SOCIAL SUPPORT AS AN INTERVENTION FOR PARENTS OF CHILDREN WITH ADHD

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

Rhonda S. Robert, M.A.
Denton, Texas

December, 1994

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Social support needs have neither been formally addressed nor assessed in prior research with parents of children of special needs. Typically, behavioral management skills, specific knowledge about the disorder/illness/handicap, parents' self-perception, and participants' evaluation of program effectiveness have been measured. Research information collected to date supports the exploration of social support as a treatment intervention. Therefore, the purpose of the present study was to examine perceived social support for parents of children with ADHD who completed a parent training program. The program, entitled "ADHD Parent Training," included information about ADHD, behavior management strategies, child advocacy, and a social support component. Upon completing the ADHD Parent Training program, parents were expected to perceive a significantly greater amount of social support than they did prior to treatment. In addition, the relationship between change in perceived social support and the more traditionally assessed outcomes of parent training was examined (parent's satisfaction with treatment, parent's

perception of child's progress, and teacher's perception of child's progress).

Findings revealed that upon completing the ADHD Parent Training program, parents did not perceive a greater amount of social support than they did prior to treatment, and no relationship was detected between change in perceived social support and the more traditionally assessed outcomes of parent training.

Mothers reported significant decreases in their children's problem behaviors as measured by the CBCL, and overall parents endorsed a satisfaction with services as measures by the Parent's Consumer Satisfaction Questionnaire. Thus, parents endorsed several personal gains such as improved behavior management skills and ability to cope, and mothers believed their children's behaviors had improved.

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CHAPTER I

INTRODUCTION

The information gleaned from three broad areas of research may aid clinicians in developing a more effective treatment for attention deficit hyperactivity disorder (ADHD) (American Psychiatric Association, 1987). As researchers have gained a better understanding of ADHD, clinicians have attempted to improve the quality of treatment (Barkley, 1987). Though improved, treatment effectiveness is limited. More recently, researchers have focused on surveying parents needs and satisfaction with treatment services (Kazdin, 1988; Kottman, Robert, & Baker, in press). In parent satisfaction surveys, parents of children with special needs report feeling neglected in regard to social support. Social support experts have established a clear link between perceived social support and health outcome. Thus, parents of children with ADHD requesting additional social support appear to be verbalizing a need consistent with the current body of research. The following is a discussion of various research findings that once integrated may help researchers in developing a more effective and efficient treatment program for parents of children with ADHD.

ADHD: Behavioral Descriptives

Attention deficit hyperactivity disorder (ADHD), a disorder with childhood onset, has continuing symptomatology throughout the lifespan. Though definitions exist, researchers and clinicians disagree in defining ADHD. A new diagnostic label has been created approximately every decade since World War II, which shifts emphases in the primacy of certain symptoms, based on current research (Barkley, 1989). In addition, definitions of ADHD used by researchers vary, making comparisons between studies difficult. For example, one researcher may (Loney, 1987) make distinctions between pure hyperactive, pure antisocial or aggressive, and mixed groups of children with ADHD. Another researcher may obscure such distinctions, use different selection criterion, or make other types of distinctions. The consequence is research findings that are difficult to compare.

The current definition presented by the American Psychiatric Association (1987) is multidimensional, in regard to both symptomatology and level of intensity. Hallmark symptoms are categorized into three broad areas: inattention, impulsivity, and overactivity. Two of these categories can be subdivided. Mirsky (1987) subdivides attention into five main constructs: focus, execute, sustain, encode, and shift. Children with ADHD may vary according to which attentional function is most impaired

(Barkley, 1989; Mirsky, 1987). Impulsivity is also a multidimensional construct. Impulsivity can refer to inaccurate responding to tasks, poor sustained inhibition of responding, poor delay of gratification, or impaired adherence to commands to regulate or inhibit behavior in social contexts (Barkley, 1989).

Severity of symptoms varies quantitatively. People with the disorder are likely to display some disturbance in each of the three hallmark areas previously noted, but to varying degrees (American Psychological Association, 1987).

Intraindividually, symptoms and areas affected vary across different time periods within the person's lifespan (e.g., decreased overactivity in adulthood as compared to childhood years) and across different settings (e.g., the doctor's office as compared to the classroom). Thus, symptoms may or may not be present across time and/or settings, and symptoms may change in severity and duration across time and/or settings. Interindividual variability between children with ADHD is evident in each of the following: symptomatology, setting in which deficits are most evident, level of severity, and response to treatment.

