individual counselling for anxiety/depression) (Kendall & Clarkin, 1992). In general, comorbid presentations have a more chronic course, poorer prognosis and tend to be less responsive to treatment (Verhulst & van der Ende, 1993).

Comorbidity presents special challenges for research on treatment. Although this study design was able to limit age range, gender, type of clinical problem and educational status within
some reasonable boundaries, it remains unclear how other psychiatric disorders affected the social interactions of the adolescents (i.e., ADHD/LD; OCD/LD). Although there is some discussion in the literature on LD and comorbidity (Wiener, 1998) there is no research on how comorbidity influences efficacy of treatment with populations of children and adolescents with LD or affects their social interactions. As with any clinical sample, researchers must deal with comorbidity and multiple providers of therapy. Perhaps selection criteria need to be refined and specific patterns of co-occurrence more explicitly documented.

Some methodological variations to address comorbidity with this study population would include: (a) selection of participants with predefined comorbidity combinations (e.g., ADHD, conduct disorder) and requirement of research therapists to address the treatment and associated clinical issues important to both problem areas; (b) a two-tiered participant recruitment strategy: a highly selected homogeneous core sample and a relatively unselected, comorbid heterogeneous sample to examine generalization and real-world effectiveness (Clarkin & Kendall, 1992); and (c) a manual for therapy to either focus treatment on the comorbid condition or describe how it is to be managed (Kendall & Clarkin, 1992).

Treatment researchers need to design interventions for the overall pattern of co-occurring problems (e.g., scope, type, severity and breadth of symptoms) or should demonstrate that a particular subset of problems is sufficiently independent of the overall pattern to be effectively treated separately (Achenbach, 1995).
Process versus Outcome Measurement of Effectiveness

Clinicians tend to find less applied utility in results when process variables are not included, thus widening the gap between clinician and researcher (Dagley et al., 1994). There are virtually no empirical studies that have incorporated both process and outcome evaluation. Consistent with the empirical studies reviewed is the opinion that unless a therapy has been studied in a controlled investigation, there is not a high demand for studies of its mechanisms (Persons & Silberschatz, 1998). In this study, however, without the benefit of process evaluation, absence of a significant outcome may have been impacted more by ineffective leadership or by the unique character of a particular adolescent group than by the nature of the planned intervention. Future research designs need to address the usefulness of both process and outcome evaluation, particularly in the context of clinical utility of the findings.

Measuring Change

Although this study implemented a pre-, post-, and follow-up design and multiple data assessments to allow for more reliable statistical estimates of change parameters (Eddy, Dishion & Stoolmiller, 1998), behaviour change could have been quite sudden and nonlinear rather than cumulative and orderly or behaviour change could have been linear but the design used a limited number of assessment points. Pre-, post-, and follow-up designs may be of limited utility for informing either developmental or clinical models of change.

To detect the full range of side effects associated with an intervention, it may be necessary to measure the adolescent's behaviour outside of the clinic setting on variables of central influence. For example, Integra's staff expressed concern that the group intervention may
have an impact months later, in a different context. Researchers and clinical staff should attempt to index the most theoretically relevant points in treatment and important potential side effects.

The findings of this study may be consistent with relevant studies which found that changes in an individual's behaviour may not always produce immediate change (Vernberg, 1990). Longitudinal studies, beyond a two-month maintenance effect may be better able to capture a 'latency period' between changes in affect and variations in experience with peers.

**Ethical Considerations**

The ethical concerns of using treatments of questionable efficacy are without doubt. Unmonitored treatment and progress permit a level of nonaccountability that is ill advised (Kazdin, 1997). Clearly, research and practice both must be changed in ways that make evaluation more meaningful.

This study has identified several variables or factors that may influence treatment effects. Findings from the study should prompt significant attention to and changes in clinical procedures, organization of the treatment team, and supervisory modifications to the existing agency approach to serving youth the LD and social-emotional problems. One common theme of these changes is the commitment Integra has shown to continuous quality improvement. Both qualitative and quantitative monitoring of outcomes should continue to inform the agency.
Limitations of the Present Study

Some limitations of this study warrant comment. First, low statistical power to detect differences is a rival explanation for the absence of treatment differences. A power test was performed in order to find out how many participants would be needed in principle for the ANOVAs performed. According to the power analyses (SPSS 6.1., 1995), a minimum of 55 subjects were needed for each group of adolescents based on a medium effect size (.50), a .05 level of significance and a power of .80. Due to the small size of the actual sample, it is possible that a Type II error was made. An increase in sample size might have resulted in a relationship showing up between the treatment and control group. Nevertheless, this seems somewhat less probable than in other circumstances because most of the findings were not even in the direction predicted. In any case, it is sometimes necessary in clinical settings to work within the administrative, staffing and financial constraints that limit sample size (Kazdin, 1998b), particularly when need for treatment intervention is high (Peterson & Bell-Dolan, 1995). It is important to note that strong methodological features in this study (e.g., assessment of treatment integrity, randomization, standardization of assessment conditions) increase power by reducing variability in the execution.

Heterogeneity of the participants (e.g., variations in medication usage, type of LD, comorbid diagnoses, cognitive functioning and family factors) may reasonably have affected treatment outcome and conclusions about the effectiveness of the treatment. Since the documented variation among adolescents' characteristics within the treatment groups was entered into the data analyses as with-in group variability (error), this can reduce the obtained
outcome (effect size).

Another explanation for the no-difference findings may be misspecification of the expected outcomes. The assessment devices may show sufficiently variable performance that only the robust relations would emerge as statistically significant and/or the dependent measures may not be the most appropriate. The potential inaccuracy produced by self-reports is inaccuracy about participants' own emotional state before and after treatment and inaccuracy in ratings of improvement in the specific problem. This is an ever-present inaccuracy in self-report data. It may, however, be more prominent in adolescents with LD, some of whom struggled with understanding concepts involved in the measures, were unsure of their feelings and had difficulty describing their problems. Second, the Likert scales measuring improvement were molar. Responses like 'made things a lot worse' to the question 'To what extent has the group helped you with your problems?' tap into gross process. More molecular assessment of improvement requiring descriptions or examples may have increased the validity of the method. A variant of this objection is that the measures may have been insensitive. This objection looms large in light of the no-difference findings. For example, the absence of differences between groups may have resulted from a ceiling effect (i.e., in this study the means at pre-test on most measures were in the normal range of functioning), limiting the range of scores obtained on the measures. Another variant of this objection is that some of the outcome measures were poorly normed. Questions like 'how satisfied were you with the group?', required responses ranging from 'completely satisfied to somewhat satisfied'. These items depend almost entirely on face validity and do not guarantee strong psychometric properties. Although there is a need for greater specificity and clarity about which behaviours are actually being measured (Eddy et al.,
1998), researchers have articulated the problem of finding and calibrating measures against real life behaviours (see Sechrest, McKnight & McKnight, 1996). The addition of extensively normed questionnaires, coupled with satisfaction ratings and multiple perspectives strengthens the method used in this study.

The use of repeated testing coupled with measurement choice may account for the main effects for time found on a few variables for adolescents and parents. An improvement in some reported behaviours was found in both the treatment and control group. This finding may have been caused by repeated testing and the measure used (e.g., CBCL). Research suggests that parents tend to report systematically fewer behaviour problems at a second test administration (Blonk, Prins, Sergeant, Ringrose & Brinkman, 1996). Achenbach (1991) reported significant decreases in T scores over a 2-week period. This implies that the CBCL may not be a valid outcome measure under certain conditions. In some studies (e.g., Kazdin, Bass, Siegel & Thomas, 1992), however, the CBCL appeared to be a sensitive outcome measure, largely because the parents were well informed about their child's behaviour problems.

Another explanation for the time effects may be the commonalities among the different forms of service at Integra. It is possible that specific therapeutic factors such as therapeutic alliance and client's involvement in therapy operate to promote change across the different treatments (Garfield, 1996; 1998). In a clinic setting such as Integra, the clinical requirement is to offer an integrated array of services, consisting of several interconnected parts (e.g., summer camp, individual or family counselling). Perhaps evaluation studies should begin with the larger integrated intervention package, then proceed with component analyses of the effects of various
treatment modalities. One insightful adolescent in the treatment group highlighted this limitation with his comments in response to the difficulty addressing how effective the intervention was for him:

*It feels a little funny answering the question because my problems were already solved before the group. If you said how has Integra and the group helped your problems.... but I can't answer with just the group... because I have been at Integra for so long. How do I know when it is the group or just being at Integra that helped me? If you do the survey again, you should have an individual part called, when you first came to Integra.*

The small sample size in this study necessitates caution in interpretation of the no-difference findings in terms of generalizability. Only adolescent boys participated in this study. Mishna's (1994) dissertation based on Integra's group therapy model indicated sex differences between adolescent boys and girls in the group therapy context. Female participants were more likely to express insecurity and concern regarding the other group members responses to them compared to the male participants. The question of the effect of group treatment on girls with learning disabilities remains. Meta-analytic reviews have indicated mixed results for both sex and age differences and responsiveness to treatment (see Casey & Berman, 1985; Weisz et al., 1995). Socioeconomic status of the participants in this study was predominately middle class. Hoag and Burlingame's (1997) results of meta-analyses found SES to be the sole client variable differentially related to treatment outcome, with adolescents classified as 'middle' showing significantly more gains than those classified as low. When the experimenter had a preference for a particular type of treatment being examined, this treatment showed significantly more improvement (ES = .72) compared to treatments that did not show a preference (ES = .30). Future research needs to look at the impact of SES on the delivery and outcome of treatment and
possible experimenter bias in the implementation of research efforts. Despite these limitations, some generalizability of the research findings is possible. In a review of participation rates in clinical child research, Betan, Roberts and McCluskey-Fawcett (1995) report mean consent rates of 67%. The authors discuss the importance of obtaining high levels of participation, particularly in studies with clinical samples. The high consent rates of participants (100% at post-test) and parents (87% at post-test), coupled with the strong ecological validity of the intervention, may give greater validity to the present study.

Statistical design considerations were limited in this study due to the small sample size. Some researchers suggest that it may not be statistically appropriate simply to combine data from individuals in different therapy groups. Statistically, no two groups are alike and data from two individuals in the same group may be more similar than data from two individuals in two different groups. Combining data across groups may violate assumptions of independence and is likely to produce Type 1 error (Marcus & Kashy, 1995). Yalom's (1985) theoretical explanation of therapeutic change suggests that the mechanisms for change are identical within any group experience. Nevertheless, innovative tools for analyzing group therapy research data by analyzing each group separately and then combined are slowly emerging (Marcus & Kashy, 1995; Burlingame, Kircher & Honts, 1994). Given an adequate sample size, future research may be able to use a nested design (i.e., begin with an analysis of intact groups) to separate group effects from treatment effects (Morran, Robison & Husle-Killacky, 1990). Other possible statistical procedures which allow examination of each group separately include a bootstrap procedure (Burlingame, Kircher & Honts, 1994) and a social relations model (Marcus & Kashy, 1995) or covariance methods (Newman & Tejeda, 1996).
Clinical Implications and Future Research

Several empirical questions and challenges of the group treatment approach have already been addressed. This section highlights additional domains of research in the context of research on the clinical utility of this treatment modality.

The role of development as a mediator or moderator of treatment efficacy needs to be explored. What are the boundary conditions for effective application of treatment or the moderators that influence effectiveness? What processes within or during treatment influence outcomes? What child, parent, family and contextual features influence outcomes? From a developmental perspective, it is important to understand how outcomes at one point in development may predict outcomes at a later point. What is needed for clinical practice is a method of monitoring the progress of adolescents over time and in an ongoing way to evaluate functioning and draw conclusions based on the pattern of data. It would be helpful to integrate additional assessment over the course of treatment. A clinical agenda may require differential consideration of possible variations in developmental stages within the group, comorbidity patterns and modified theory-based techniques to address these issues.

Since comorbidity is extensive in this population, to exclude subjects with comorbid conditions lacks generalizability. As a next step, a manualized treatment protocol and other therapies should expand together to either focus on the comorbid condition or describe how it is to be managed. Identifying subgroups can contribute to knowledge by raising hypotheses about the reasons why factors moderate outcome. This would contribute to clinical practice by permitting a better triage of cases to treatments that work.
This study was designed to test for group differences. Since the data were highly variable (large standard deviations), it may be that only a subset of participants responded to the independent variable as predicted. With larger samples, future research could attempt to analyze data for those subsets only. Analyses at the individual (i.e., patient profiling) or subgroup (i.e., dyadic) level may provide critical information on the interplay between the adolescent's personal characteristics and moderator effects (i.e., treatment aptitude X treatment) (Chambless & Hollon, 1998).

Efficacy and effectiveness have been used to note points on a continuum that address well-controlled lab conditions and clinical practice conditions. This study illustrates different parts of this continuum. This study can be improved upon in both research and clinical ways. These improvements would combine several of the best features of efficacy studies with the realism of the clinical setting. First, a larger sample of participants, longer duration and nonrandom assignment to treatment groups (or specialized randomization procedures) should be attempted. Second, the assessment battery could include well-normed questionnaires as well as detailed, behavioral information in addition to more global improvement information, thus increasing the sensitivity of the measures. Third, longitudinal measures addressing potential side effect benefits should be investigated. Next, findings from this study suggest that Integra's treatment needs to be better grounded in a theory of child development and theory of therapeutic action. Specifically, the treatment needs to be well defined, the approach well documented and sufficiently operationalized and selection criteria better evaluated.
For the immediate future, research should focus on the process of treatment and the nature of therapeutic action. A great deal more work needs to be done in relation to assessing adolescents with LD, defining treatment objectives and mounting them in ways which can be empirically studied.