Estimated prevalence rates vary. Within the United States prevalence estimates range from as low as 1% to as high as 20% of school age children (Barkley, 1989). In addition, prevalence estimates vary between cultures. For example, studies conducted in Canada (Offord, Boyle,

Szatmari, Rae-Grant, Links, Cadman, Byles, Crawford, Blum, Byrne, Thomas, & Woodward, 1987), the United States (American Psychological Association, 1987), and Great Britain (Barkley, 1981) vary in "best estimates" of prevalence, 7%, 3%, 1%, respectively. High variability of prevalence estimates within the United States may be attributed to methodological problems, such as defining "attention deficit" (World Health Organization, 1978), assessing subjects, establishing cut off criterion, and sampling bias (e.g., clinical populations). One example of sampling bias is in a study by Lou, Henriksen, Bruhn, and Psych (1984). The investigators studied children with dysphasia and/or ADHD by measuring cerebral blood flow with emission computed tomography. Of 13 children studied, only two children with ADHD were free of other neurological deficits. The other nine children with ADHD had dysphasia (verbal dyspraxia, phonologic-syntactic dysphasia, and/or verbal auditory agnosia) and/or neuropsychological deficits (visuospatial deficits, somatognostic deficits, and/or mild mental retardation). Thus, findings are not generalizable to most of the ADHD population and should not be compared with studies of children representing a typical ADHD profile. Discriminating methodological concerns in the current body of ADHD research is important in shaping more sophisticated research on estimates of prevalence. The

ratio of males to females in community samples is 3:1 and in clinic samples 6:1 (American Psychiatric Association, 1987).

Onset of ADHD occurs in infancy or early childhood (Barkley, 1982; Campbell, 1983; Ross, 1982). The Diagnostic and Statistical Manual of Mental Disorders III, Revised (DSM-III-R) is more specific in stating that onset must be prior to age seven. Parents report first noticing symptoms of ADHD in their children at about five years of age (Baker, Robert, & Kottman, in press). Researchers have hypothesized as to why symptoms suddenly become evident, and the most commonly espoused explanation addresses the contextual changes experienced by the five year old. The task demands in kindergarten highlight behaviors that were not as obvious or problematic in a less structured home or day care environment (Barkley, 1981). Once children enter school or a structured pre-school, they are expected to behave in a new way. At this point, the environment becomes asynchronous with the child and adults make new observations about the child. Such explanatory theories regarding time of onset highlight the interactive aspects of ADHD and the environment.

Additional Interactive Aspects of Environment and ADHD

Henker and Whalen (1989) describe hyperactivity as a transactional disorder. The child's behaviors clash with social expectations and environmental demands. Some of the social problems encountered by children with ADHD are the

responses they elicit from others. Interactions between the child with ADHD and environment oftentimes result in social alienation, lowered self-esteem, interpersonal conflict, defiant social behavior, and underachievement (Henker & Whalen, 1989). The vast majority of children with ADHD have serious social problems (Whalen & Henker, 1991). Several studies found that strangers--whether children or adults--need only observe videotapes of children with ADHD interacting with normal peers for a few minutes to discriminate between the two groups (Henker & Whalen, 1989). Such interpersonal conflict is also deleterious to the parent-child relationship. For this reason, researchers have begun to study the parent-child dyad and recommend interventions based on their findings.

Studies with parents and teachers have demonstrated that positive behavior changes in children with ADHD treated by medication are accompanied by positive changes in their adult caretakers. Notable adult changes include decreased control, increased responsiveness, improved affect, decreased maternal criticism, increased maternal warmth and mother-child contact. Thus, when the child's behaviors improve, the behaviors of adults appear more similar to the behavior of adults interacting with non-handicapped children (Whalen & Henker, 1991).

Peers resent the intrusions and lament the unpleasantness of the child with ADHD. An uncooperative

classmate not only interferes with or disrupts the activities of others, but may also get others in trouble by preventing task completion or eliciting negative group sanctions from the teacher (Whalen & Henker, 1991). Thus in most relationships, the child's ADHD symptoms conflict with the expectations of others and become problematic for all involved. Various models have been proposed to explain why this occurs.

Explanatory Models

Researchers have developed theories which attempt to explain the phenomenon of ADHD; however, such theories are at best inferred. Most theories would be categorized under three types of models: models of internalized structure, neurobiological models, and final common pathway models.

The internalized structure model addresses cognitive and motivational development and views ADHD as a deficit which results in a poor internalized structure for behavior (Moses, 1990). Three common theories fall under this category. First, a physiological deficit in the person's motivational system is postulated. This idea originated from the notion of a deficit in rule governed behavior. However, the rule governed deficit is not consistent across situations/settings, and this theory can not account for situational variance. The contingencies specified in rules are important in governing attention and obedience. These contingencies help control children's motivation to follow

rules, and this has led to the theory of a physiological deficit in the motivational systems of individuals with ADHD. A second hypothesis is that ADHD is a cognitive deficit in executive function. Executive function involves the ability to initiate, sustain, inhibit, and shift mental activity. Though children with ADHD can learn, they are far less efficient in learning (Moses, 1990). Third is the attentional model, advancing the following as problem tasks: sustained attention, vigilance, and inhibition of impulsive responses to situational demands. The child with ADHD is unable to stop, look, and listen. Each of these three models (Moses, 1990) views ADHD as a deficit which results in a poor internalized structure for behavior.

Neurobiological models for ADHD have been proposed. When data from family studies, biological marker studies, toxin studies, ADHD's association with other neurological and biological syndromes, drug response studies, and biochemical studies is combined, the picture of ADHD as a neurobiological disorder is convincing (Zametkin, 1989). However, all neurobiological evidence is indirect. Direct evidence for a neurobiological model of ADHD is difficult to obtain because of ethical and methodological issues (Mirsky, 1987). For example, Zametkin (1990) surveyed adults using PET scanning techniques, when children would have been optimal, due to ethical concerns about exposing children to a radioactive tracer.