For a number of adolescents with LD, the course of maladjustment is lifelong. Their learning disability encompasses a broad range of symptoms, associated areas of dysfunction and family, parent and societal problems. It is clear that treatment of an adolescent with LD may require a broader range of interventions than any one treatment approach.

Conclusion

A single study of this type is not meant to answer all questions. In light of the no-difference findings, the requirement of replication will help to provide protection against reliance on drawing erroneous conclusions based on one aberrant finding or providing protection against findings that prove unique to a particular setting or group of therapists. Replication in this study may better be conceptualized as a test of robustness and generality of the original findings or a more careful evaluation of the original hypotheses. A replication may repeat the original experiment with additional control conditions and provide a methodological and theoretical advance. Clearly, replication early in the development of an area of research is important as the framework of the theory and empirical phenomena are established (Chambless & Hollon, 1998).
The aim of this discussion was to accentuate a perspective that does not 'blame' others for program findings, but emphasizes the identification of barriers to achieving goals and the collaborative development of solutions to address these barriers. This study was invaluable in identifying clinical, research and administrative aspects of the intervention that may influence treatment effects and which may address needed modifications to enhance the probability of success.
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Appendix 1: Consent Letters and Forms
Parent Consent Letter

Date:

Dear Parent:

I am a doctoral student at the Ontario Institute for Studies in Education, University of Toronto's graduate department of education. In cooperation with Integra, I am conducting a research project to help us understand the benefits of group therapy for teenagers who have learning disabilities. To date, there is very little known about how group therapy can be helpful for these adolescents. This study involves a partnership between the University of Toronto, under the supervision of Dr. Judith Wiener and Integra’s research committee, under the direction of Drs. Lorraine Campbell and Faye Mishna. This research project has been specifically requested by Integra and approved by its research board and clinical staff within Integra's agency. Your son,_____________________, has been selected by the clinical staff at Integra, as a teenager who could participate in the research study.

To conduct this research project, it is necessary to involve a large number of adolescents who receive services at Integra. The purpose of this study is to see how effective group therapy is for the adolescents at Integra, in terms of friendship and feelings that are experienced by them. In order to determine whether group therapy is effective, we need to compare the gains in friendship and particular feelings expressed by the adolescents in a group therapy setting with possible changes in a group of learning disabled adolescents who did not get a group immediately. This means, that adolescents who participate in the research project, will be placed in a group. The groups will begin at different times through the year. That way, we can figure out whether the gains are due to group therapy or just the passage of time. Therefore, the purpose of this letter is to ask your permission to allow your child to participate in this study at Integra. Your child may be placed in a group immediately or may be placed on a waiting list to receive a group at another time.

My plan is to meet individually with the participants of the research project. Three interviews, over a nine month time span would take approximately 1 to 1 1/2 hrs. each and will be audiotaped. Questions will focus on the teenager's experiences with peers and their learning disabilities and for those teenagers who will be placed in a group immediately, specific questions about their group experiences will be asked. As well, I would like to ask parents and special education teachers to complete a questionnaire about your child. As part of the research, I may review some of the video tapes of the group sessions. I am requesting your consent, and that of your son's, to participate in this research.

Confidentiality will be respected and no information that discloses the identity of the participants will be released or published without consent, unless required by law. Individual's and family's participating in the study may want to talk further about their thoughts and feelings. On reviewing the information collected in the study, the principal investigator, Laurie Costaris, may also recommend further discussion of questions or concerns. Follow-up discussion would be available through your case manager at Integra. You are free to withdraw at any time from participation in the study. Please rest assured that participation or non-participation in this research project will in no way jeopardize current or future access to services at Integra.

Upon completion of the project, I will send you a summary of the research findings. Please feel free to call me at Integra if you have any questions at all about this research. Thank you very much for your time.

Sincerely,

Laurie Costaris, M.A., Ph.D. Candidate, University of Toronto
Judy Wiener, Ph.D., Supervisor, University of Toronto
Faye Mishna, Ph.D., Clinical Director, Integra
Lorraine Campbell, Ph.D., Research Psychologist, Integra

Serving Children and Adolescents with Learning Disabilities

In Integra, Toronto, Canada M6K 2B9 Phone: (416) 590-7600
Dear Participant:

Some adolescents have trouble learning at school. Their learning problems can sometimes make it hard for them to make friends and talk about their feelings. At Integra, we believe that discussion groups can be helpful for teenagers with these kinds of problems. I am planning a research project to help us understand how these groups might help the teenagers. I am a graduate student at the University of Toronto and have also worked at Integra in the past. Everyone at Integra is interested in working on this project and have agreed to let me ask you if you would like to participate in this study.

I need to ask a lot of teenagers to participate in the study. Some of the teenagers will join a group at Integra immediately and some other teenagers will wait for awhile before they join a group. That way, I can compare the effects of group therapy on teenagers who are in a group at Integra with teenagers who aren’t in a group at the same time. So, for this study, you may be placed into a group right away or you may be one of the teenager’s who will wait for awhile before getting into a group. The reason for this letter is to ask for your permission to be in this study at Integra.

In order to get this information, I would like to interview you and have you complete some questionnaires. These interviews will be done three times during the year. Each interview will take about 1 to 1 1/2 hours and will be audio taped. I would arrange to meet with you at a time that is good for you. Your opinions and feelings about the group will be very important. This interview time will be private and your name will not be used in the research. As part of the research, I may review some of the video tapes of the group sessions.

If you would like to participate, check with your parents to see if it is okay with them. Then, both you and your parent(s) should sign the form giving permission to be in the study. The consent form says that you understand why I am doing the study and that you are willing to participate.

If you sign the form and then decide that you do not want to participate, that is okay. You can change your mind if you wish. If you have any questions about the study, you can talk to me about it.

When I complete the project, I will send you a summary of the findings. Thanks for reading this letter and thinking about this research project.

Sincerely,

Laurie Costaris, M.A.,
Ph.D. Candidate,
University of Toronto.

Faye Mishna, Ph.D.,
Clinical Director,
Integra

Judy Wiener, Ph.D.,
Supervisor,
University of Toronto.

Lorraine Campbell, Ph.D.,
Research Psychologist,
Integra

Serving Children and Adolescents with Learning Disabilities
25 Imperial Street, Toronto, Ontario, M5P 1B9 Telephone (416) 486-8055 Fax (416) 486-1282
Dear Participant:

Some adolescents have trouble learning at school. Their learning problems can sometimes make it hard for them to make friends and talk about their feelings. At Integra, we believe that discussion groups can be helpful for teenagers with these kinds of problems. I am planning a research project to help us understand how these groups might help the teenagers. I am a graduate student at the University of Toronto and have also worked at Integra in the past. Everyone at Integra is interested in working on this project and have agreed to let me ask you if you would like to participate in this study.

I need to ask a lot of teenagers to participate in the study. Some of the teenagers will join a group at Integra immediately and some other teenagers will wait for awhile before they join a group. That way, I can compare the effects of group therapy on teenagers who are in a group at Integra with teenagers who aren't in a group at the same time. So, for this study, you may be placed into a group right away or you may be one of the teenager's who will wait for awhile before getting into a group. The reason for this letter is to ask for your permission to be in this study at Integra.

In order to get this information, I would like to interview you and have you complete some questionnaires. These interviews will be done three times during the year. Each interview will take about 1 to 1 1/2 hours and will be audio taped. I would arrange to meet with you at a time that is good for you. Your opinions and feelings about the group will be very important. This interview time will be private and your name will not be used in the research. As part of the research, I may review some of the video tapes of the group sessions.

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Research Psychologist,
Integra

Serving Children and Adolescents with Learning Disabilities
25 Imperial Street, Toronto, Ontario, M5P 1B9 Telephone (416) 486-8055 Fax (416) 486-1382
Consent Form

Parent Consent

Youth's Name: ____________________________
Date of Birth: ____________________________
School: ______________ Special Education Teacher: ______________

I have read the accompanying letters and I give my permission for my son to participate in the research project on group therapy being conducted by Integra.

__________________________  _________________________
Signature                     Date

Participant Consent

Name: ____________________________

I have had the opportunity to review the information about the research project on group therapy and I agree to participate in the research being done at Integra.

__________________________  _________________________
Signature                     Date
Consent Form

Parent Consent

Youth's Name

Date of Birth

School __________________________ Special Education Teacher __________________________

I have read the accompanying letters and I give my permission for my son to participate in the research project on group therapy being conducted by Integra.

_____________________________  ______________________________

Signature        Date

Participant Assent

Name: __________________________

I have had the opportunity to review the information about the research project on group therapy and I agree to participate in the research being done at Integra.

_____________________________  ______________________________

Signature        Date
Appendix 2:  Treatment Integrity Protocol
1. Discussions are generated by group members
The group members raise and generate the group discussions. This may consist of one or more
of the following:

- Group members may bring up specific topics to discuss, such as being teased by peers,
having a learning disability, death, homosexuality, promiscuity, etc.
- The group may struggle with a particular member(s) (i.e., being late, acting silly,
  dominating the group, bullying, not listening to others, etc.).
- The group may grapple with a particular element of the group experience (i.e.,
  sharing of feelings, attending the group, etc.).
- Group members may discuss their struggles with the group experience (i.e., feeling
  forced to attend, group members wanting different things, frustrated by the process, etc.).
- Group members may give each other feedback (i.e., supporting, challenging,
  questioning) about group members' behaviour, and/or about conflicts or concerns that
  arise in the group.

Discussions are based on an interaction between members, with a here-and-now focus:
1. Specific topics relevant to one or more of the group members.
2. Struggles that group members are having related to any aspect of the group experience.
3. Feedback from members of the group to each other

Rating Scale:

After viewing each of the taped sessions: Please rate the above description according to the
extent to which you agree or disagree with the following statement.

First session viewed:

I believe that the group discussions were raised and generated by group members based on the
descriptions provided above.

1 2 3 4 5
Strongly Agree Agree Undecided Disagree Strongly Disagree

Second session viewed:

I believe that the group discussions were raised and generated by group members based on the
descriptions provided above.

1 2 3 4 5
Strongly Agree Agree Undecided Disagree Strongly Disagree
2a). Leaders facilitate the group process
The group leaders facilitate discussion, interaction and group process through a variety of techniques, including:

- Labelling affect
- Facilitating interaction among the members (i.e., helping the group members talk to, acknowledge and/or respond to one another).
- Helping the group members give each other feedback, helping them verbalize responses to each other (e.g. verbalizing frustration with each other rather than saying "shutup").
- Making observations about the group members' behaviours, group process, etc.
- Providing encouragement.
- Questioning and probing the group members.
- Clarifying verbal and nonverbal messages.
- Monitoring conversations to make sure that members follow the conversation.

Through their comments and facilitation, the group leaders help group members express their needs and opinions and help members support and challenge one another.

Rating Scale:

After viewing each of the taped sessions: Please rate the above description according to the extent to which you agree or disagree with the following statement.

I believe that the group leaders facilitated discussion, interaction and group process based on the variety of techniques outlined above.

First session viewed:

1  2  3  4  5
Strongly Agree  Agree  Undecided  Disagree  Strongly Disagree

Second session viewed:

1  2  3  4  5
Strongly Agree  Agree  Undecided  Disagree  Strongly Disagree
2b). The Supervisor facilitates the group process

The supervisor participates in the group process via telephone, behind the two-way mirror. Leaders respond to the supervisor's comments/suggestions which may include:

- redirecting discussions, facilitating interactions
- helping leaders to encourage group members to respond/give feedback/accept feedback
- providing observations about group members' behaviours/reactions/participation
- monitoring of group members' conversations
- clarifying verbal and non-verbal messages

Through the supervisor's feedback to the leaders, group members are assisted in expressing their needs and opinions and are helped to support and challenge each other.

Rating Scale:

After viewing each of the taped sessions: Please rate the above description according to the extent to which you agree or disagree with the following statement.

I believe that the supervisor facilitated discussion, interaction and group process based on the variety of techniques outlined above.

First session viewed:

1  2  3  4  5
Strongly Agree  Agree  Undecided  Disagree  Strongly Disagree

Second session viewed:

I believe that the supervisor facilitated discussion, interaction and group process based on the variety of techniques outlined above.

1  2  3  4  5
Strongly Agree  Agree  Undecided  Disagree  Strongly Disagree
Treatment Integrity: Protocol Developed for this Study

3. Cohesiveness of the Group Experience

Overtime the members of the group function less like individuals and more like a group, progressively displaying a sense of cohesiveness and mutual understanding. A sense of cohesiveness can be seen within the group and among members over time. The cohesiveness will look different, according to the nature of the group, and can include:

- An increase in comfort, ease, sense of belonging, clear enjoyment, etc.
- Greater ability to discuss difficult and personal issues.
- Increased tolerance for differences of opinion.
- Greater understanding and more accepting of group members and their behaviours.
- More able/willing to listen to others.
- More effort at trying to influence others.
- Group members are more open to others' influence.
- Greater ability to take risks in group (e.g., express feelings, share secrets, ask for help.
- Less susceptible to disruption as a group.
- More able to deal with group issues together (e.g., challenge a member who is domineering, challenge the group leaders, etc.)