Though such methodological limitations exist, researchers have been creative in research design and studied their questions indirectly. Such perseverance has led to some convergence in research findings and biological theories have followed. An example of a biological theory is the monoaminergic theory of ADHD (Shaywitz, Shaywitz, Cohen, & Young, 1983). These authors attempt to account for intraindividual change by looking at monoaminergic ontogeny. Shaywitz et al. (1983) conclude that normal monoaminergic functioning changes during the lifespan: concentrations of norepinephrine become more vital to adult functioning and thus increase as one ages, while serotonin stays relatively constant, and dopamine declines and thus has a lesser role in adult functioning. This hypothesis is consistent with longitudinal studies of adults with ADHD, where some ADHD symptoms persist and others cease or become less debilitating.

Other investigators (Henker & Whalen, 1989; Lambert, 1988; Loney, 1987; Weiss, 1990) take a global approach to etiology, speculating that ADHD has no single cause, but represents a final common pathway of early individual characteristics and environmental process variables. The relative importance of genetic factors in the disorder may differ from child to child, and dysfunction in the brain may be an important but not essential determinant of the disorder that interacts with psychosocial factors. Early

individual characteristics and interpersonal environment predispose subjects to developing hyperactive symptoms and to being identified and treated for hyperactivity. Adult outcome studies offer additional support that individual characteristics, interpersonal environment, and life events over the developmental period correlate with level of impairment (Lambert, 1988).

Though only a sampling of explanations has been discussed, most theories are a variation of the internalized structure model, neurobiological model, and final common pathway model. Treatment interventions are based on these models. For example, psychopharmacological therapy is based on a neurobiological model. Cognitive-behavioral and behavioral interventions are based on the internalized structure model. Most parent training programs are based on the final common pathway model.

Interventions

Treatment is oftentimes multidisciplinary, multimodal, and continuous over long periods of time because of the large number of symptoms (as many as 99 identified) and the coexisting diagnoses or deficits. Current treatment interventions have limited effectiveness. Treatments with some proven efficacy include psychopharmacological therapy (Henker & Whalen, 1989); behavioral strategies utilized in either family or school settings, such as response cost and contingency management (Henker & Whalen, 1989); cognitive-

behavioral training of children with ADHD (Henker & Whalen, 1989); parent training programs (Horn & Ialongo, 1986; Mash & Johnston, 1983a; Pisterman, McGrath, Firestone, Goodman, Webster, & Mallory, 1989); and various combinations of these approaches (Barkley, 1989).

Psychopharmacological therapy is most commonly used. The medication used most often is methylphenidate (Ritalin). Side effects, physician preference, or differential efficacy may call for the use of alternative stimulants such as pemoline (Cylert) or dextroamphetamine (Dexedrine) or psychoactive medications such as imipramine (Tofranil) (Henker & Whalen, 1989). Seventy to eighty percent of children with ADHD treated with stimulant medication show improvement across a broad range of behavior, i.e., better regulation of physical activity, decreased impulsivity, and increased attention span and concentration (Ingersoll, 1989).

Stimulant medication, though the most prevalent and efficacious treatment modality for the child with ADHD, results in heterogeneity of response (Whalen, Henker, Castro, & Granger, 1987; Whalen, Henker, & Dotemoto, 1980). A child who shows a particular profile of improvement at one time of measurement may show either no or adverse medication-related changes when reevaluated at a different time of measurement. Even in children with similar pre-treatment performance patterns, one may show improved

interpersonal transactions but no changes in classroom attention and performance, whereas a second may show the opposite pattern. When group data is analyzed, most measures reveal linear dose-response curves; however, the records for individual children defy such tidy characterization. A child's individual response pattern to medication varies across activities, behaviors, type of medication, dosage amount, and dosage intervals (Henker & Whalen, 1989).

Behavior management has been utilized in the school room and laboratory; however, behavior management is most notably utilized in the context of parent training. Parent training programs specific to the child with ADHD have been developed and researched by Baker (in press), Barkley (1987), Horn and Ialongo (1986), and Pisterman et al. (1989). Typical information disseminated in ADHD parent training programs includes labeling the noncompliant cycles of interaction between parent and child and teaching parenting skills such as giving commands, using selective attention and verbal rewards, establishing behavior management systems, and utilizing time out. In utilizing parent training, Barkley (1981) has found significant improvement in percentage of positive maternal responses to appropriate child compliance, decreases in maternal commands, increases in observed child compliance, and decreases in maternal ratings of hyperactivity. In similar

programs, Pisterman et al. (1989) observed parent-child interaction and found improvement in child compliance relative to the total number of parent commands, while Horn and Ialongo (1986) found significant improvement in maternal ratings of the child's hyperactivity.

Cognitive-behavioral interventions focus on enhancing the child's ability to self-regulate behavior and self-evaluate outcome effectiveness. Cognitive-behavioral interventions are appealing because of the humanistic preference for self-regulation, versus chemical control. Initial research appeared promising; however, more recent outcome studies have been discouraging (Barkley, 1989; Henker & Whalen, 1989).

Various combinations of these approaches are a compelling consideration (Henker & Whalen, 1989). Current investigations reflect the combination of parent training with stimulant medication to be an even more effective intervention than stimulant medication alone (Barkley, 1987; Horn & Ialongo, 1986; Pisterman et al., 1989). Thus, outcome studies are highlighting the effectiveness of parental interventions. In response, researchers are giving more attention to both the final common pathway explanatory model and parental interventions. The consideration of parents of children with ADHD is one aspect of such a focus.

Parents of Children with ADHD

Ample evidence exists to support the belief that children with ADHD have their own unique needs and that the family is a vital resource in treatment planning. Parents of children with ADHD comprise a group requiring professional attention. Parents are pervasively affected by a child who has ADHD and have needs in their own right. The most noted of these effects is parenting self-competence, family/parental/marital stress, and self-esteem (Pisterman et al., 1989). Mash and Johnston (1983a) found that as a child's hyperactivity increases parenting stress increases and parenting self-esteem decreases. Parents report less confidence in their parenting knowledge, with mothers reporting more role restriction, more stress associated with a mother-child relationship, and more social isolation. Mothers also report more depression and self-blame (Mash & Johnston, 1983a). Sobol, Ashbourne, Earn, and Cunningham (1989) found that though parents take personal responsibility for achieving compliance from their child with ADHD, they do not experience success for achieving compliance because the child's compliance is infrequent, unpredictable, unstable, and uncontrollable. The experience of failure helps to explain both Mash's and Johnston's (1983a) and Pisterman et al.'s (1989) findings in regard to parental inadequacy, depression, stress, and decreased self-esteem. The numerous stressors faced by the parents of

children with ADHD represent an area of intervention where helping professionals need to focus and be responsive.

An example of attention to parenting needs is the growth of self-help and support groups. Self-help organizations for families of children with ADHD are growing rapidly (Cornish, 1990). Such self-help groups often form when group members' needs are not met through more traditional channels (Holden & Lewine, 1982).

Parents are a valuable and often under-utilized resource in the treatment of children with ADHD. Traditionally, parents have been the primary caretakers for their children, and the notion of educating parents of special needs children to be the primary agents of change is not new. Freud (1909/1955) recorded one of the earliest cases of child psychotherapy, in which Freud did not treat the child directly, but instructed the child's father in techniques for resolving the child's conflicts and fears. Thus, Freud laid a foundation for indirect interventions with children.

Parents can increase their knowledge base and try new parenting skills through any number of treatment interventions. Parent training is a treatment modality commonly used and researched. Researchers have defined and evaluated its validity as the indirect intervention of choice for parents of children with ADHD (Baker, 1989; Barkley, 1981; Dangel & Polster, 1984).

Parent Training: Defining, Theorizing, and Evaluating

Parent training is an attempt to help parents manage serious behaviors, such as those emitted by children with ADHD. Parents are taught to view themselves as co-therapists and change agents. Most parent training programs teach behavior modification and relationship enhancement skills (Baker, 1989). Behavior modification techniques are based on learning theories and aid in increasing compliance and decreasing disruptive behaviors. Relationship enhancement skills aim to strengthen parent-child relationships via traditional play therapy techniques, positive communication, problem-solving skills, and corrective emotional experiences. Through a more rewarding parent-child relationship, children learn interpersonal relationship skills that can be transferred to peer relations (Eyberg & Boggs, 1989; Schaefer & Briesmeister, 1989). Parent training programs designed specifically for parents of children with ADHD typically provide parents with information on understanding and managing the behavior of the child with ADHD.

Due to face validity, training parents is advocated because of the amount of time spent and influence exerted by parents on their children. In addition, both empirically based theoretical models (Bell & Harper, 1977; Moses, 1990; Patterson, 1976; Schaefer & Briesmeister, 1989) and outcome studies (Barkley, 1987; Horn & Ialongo, 1986; Pisterman et

al., 1989) lend support to further exploration of the effectiveness of parent training programs.

From a theoretical perspective, bidirectional models of parent-child interactions have influenced treatment interventions (Bell & Harper, 1977; Patterson, 1976). Contrary to the belief that maladaptive child behaviors stem unidirectionally from the parents, both Bell and Harper (1977) and Patterson (1976) focus on the reciprocal contribution of the child's characteristics and behaviors that play a significant role in shaping parental reactions and management styles.

In addition to accounting for bidirectional aspects of ADHD, parent training programs are also theoretically consistent with neurobiological conceptualizations of ADHD. A theoretical assumption of an ADHD parent training program could be that "ADHD is in large a biologically based disorder with deficits in the ability to develop internal controls for modulating behavior" (Moses, 1990). This theoretical premise implies the need for a modified home and school environment in which the child with ADHD develops compensatory skills for coping with a chronic and pervasive behavioral disability (Anastopoulos & Barkley, 1989). Such internal structures can be shaped by means of an external structure. Parents spend a greater amount of time with their child than a therapist. Parents are a crucial part of the child's daily routine, having more power and control and

are in a position to dispense more reinforcers than any other adult (Schaefer & Briesmeister, 1989). Thus, parents are the most likely source of external structure for children with ADHD. Parents can impose structure and shape behaviors which allow the child to normalize behaviors by means of habits (W. R. Jenson, personal communication, February, 10, 1990).