Rating Scale:

After viewing both of the taped sessions consecutively: Please rate the above description according to the extent to which you agree or disagree with the following statement.

First and second session viewed:

I believe that the members of the group functioned less like individuals and more like a group from the first to second session, based on the descriptions provided above.

1  2  3  4  5
Strongly Agree    Agree    Undecided    Disagree    Strongly Disagree
Appendix 3: Self-Perception Profile for Adolescents
What I am Like

Name__________________________ Age______DOB_________ID________

SAMPLE SENTENCE

<table>
<thead>
<tr>
<th>Really True for Me</th>
<th>Sort of True for Me</th>
<th>Some teenagers like to go to movies in their spare time</th>
<th>BUT</th>
<th>Other teenagers would rather go to sports events.</th>
<th>Sort of True for Me</th>
<th>Really True for Me</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
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<td>a)</td>
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<td></td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

1. ☐ ☐ ❌ Some teenagers find it hard to make friends BUT For other teenagers it's pretty easy. ❌ ☐ 

2. ☐ ☐ ✗ Some teenagers are able to make really close friends BUT Other teenagers find it hard to make really close friends. ✗ ☐ 

3. ☐ ☐ ✗ Some teenagers are often disappointed with themselves BUT Other teenagers are pretty pleased with themselves. ✗ ☐ 

4. ☐ ☐ ✗ Some teenagers have a lot of friends BUT Other teenagers don't have very many friends. ✗ ☐ 

5. ☐ ☐ ✗ Some teenagers do have a close friend they can share secrets with BUT Other teenagers do not have a really close friend they can share secrets with. ✗ ☐ 

6. ☐ ☐ ☐ Some teenagers don't like the way they are leading their life BUT Other teenagers do like the way they are leading their life. ☐ ☐ ☐ 

7. ☐ ☐ ☐ Some teenagers are very hard to like BUT Other teenagers are really easy to like. ☐ ☐ ☐
<table>
<thead>
<tr>
<th></th>
<th>Really True for Me</th>
<th>Sort of True for Me</th>
<th>Really True for Me</th>
<th>Sort of True for Me</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>BUT</td>
<td>[ ]</td>
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<tr>
<td></td>
<td>Some teenagers wish they had a really close friend to share things with</td>
<td>Other teenagers do have a close friend to share things with.</td>
<td></td>
<td></td>
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<tr>
<td>9.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>BUT</td>
<td>[ ]</td>
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<tr>
<td></td>
<td>Some teenagers are happy with themselves most of the time</td>
<td>Other teenagers are often not happy with themselves.</td>
<td></td>
<td></td>
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<tr>
<td>10.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>BUT</td>
<td>[ ]</td>
</tr>
<tr>
<td></td>
<td>Some teenagers are popular with others their age</td>
<td>Other teenagers are not very popular.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>BUT</td>
<td>[ ]</td>
</tr>
<tr>
<td></td>
<td>Some teenagers find it hard to make friends they can really trust</td>
<td>Other teenagers are able to make close friends they can really trust.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>BUT</td>
<td>[ ]</td>
</tr>
<tr>
<td></td>
<td>Some teenagers like the kind of person they are</td>
<td>Other teenagers often wish they were someone else.</td>
<td></td>
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<tr>
<td>13.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>BUT</td>
<td>[ ]</td>
</tr>
<tr>
<td></td>
<td>Some teenagers feel that they are socially accepted</td>
<td>Other teenagers wished that more people their age accepted them.</td>
<td></td>
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<tr>
<td>14.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>BUT</td>
<td>[ ]</td>
</tr>
<tr>
<td></td>
<td>Some teenagers don't have a friend that is close enough to share really personal thoughts</td>
<td>Other teenagers do have a close friend that they can share personal thoughts and feelings with.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>BUT</td>
<td>[ ]</td>
</tr>
<tr>
<td></td>
<td>Some teenagers are very happy being the way they are</td>
<td>Other teenagers wish they were different.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 4: Loneliness and Social Dissatisfaction
The following are some statements that may be always true, true most of the time, some of the time, hardly ever true, or not true at all for you. Please circle the number under the statements to show the way you feel about them.

Example: "I like to go shopping". If it is not true at all that I like to go shopping, I would circle 5. On the other hand, if it is always true that I like to go shopping, I would circle 1. If it is some times true that I like to go shopping, I would circle 3.

<table>
<thead>
<tr>
<th>I like playing cards.</th>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Hardly ever true</th>
<th>Not True at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>I like watching basketball on TV.</th>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Hardly ever true</th>
<th>Not True at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I like talking on the telephone to my friends.</th>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Hardly ever true</th>
<th>Not True at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

1.  It's easy for me to make new friends at school.

<table>
<thead>
<tr>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Hardly ever true</th>
<th>Not True at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

2.  I like to read.

<table>
<thead>
<tr>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Hardly ever true</th>
<th>Not True at all</th>
</tr>
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<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

3.  I have nobody to talk to.

<table>
<thead>
<tr>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Hardly ever true</th>
<th>Not True at all</th>
</tr>
</thead>
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<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
4. I'm good at working with other teenagers.

<table>
<thead>
<tr>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Nearly ever true</th>
<th>Not True at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

5. I watch TV a lot.

<table>
<thead>
<tr>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Nearly ever true</th>
<th>Not True at all</th>
</tr>
</thead>
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<td>1</td>
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<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

6. It's hard for me to make friends.

<table>
<thead>
<tr>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Nearly ever true</th>
<th>Not True at all</th>
</tr>
</thead>
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<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

7. I like school.

<table>
<thead>
<tr>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Nearly ever true</th>
<th>Not True at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

8. I have lots of friends.

<table>
<thead>
<tr>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Nearly ever true</th>
<th>Not True at all</th>
</tr>
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<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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</tbody>
</table>

9. I feel alone.

<table>
<thead>
<tr>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Nearly ever true</th>
<th>Not True at all</th>
</tr>
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<td>1</td>
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<td>5</td>
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</table>

10. I can find a friend when I need one.

<table>
<thead>
<tr>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Nearly ever true</th>
<th>Not True at all</th>
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<td>1</td>
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<td>4</td>
<td>5</td>
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</table>

11. I enjoy sports a lot.

<table>
<thead>
<tr>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Nearly ever true</th>
<th>Not True at all</th>
</tr>
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<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Statement</td>
<td>Always</td>
<td>True most of the time</td>
<td>True some of the time</td>
<td>Hardly ever true</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>--------</td>
<td>-----------------------</td>
<td>-----------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>12. It's hard to get other teenagers to like me.</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>13. I don't like science.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>14. I don't have anyone to hang out with.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. I like music.</td>
<td></td>
<td></td>
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<tr>
<td>16. I get along with other teenagers.</td>
<td></td>
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<tr>
<td>17. I feel left out of things.</td>
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<tr>
<td>18. There's nobody I can go to when I need help.</td>
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</tr>
<tr>
<td>19. I like to draw.</td>
<td></td>
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</tbody>
</table>

- Always: 1
- True most of the time: 2
- True some of the time: 3
- Hardly ever true: 4
- Not True at all: 5
20. I don't get along with other teenagers.