Outcome studies have evaluated ADHD parent training programs designed around the above noted assumptions (Barkley, 1987; Horn & Ialongo, 1986; Pisterman et al., 1989). Barkley (1981) found that parent training effected increases in positive maternal responses to child compliance, decreases in maternal commands, increases in child compliance, and decreases in maternal ratings of hyperactivity. In similar programs, Pisterman et al. (1989) found improved child compliance, while Horn and Ialongo (1986) found improved maternal ratings of hyperactivity. Overall, ADHD parent training programs effect significant change. Such initial findings warrant further study. Future investigation should examine outcome criteria neglected in studies to date (Kazdin, 1988).

Program Evaluation Criteria

In the current literature reporting outcome effectiveness of ADHD parent training programs three outcome criteria have been repeatedly assessed and fairly sound interpretations have been generalized from such findings

(Baker, 1989; Kazdin, 1988). First, parental behavior management proficiency has been assessed through multiple choice tests (e.g., Baker, 1989) and behavioral observations (e.g., Barkley, 1987). Consistent improvement in parenting skills is reported. Second, behavioral gains by the child are assessed by reports completed by parents and teachers on behavioral rating scales (e.g., Horn & Ialongo, 1986) and behavioral observations (e.g., Barkley, 1987). Consistent improvement in compliance and age appropriate behavior is reported. And last, parental, marital, and family adjustment have all been assessed by various self-report measures (e.g., Mash & Johnston, 1983a) and reports of relational discord and personal distress decrease significantly.

One area that has been neglected in the outcome research is consumer perception and satisfaction. Historically, consumers' opinions about the helpfulness of mental health services were dismissed by professionals as too subjective and biased. More recently, consumer satisfaction with mental health interventions has become part of a multimethod assessment (Baker, 1989; Kazdin, 1988). Consumer feedback is most often utilized to improve service delivery. For example, research on consumer satisfaction has revealed that parents find lectures and learning how to teach children much more helpful than videotapes and role-playing (Baker, 1989). However,

investigation of consumer satisfaction and needs of parents of children with ADHD is sparse. Baker, Robert, and Kottman (in press) assessed the experiences parents of children with ADHD have had with professional services and queried as to their ongoing concerns. Findings supported the parent training interventions noted above (Barkley, 1987; Horn & Ialongo, 1986; Pisterman et al., 1989). Parents found educational materials and specific parenting skills helpful. Educational materials cited as helpful included books, magazines, and workshops. Specific parenting skills included how to build and maintain children's self-esteem; how to teach social skills; how to treat children as capable, significant, needed, and loved; and communication and listening skills (Baker et al., in press). However, consumer perception and satisfaction as measured by Baker et al. (in press) highlight a currently excluded area in ADHD parent training programs. Parents emphasized a need for social support. When parents were asked what has been useful to them in working with their child, 39% noted a support network, (i.e., talking with other parents, not being alone). When asked what they would like to see in a parent training program, 18% recommended the instilling of support, encouragement, and hope for tomorrow in the parent. In soliciting the advice of parents of children with ADHD, 23% suggested that parents become involved with a support group and talk to other parents regarding their parenting

concerns. On all open ended questions, parents rated social support second only to information about ADHD, parenting skills, and child advocacy.

In amazing contrast to parents' vocalized needs, social support has not been researched with parents of children with ADHD. Typically, behavioral management skills, specific knowledge about ADHD and parents' self-perception has been measured in parent training programs for children with ADHD. Clearly, the information collected by Baker et al. (in press) supports the exploration of social support as a treatment intervention. Seeing that social support was rated second only to information already incorporated in most ADHD parent training programs, future program modifications should include a structured social support component and evaluation of that component's effectiveness.

Social Support

Social support has many meanings and is researched across disciplines. Currently, the literature focuses on models and constructs of social support, etiology and development of perceived social support, and exploration of what makes social support therapeutic and effect better mental and physical health. Each are important and warrant understanding in order to establish a theoretically sound social support intervention with parents of children with ADHD.

Social Support: A Brief History

Social support is a relatively new area of research. Though of interest to scientists since the 1800's (Darwin, 1872/1965; Durkheim, 1897/1951), the cross-disciplinary research field that studies what is now called social support was not established until two seminal papers were published by Cassel (1976) and Cobb (1976). Cassel (1976) and Cobb (1976) spoke of social support as information leading an individual to believe that she or he is cared for and loved, esteemed, and a member of a network of mutual obligations. Perceived social support is the cognitive appraisal of being reliably connected with others (Barrera, 1986); for example--knowing that help would be available if needed. The construct of perceived social support consistently correlates with health outcome (Blazer, 1982). Perceived social support is the construct to be addressed in this study, and the terms "perceived social support" and "social support" will be used interchangeably.