<table>
<thead>
<tr>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Hardly ever true</th>
<th>Not True at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

21. I'm lonely.

<table>
<thead>
<tr>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Hardly ever true</th>
<th>Not True at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

22. I am well liked by the teenagers in my classes.

<table>
<thead>
<tr>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Hardly ever true</th>
<th>Not True at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

23. I like playing video games a lot.

<table>
<thead>
<tr>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Hardly ever true</th>
<th>Not True at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

24. I don't have any friends.

<table>
<thead>
<tr>
<th>Always True</th>
<th>True most of the time</th>
<th>True some of the time</th>
<th>Hardly ever true</th>
<th>Not True at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Appendix 5: Participant Friendship Questionnaire
### Friendship Interview
#### Names of Friends

<table>
<thead>
<tr>
<th>Name</th>
<th>M</th>
<th>F</th>
<th>Name</th>
<th>M</th>
<th>F</th>
<th>Name</th>
<th>M</th>
<th>F</th>
</tr>
</thead>
</table>

1. **Is ____ male or female?**

2. **How old is ____?**

3a. **Where did you first meet ____?**

3b. **When did you first meet ____?**

4. **Where do you get together now?**

5. **Do you think ____ would say that you are his/her friend?**

6. **Are you best friends?**

   (YES/NO) YES NO YES NO YES NO

7. **About how often do you and ____ talk on the phone?**

   - Never 1. 1. 1.
   - Almost every day 2. 2. 2.
   - Once a week or more 3. 3. 3.
   - Once or twice a month 4. 4. 4.
   - A few times a year 5. 5. 5.
   - Less than twice a year 6. 6. 6.

8. **About how often do you spend time with ____ outside of school?**

   - Never spend time 1. 1. 1.
   - Once a week or more 2. 2. 2.
   - Once or twice a month 3. 3. 3.
   - A few times a year 4. 4. 4.
   - Less than twice a year 5. 5. 5.
Appendix 6: Participant Semi-Structured Interview at Post-test
Semi-Structured Interview:  
For Participants in a Group (Treatment Condition) Post-test

Subject ID: __________________________ Date: ________________________  
Treatment Condition: ______________________

You’ve finished your group now so I’d like to talk with you so I can better understand what you’ve experienced in the group. Remember that you and your parent(s) both agreed that you would talk with me. Your feelings and opinions about the group are very helpful. This interview is also confidential. The interview is being tape-recorded.

1. First, I’d like you to give me your feedback on how satisfied you were with your experience in the group.

a) Specific Improvement: How much did the group treatment help with the specific problems that led you to group?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>made a great deal of difference</td>
<td>made some difference</td>
<td>made no difference</td>
<td>made things somewhat worse</td>
<td>made things a lot worse</td>
<td>not sure</td>
</tr>
</tbody>
</table>

Probe: What types of things are you talking about? Can you tell me more?


b) Satisfaction: How satisfied are you with the progress you made in the group?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>completely satisfied</td>
<td>very satisfied</td>
<td>fairly well satisfied</td>
<td>somewhat satisfied</td>
<td>very satisfied</td>
<td>completely satisfied</td>
<td></td>
</tr>
</tbody>
</table>

Probe: What were you thinking about when you answered this question? Can you tell me more?


c) Global Improvement: Overall, how would you describe changes in your behaviour from the beginning of the group to the last session?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>very poor</td>
<td>fairly poor</td>
<td>so-so</td>
<td>quite good</td>
<td>very good</td>
</tr>
</tbody>
</table>

very poor: I couldn't really deal with issues
fairly poor: I have some difficulty dealing with issues
so-so: some days were fine, others were difficult
quite good: I was able to deal with emotional issues better than before the group started
very good: I was able to deal with many emotional issues

Probe: What kinds of behaviours were you thinking about when you answered the question? Can you tell me more about it?

2. I'd like to ask you some questions about how you feel now having been in the group.

a) So, overall, how do you feel now about having joined the group?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>completely satisfied</td>
<td>very satisfied</td>
<td>fairly well satisfied</td>
<td>somewhat dissatisfied</td>
<td>very dissatisfied</td>
<td></td>
</tr>
</tbody>
</table>

Probe: What were you thinking about when you answered this question? Can you tell me more?

b) Were there things you would have liked to have said or done during the group but did not?

Yes  No  If so, what are they?
c) What kept you from saying or doing these things?

3. Before the group started, we talked about what you wanted the group to help you with.

a) How many of the goals that you set for yourself at the beginning of the group (read off items from 4b- pre-test) would you say were met?

4. Remember in the first interview we talked about being in the group with other teenagers for 12 weeks. I'd like to ask you some questions about how you got along with other members of the group.

a) Did you see yourself fitting into the group?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>completely well</td>
<td>very well</td>
<td>fairly well</td>
<td>somewhat well</td>
<td>not very well</td>
<td>not at all</td>
</tr>
</tbody>
</table>

Probe: What were you thinking about when you answered this question? Can you tell me more?
b) How well do you feel you were liked by the group?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>everyone liked me</td>
<td>most of the group liked me</td>
<td>some of the group liked me</td>
<td>hardly anyone liked me</td>
<td>no one liked me</td>
</tr>
</tbody>
</table>

Probe: What were you thinking about when you answered this question? Can you tell me more?

5. One of the things I am interested in understanding better as a result of the group is how the group helps teenagers with learning disabilities. Now that the group is over, some of the things that I am interested in are:

a) What is your learning disability?

b) Does your learning disability affect the type of person you are?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>yes, totally</td>
<td>yes, a lot</td>
<td>it does somewhat</td>
<td>no, not very much</td>
<td>no, not at all</td>
<td>not sure</td>
</tr>
</tbody>
</table>

Probe: What types of things are you talking about? Can you tell me more?
c) Some teenagers find that their disability means they hang around with other teenagers with learning disabilities. Other teenagers seem to stay by themselves a lot and others with learning disabilities hang around younger friends. Does your learning disability affect the kind of friends or school classmates you hang around with?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>makes a great difference</td>
<td>makes some difference</td>
<td>makes no difference</td>
<td>makes things somewhat worse</td>
<td>makes things a lot worse</td>
<td>not sure</td>
</tr>
</tbody>
</table>

Probe: What types of things are you talking about? Can you tell me more?

6. Remember, you told me about your friends. I would like to ask you the same questions again to see if there are any changes in your friendships. You can include friends from school, outside of school or from Integra.

Friendship Questionnaire:

a) Do you have any friends? Yes No

b) Please tell me the names of your friends (first name and last initial). I'd like to ask you some questions about these friends.
<table>
<thead>
<tr>
<th>Question</th>
<th>M</th>
<th>F</th>
<th>M</th>
<th>F</th>
<th>M</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is ________ male or female?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. How old is ______?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3a. Where did you first meet ______?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3b. When did you first meet ______?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Where do you get together now?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Do you think ______ would say that you are his/her friend?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Are you best friends? (YES/NO)</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>7. About how often do you and ______ talk on the phone?</td>
<td>1.</td>
<td>1.</td>
<td>1.</td>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Never</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Almost every day</td>
<td>2.</td>
<td>2.</td>
<td>2.</td>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Once a week or more</td>
<td>3.</td>
<td>3.</td>
<td>3.</td>
<td>3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Once or twice a month</td>
<td>4.</td>
<td>4.</td>
<td>4.</td>
<td>4.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. A few times a year</td>
<td>5.</td>
<td>5.</td>
<td>5.</td>
<td>5.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Less than twice a year</td>
<td>6.</td>
<td>6.</td>
<td>6.</td>
<td>6.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. About how often do you spend time with ______ outside of school?</td>
<td>1.</td>
<td>1.</td>
<td>1.</td>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Never spend time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Once a week or more</td>
<td>2.</td>
<td>2.</td>
<td>2.</td>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Once or twice a month</td>
<td>3.</td>
<td>3.</td>
<td>3.</td>
<td>3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. A few times a year</td>
<td>4.</td>
<td>4.</td>
<td>4.</td>
<td>4.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Less than twice a year</td>
<td>5.</td>
<td>5.</td>
<td>5.</td>
<td>5.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
c) Do you have any plans to call anyone in the group?

________________________

________________________

d) What do you think is the difference between a friend and a best friend?
(i.e., need for reciprocity, similarity of interests, trust, sharing of thoughts and feelings, supportive, long-term)

<table>
<thead>
<tr>
<th>Friends</th>
<th>Best Friends</th>
</tr>
</thead>
</table>

________________________

e) How do you choose a friend? What do you look for?

________________________

________________________

f) How would you handle problems in a friendship? What if you want to do something and your friend wants to do something else? (i.e., is it resolved in a reciprocal, mutually satisfying way?, is it complementary vs. reciprocal?)

________________________

________________________

________________________

7. I'd also like to get your impressions and ideas about how you feel when you are with friends.

a) Do you feel that friends and others around you understand how you feel?

1 | 2 | 3 | 4 | 5 | 6
---|---|---|---|---|---
completely well | very well | fairly well | somewhat well | not very well | not at all well

Probe: What were you thinking about when you answered this question? Can you tell me more?

________________________

________________________

________________________
b) Are there times when you really feel different and apart from others?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>All the time</td>
<td>Almost all the time</td>
<td>Sometimes</td>
<td>Almost Never</td>
<td>Never</td>
</tr>
</tbody>
</table>

Probe: What were you thinking about when you answered this question? Can you tell me more?

You've been very helpful. Thank you. Is there anything you would like to ask or add to the interview?
Appendix 7: Coding Schedule: Friendship Variables
1. What is your LD?

1. **Process Involvement/Conceptual**

   attention, concentration, memory, visual problems, motor skills and motor coordination (e.g., may say not good at sports), comprehension, limited understanding, slow to respond, misinterpretation, language difficulties, speech problems, judgement problems, organizational problems, eye hand coordination, sequential processing

2. **Academic Problems/School-Related/Teacher-Related**

   subject area difficulties (e.g., math, written expression, spelling, handwriting, science etc), following instructions, teacher difficulties, homework, test-taking, copying off board, writing essays, keeping up with the class, need extra time to complete assignments, study skills and note-taking

3. **Social-Emotional/Attitude**

   social acceptance, social perception difficulties, self-blame, laziness, procrastination, poor motivation, lack of interest, lethargy, worrier, frustration, not talking about my problems, temper, behaviour problem, parents have trouble understanding me

4. **Exceptionality/DSM Diagnosis/Label**

   includes any Exceptional Learner category (e.g., dyslexic, non-verbal LD, ADD/HD)note: if the response includes the word disability after a description include in this category (e.g., motor disability, organizational disability)

   includes DSM diagnoses: (e.g., Tourettes, Aspersers, Panic Attacks, Hyperactivity, Obsessive-Compulsive Disorder)

* Note: DON'T KNOW IS CODED 'DK'

   if response indicates don't know followed by a response, ignore don't know

outliers: "harder for me to learn than other kids"
2. Qualitative Distinction between a friend and a best friend

1. **Intimate Self-Disclosure and Trust**
   "knows your history, likes you for who you are, share secrets and private thoughts, soul brother, the missing piece of the puzzle, reliable, loyal, more open and comfortable"

2. **Continuity and Stability**
   "always keep in touch, a friend forever, 7 years or more, not worried about losing them"

3. **Companionship/Recreation (shared activities)**
   "hang out, spend time together after school, enjoy being together, another variation of you, do same things"

4. **Tangible Support, Instrumental Assistance**
   "try to make you feel better, always there for you, helps you when you are in trouble"

*Note: any responses indicating Don't Know is recorded 'DK'.
any response indicating No Difference is recorded as 'ND'.

3. How do you choose/make a friend? What do you look for in a friend?

1. **Evidence of active strategy use**

   **Shared Activities/Similarities:**
   "someone who likes what I like, we do the same things, similar hobbies and interests, in my class"

   **Prosocial Behaviour**
   "doesn't tease me, doesn't get in trouble, not mean, not aggressive, good personality, sense of humour, not weird, polite, doesn't skip school, doesn't insult, nice to me"

   **Companionship/Recreation**
   "someone who wants to hang out and do stuff with me"
Trust/Supportiveness/Understanding
"understands me, trustworthy, reliable, listens to your problems, puts aside differences"

0 No active use of strategies
"don't know it just happens, I don't do anything, don't know, I don't go out and look for anyone"

*Note: if the subject begins with DK but then gives a response, score as a response as '1a/b/c/d'
*Note: outlier: "try something new, look for someone who is different"


0 No conflict resolution skills
"don't know, I don't handle it, has never happened so I don't know"
-If they give an incoherent response or confusing response which suggests that they aren't quite sure

1 Power and Assertion (i.e., one submits/other dominates)
"do what they want, cry and do what they want, go along, I cave in, argue to prove my point, avoid arguments so I give in"

2 Negotiation and Compromise (i.e., consensus, middle ground)
"turn-taking, flip a coin, use tactfulness, communicate to person, best 2 out of three, rock/paper/scissors, do what you want then what I want"

3 Disengagement (i.e., terminates a dispute without addressing a solution, including changing subject, standoff, dropping the conflict)
"leave them, ignore it, do it with or without them, let it breeze over, walk away"
Content Analysis of Sections on the Semi-structured Interview

Original Questions:

1. What is your LD?
2. What do you think is the difference between a friend and a best friend? Qualitative distinction between friend and best friend.
3. How do you choose a friend? What do you look for?
4. How would you handle problems in a friendship?