In the mid-seventies, social support intervention was a new area of psychological research and inquiry. The majority of social support studies were atheoretical demonstration projects, repeatedly documenting that social support was correlated with various physical and mental health outcomes (Heller, Dusenbury, & Swindle, 1986). Current research on social support intervention resembles the state of knowledge about psychotherapeutic interventions

described 40 years ago. Much of the research assumes homogeneity of the support process, how it is delivered, and who benefits from its administration. Refinements in thinking about social support have typically not been integrated into the intervention literature (Cutrona & Russell, 1990). The question "Is social support effective?" is as unanswerable as is the earlier question "Is psychotherapy effective?" (Heller, Price, & Hogg, 1990). As theories of social support have developed, as research findings have appeared contradictory, and as questions asked by researchers have become more refined, current researchers are developing theoretically driven studies and developing questions out of a body of consistent and generalizable research findings. As a consequence of maturing conceptualization and design, experts in the field of social support are breaking down the earlier question "Is psychotherapy effective?" Namely, the question is being broken down in three major ways based on theory and the accrual of a body of research. First, the construct of "social support" is being subdivided into types of social support. Second, researchers are accounting for specific types of stressful events. Third, researchers are addressing the issue of "best fit" between type and context of stressful events and type of social support (Cutrona & Russell, 1990). Theory and research on the types of social support have received much attention.

Types of Social Support

Theorists of social support have proposed a number of multidimensional models of social support (Cobb, 1979; Cohen, Mermelstein, Kamarck, & Hoberman, 1985; Kahn, 1979; Schaefer, Coyne, & Lazarus, 1981; Weiss, 1974). Based on empirical findings, Rose (1986) suggests that theorists have found six types or dimensions of social support (Cobb, 1979; Cohen et al., 1985; Kahn, 1979; Schaefer et al., 1981; Weiss, 1974). The following construct labels were developed by Weiss (1974) and were chosen in order to be consistent with labels used by Cutrona and Russell (1990) in discussing measurement of social support.

The first construct is "attachment." Attachment represents the ability to turn to others for comfort and security during times of stress, leading one to feel cared for by others. In the absence of such security and sense of being at home, people feel lonely and restless. Attachment is provided by marriage or committed relationships and close friendships and family relations (Cutrona & Russell, 1990; Weiss, 1974).

A second type of support is "social integration." Social integration is a person's feeling a part of a group whose members have common interests and concerns. By engaging in various forms of social contact and having casual friendships, a person experiences a sense of belonging or networking. Membership in a network of common-

concern relationships permits the development of pooled information, ideas, and a shared interpretation of experience. Such companions exchange services, especially in the area of common interest (Cutrona & Russell, 1990; Weiss, 1974).

Third, "reassurance of worth" represents the bolstering of a person's sense of competence or self-esteem by other people. Others affirm the individual's competence in a social role. Colleague relationships likely function in this way, especially when the work is difficult or highly valued. Either financially supporting a family or creating a nurturing and supportive home atmosphere may afford an individual with reassurance of worth (Cutrona & Russell, 1990; Weiss, 1974).

"Reliable alliance" refers to tangible aide or concrete instrumental assistance. When a person in a stressful situation is given the necessary resources (e.g., financial assistance, physical help with tasks) to cope with a stressful event, reliable alliance has been experienced (Cutrona & Russell, 1990; Weiss, 1974).

"Guidance" is providing the individual with advice and information concerning possible solutions to a problem. A relationship with an apparently trustworthy and authoritative figure can provide emotional support and assist the person in formulating and sustaining a line of action (Cutrona & Russell, 1990; Weiss, 1974).

Last, the "opportunity to provide nurturance" is an individual's desire to feel needed by others. Opportunity for nurturance is usually provided by leading others. Responsibility for the well-being of others seems to provide meaning to an individual's life and to sustain commitment to a wide variety of goals (Cutrona & Russell, 1990; Weiss, 1974).

Multidimensional models of social support such as Weiss's (1974) allow researchers to formulate and test more specific hypotheses regarding component variables, e.g., personality, population, context, goodness of fit between stressor and support, timing of intervention related to the stressor, and outcome effectiveness. Such research will likely lead to an improved understanding of how perceptions of social ties are developed and what aspects of social support are health protective. Theorists speculate as to how perceived social support develops and what functions of social support effect better health.

Perceived Social Support: Etiology and Development

Researchers are exploring the nature of perceived social support. Accumulating evidence substantiates perceived social support as a personality variable that is shaped during childhood. Sarason, Sarason, and Shearin (1986) found social support levels to be stable up to three years in college students. Sarason et al. (1986) postulated that perceptions of social support develop in childhood, as

attractive children receive interest and attention and develop more positive self-concepts. In turn, attractive children may come to have different and more positive expectations of others. Positive expectations may then lead these children to be more outgoing and consequently to be more sociable, thereby reinforcing and enhancing their social skills. Consequently, these adults would develop an extensive support network. Although a simplified account, the aforementioned description of developing social support perceptions illustrates that both physical attractiveness and behavioral attractiveness (social competence) may affect interpersonal interactions and hence, perceptions of social support. Initial findings support this theory. For example, Sarason et al. (1986) have established a positive relationship between perceived support and superior social skills.

Therefore, attractiveness, social competence, and past receipt of socially supportive behaviors may facilitate the acquisition of the perception of available social support. In contrast, the experience of negative interpersonal interactions or failure to receive support may inhibit the development of positive perceptions of available support.

In addition to understanding the etiology of perceived social support, researchers are functionally analyzing social support in hopes of better understanding what mechanisms of social support effect health protective

powers. If the therapeutic process is understood, perhaps clinicians can develop interventions that provide social support or teach clients the process of creating social support for themselves.