Coding Schedule:

1. What is your LD?

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Process Involvement/Conceptual</td>
</tr>
<tr>
<td>2</td>
<td>Academic Problems/School-Related</td>
</tr>
<tr>
<td>3</td>
<td>Social-Emotional/Attitude</td>
</tr>
<tr>
<td>4</td>
<td>Exceptionality/DSM Diagnosis/Label</td>
</tr>
</tbody>
</table>

2. Qualitative Distinction between a friend and a best friend

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Intimate Self-Disclosure and Trust</td>
</tr>
<tr>
<td>2</td>
<td>Continuity and Stability</td>
</tr>
<tr>
<td>3</td>
<td>Companionship/Recreation (shared activities)</td>
</tr>
<tr>
<td>4</td>
<td>Tangible Support, Instrumental Assistance</td>
</tr>
</tbody>
</table>

3. How do you choose/make a friend? What do you look for in a friend?

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Evidence of active strategy use</td>
</tr>
<tr>
<td></td>
<td>Shared Activities/Similarities</td>
</tr>
<tr>
<td></td>
<td>Prosocial Behaviour</td>
</tr>
<tr>
<td></td>
<td>Companionship/Recreation</td>
</tr>
<tr>
<td></td>
<td>Trust/Supportiveness/Understanding</td>
</tr>
<tr>
<td>0</td>
<td>No active use of strategies</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No conflict resolution skills</td>
</tr>
<tr>
<td>1</td>
<td>Power and Assertion</td>
</tr>
<tr>
<td>2</td>
<td>Negotiation and Compromise</td>
</tr>
<tr>
<td>3</td>
<td>Disengagement</td>
</tr>
</tbody>
</table>
Appendix 8: Measure of Clinical Significance-Parent Version
Parent Evaluation of Clinical Significance

I’d like you to give me your feedback on how satisfied you are currently were with your son’s experience in the group.

1. Specific Improvement: How much has group treatment continued to help with the specific problems that led your son to group?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>made a great deal of difference</td>
<td>made some difference</td>
<td>made no difference</td>
<td>made things somewhat</td>
<td>made things a lot worse</td>
<td>not sure</td>
</tr>
</tbody>
</table>

2. Satisfaction: How satisfied are you with the current progress your son has made as a result of the group experience?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>completely satisfied</td>
<td>very satisfied</td>
<td>fairly well satisfied</td>
<td>somewhat dissatisfied</td>
<td>very dissat.</td>
<td>completely dissatisfied</td>
</tr>
</tbody>
</table>

3. Global Improvement: Overall, how would you describe changes in your son’s behaviour from the beginning of the group to the current time (two months following the group)?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>very poor</td>
<td>fairly poor</td>
<td>so-so</td>
<td>quite good</td>
<td>very good</td>
</tr>
</tbody>
</table>

very poor: he still can't really deal with issues
fairly poor: he has some difficulty dealing with issues
so-so: some days are fine, others are difficult
quite good: he is able to deal with emotional issues better than before the group started
very good: he is able to deal with many emotional issues

Probe: What aspect(s) of change are you referring to in particular? Could you tell me more about that?
Appendix 9: Agency Transcripts: Group Treatment Reports
Excerpts from agency treatment group reports written at the conclusion of each group.

Treatment Group A:

The group consisted of 8 adolescent boys, between the ages of 14 and 18 years. Their learning disabilities were in the areas of organization, language (processing and expressive), fine and gross motor skills, visual motor skills, auditory processing, memory and time and space concepts. Two of the group members were diagnosed with Attention Deficit Disorder (ADHD). One of the boys with ADHD was also diagnosed with Tourette's Syndrome.

A major theme throughout this group was that of safety. One group member was dominant and threatening to the others. This member was popular with the other group members. Initially, he taunted another boy. A third boy challenged this behaviour, stating that he did not like seeing somebody else teased because he knew what it felt like. The dominate member threatened this group member. Subsequently, the group discussed safety. This member asked others if he intimidated them, to which they replied that he did. Although, the group members found it hard to confront this member, they were able to constructively challenge him in the second last session.

One of the group leaders left the group suddenly, after the fifth session, due to illness, which necessitated a new leader joining. The members talked about their worry about her health and about people in their lives who had died.

Initially, the group members had difficulty articulating the areas they needed help with. As the group progressed, members were able to talk about issues they were struggling with and with which they needed help. For example, members described problems being teased, feeling nervous and not knowing how to communicate. Despite the ongoing concerns about safety, the members appeared quite committed to the group and seemed to feel good spending time together. At times, they challenged the group leaders, which seemed to enhance the group's cohesiveness.
Treatment Group B:

The group was composed of 8 adolescent boys, between 15 and 18 years of age. Most of the boys had learning disabilities in the non-verbal areas, including visual-motor, sequential reasoning, memory, and organizational difficulties. Two group members had language based learning disabilities, in comprehension and expression. One group member was diagnosed with ADHD, and another was described as exhibiting autistic features.

From the start, most of the group members appeared enthusiastic about their involvement in the group and quickly shared personal information. One boy, who was quiet during the first group, did not return after the first meeting, stating that he did not wish to attend any group.

The group members were aware of needing treatment and shared and talked about painful experiences, many of which they had in common. These included being rejected and teased, feeling different, adolescent issues, death of close family members and family problems. Group members tried to listen to each other, asked questions, shared similar experiences and offered suggestions. The group members also clearly enjoyed the opportunity to socialize and "hang out" with peers, and often commented on the fun they had during break.

The members demonstrated awareness of the group process. They noted and discussed differences among them, for example variations in attendance and the possible meaning of group members missing sessions. The group members explored how conflict affected them individually and as a group. The boys gave others' feedback, and individuals generally listened and responded to feedback. A significant issue for the group related to members interrupting one another. The boys tried to understand how others felt when they were interrupted. Another significant issue was being sensitive to each other's feelings. Some members struggled with finding ways to articulate their feelings without hurting others.

Two major conflicts emerged and were dealt with. In one instance, a member gave another member feedback about his mannerisms and ways of responding. The boy who received the feedback told the other boy that his comments were hurtful and stereotypical. The boy who gave the initial feedback eventually gained an understanding of how his comments hurt the other boy. The whole group became involved. After much conflict, pain and self-reflection, the two boys arrived at a resolution. The second instance occurred when one boy shared his negative opinion of the group. The others told him that his comments hurt and made them feel like "freaks". This boy listened and responded in a way that allowed the group to feel resolved with this issue. Overall, this was a group that came together and felt great about being together.