Effecting Health: How Social Support Works

Traditionally, social support has been considered important in its relation to the effects of stress. The role of social support in the moderation of stress experienced by adults has been well-documented (Coyne & DeLongis, 1986; Duckitt, 1984). Two functional conceptualizations of social support have received considerable attention. One conceptualization, the "stress buffering model," espouses that support protects persons from the potentially adverse effects of stressful events. A second conceptualization, the "main effect model," maintains that a positive association between social support and well-being is attributable to the overall beneficial effect of support. While both conceptualizations are supported in some respects, each represents a different process through which social support contributes to well-being (Cohen & Wills, 1985). Understanding how social support works would likely improve social support interventions and measurement. For example, questions on questionnaires may query about buffering, i.e., "Others protect me from the harsh stressors of daily living," while the function of buffering may not be the active change agent. By omitting questions that

establish the presence of the active change agent, researchers will likely report conflicting results. Measures of social support have not yet been developed to the extent of discriminating the change agent. However, advances are being made in the measurement of social support (Cutrona & Russell, 1990).

Measures of Social Support

Most social support research relies on questionnaires. Measurement by questionnaire assumes that respondents can accurately describe and differentiate the subtle qualities of helping relationships. In creating elaborate conceptual schemes, researchers are assuming that individuals have highly differentiated concepts or categories that they use to describe helpful interpersonal transactions (Lieberman, 1986).

The types of questionnaires used to measure social support can be divided into three categories: (a) the network model, (b) received social support, and (c) perceived social support. The network model focuses on the individual's social integration into a group and the interconnectedness of those within that group. For example, the instructions of such questionnaires usually ask the subject to list people in certain categories (i.e., "List the names of people that you see frequently;" "List those who are important in your life;"). However, such measures have not correlated with health outcome. Researchers

believe that the number of people or whether people are targeted under a certain role cannot account for social support. The person designated under "important in your life" may also be the source of negative feelings, conflict, and other types of stress. Thus, network measures have not proven useful in the study of social support when the focus is to relate social support to health outcome. However, modified network measures that specify what characteristics about particular relationships offer relief from specific stressors may prove helpful (Sarason, Sarason, & Pierce, 1990).

A second type of assessment measure is "received social support." A commonly used measure of received social support is the Inventory of Socially Supportive Behaviors (ISSB) (Barrera, Sandler, & Ramsey, 1981). Received social support refers to the perception of past events. Studies of received support show mixed results. Researchers speculate that utilized support also taps the individual's coping skills, how others perceive the recipient, and how the recipient believes others perceive her or him. A person may receive support because of an apparent negative event, because the recipient appears helpless, or because the recipient actively solicits support in a dependent fashion. The last two reasons for received social support have an implication different from that of the first. The last two situations suggest a failure to cope effectively or

demonstrate the ability to function as a healthy adult. Researchers use these two reasons to explain why measures of received support are positively correlated with negative life events, personal distress, and symptomatology of psychiatric disorders. Others speculate that the person receiving the support interprets the aid as verification of personal inadequacy, producing feelings of obligation or guilt which lead to dysphoric feelings. Also, the receipt of help from others may have a negative effect on future coping efforts. Measures of received social support have not proven helpful to date. Moreover, many inconsistencies in the literature can likely be traced to a failure to differentiate findings using measures of received support from those using other types of social support measures (Sarason et al., 1990). Consequently, researchers have moved away from received support and are more focused in the area of perceived social support.

Measures of perceived support refer to the perception that support will be available if needed. The majority of measures of social support fit the perceived support category. Common measures include the Social Support Questionnaire (SSQ) (Sarason, Levine, Basham, & Sarason, 1983), the Interpersonal Support Evaluation List (ISEL) (Cohen et al., 1985), and the Social Provisions Scale (SPS) (Cutrona & Russell, 1987). The importance of perception in social support is evidenced in the highly consistent finding

that perception of social support is most closely related to health outcomes. The concept of perceived social support fits well with Cobb's (1976) early conceptualizations of social support. Cobb (1976) hypothesized that social support's major role is to convey information that the individual is cared about and valued. Thus, the support emanates from not so much what is done but from what that indicates to the recipient about the relationship (Sarason et al., 1990). Most measures of perceived social support stress the matching of need to type of support. Developmental status and life situation lead to the need for different types of social support. Thus, different periods in life call for different functions of social support in order to be effective (Sarason et al., 1990). In addition to providing consistent findings and aiding in more specific research questions, measures of perceived social support are consistent with the recently popular multidimensional theories of social support (Cutrona & Russell, 1990).

Given the current findings in the ADHD, parent training, and social support literature, modified interventions for parents of children with ADHD are warranted. Most evident is the need to link social support with interventions for parents of children with ADHD.

Social Support as an Intervention with Parents of Children with ADHD

Support groups are seen by many researchers as an excellent example of a social support system. Support groups are composed of people with a common experience, networking to exchange emotional, informational, and instrumental services. Thus, a support group appears to meet many of the conditions necessary for increasing the amount and quality of perceived social support (Lieberman, 1986).

Parents of children with ADHD experience an uncontrollable stressor. Their child has a chronic disorder which researchers currently believe does not remit during adulthood (Henker & Whalen, 1989; Lambert, 1988; Loney, 1987; Moses, 1990; Shaywitz et al., 1983; Weiss, 1990; Zametkin, 1989). The stressor is long-term and undesirable (in contrast to a desirable stressor, such as having a baby). This negative, long-term, uncontrollable stressor affects all interpersonal relations within the home. When parents of children with ADHD were surveyed by Baker et al. (in press), parents emphasized their perceptions of experiencing a lack of social support. Parents noted the need to talk with other parents and actively participate in parent training programs. They wanted future programs to address parental stress and coping strategies. They acknowledged the need for professional assistance in

instilling encouragement, support, and hope. Parents who have attempted numerous interventions recommended that other parents of children with ADHD become involved with a support group and talk to other parents of children with ADHD.

In summary, parents of children with ADHD experience considerable stress in their parenting role. While parents are a vital resource in treatment planning, professional awareness and response to both parents evaluation of treatment interventions and utilization of parental resources in treatment is lacking. Past treatment which involved parents has consisted of the dissemination of parenting skills. Other research (Baker et al., in press) has found that parents report dissatisfaction due to the lack of social support. Clinicians need to respond by becoming acquainted with the social support research and adapting treatment interventions accordingly.

It could be reasonable to expect that a social support theory of optimal matching may be applied to the specific stressor of having a child with ADHD within the context of a support group. Social integration, reassurance of worth, and obtaining of guidance may be the aspects of social support most severely impaired by the stressor of the child with ADHD as described above. The research of both Cutrona and Russell (1990) and Baker et al. (in press) provide researchers with information applicable to matching types of social support with the specific stressor of having a child

with ADHD. Perhaps parents' reported desire to experience feedback from others that notes they are not alone in this experience would be analogous to the social support construct of "social integration". Similarly, parents' desire to perceive themselves as competent and worthy parents may match the social support construct of "reassurance of worth", and parents' verbalized need for authoritative guidance in learning how to receive and access resources for their children may match the construct "obtaining of guidance" (Baker et al., in press). Parents of children with ADHD are usually at a loss as to how they might connect with others, experience success with their children, and access expert information.

Parents report that support groups do indeed succeed in relieving stress by connecting with others in a similar situation and exchanging information to aid in successful parenting and advocacy. Such a support aspect can be added to a parent training program to initially explore the hypothesis that parents, who typically feel incompetent, alone and immobilized, would experience the functions of social support that match their stressor (Baker et al., in press; Cutrona & Russell, 1990).

Social Support and Its Relation to Other Outcomes of Parent Training

Parent training programs specific to the child with ADHD (Baker, in press; Barkley, 1987; Horn & Ialongo, 1986;

Pisterman et al., 1989) have been researched for outcome effectiveness. Significant gains reported include improvement in percentage of positive maternal responses to child compliance, decreases in maternal commands, increases in child compliance, and decreases in maternal ratings of hyperactivity (Barkley, 1981; Horn & Ialongo, 1986; Pisterman et al., 1989).

Though researchers purport the clinical effectiveness of parent training programs in regard to the above outcomes with some parents, other parents report dissatisfaction with treatment interventions, noting specifically the lack of social support. So a reasonable question could be, "Do parents who make the behavioral gains noted above also experience social support?." It could be expected that gains in social support are related to other outcomes of parent training.

Such speculation highlights the bi-directional conceptualization of the disorder currently purported in much of the literature (Bell & Harper, 1977; Lambert, 1986; Patterson, 1976). Previously cited outcome studies (Baker, in press; Barkley, 1981; Horn & Ialongo, 1986; Pisterman et al., 1989) offer initial support for the interactive theory: parental reactions and management styles improve as the child's compliance increases and symptoms decrease, and vice versa. Perhaps gains in parent's perception of social support is an additional aspect of the pathway or model by

which change occurs or is facilitated. For example, it may be reasonable to expect that a parent who experiences gains in social support more effectively acquires behavior management skills and perceives the treatment as efficacious. Consequently, the parent experiences the child as more compliant and less symptomatic.

In contrast, it could be hypothesized that a decline in perceived social support may thwart parent training effectiveness. The potentially negative effects of social interaction must also be considered. At times the actions of others can threaten individual self-esteem or are not helpful in aiding response to a major stressor (Heller et al., 1986). For example, parents of children with ADHD report that uneducated or unsolicited advice and lack of public awareness and understanding had deleterious effects (Baker et al., in press). Such information should assist in shaping treatment interventions. For example, parent training programs may need to focus on research findings, proposed models, attempts made by others, and validation of the group members' feelings (their sense of frustration, hopelessness, and helplessness; feeling misunderstood; fearing the future), versus offering a "solution." If practitioners merely present skills, parents may perceive the practitioners as "parent bashers," advice-givers, and discredit the presenter's expertness. It could be expected that a decline in perceived social support could thwart

behavior management skill acquisition and decrease parent's satisfaction with treatment. Prior to exploring a pathway or directionality, the presence of relationships between outcome variables warrants exploration.

Statement of Problem

Social support as an intervention has neither been formally addressed nor assessed in prior research with parents of children of special needs. Typically, behavioral management skills and parents' perception of the child's progress have been measured. Clearly, the information collected by Baker et al. (in press) supports the exploration of social support as a treatment intervention. Therefore, the purpose of the present study is to examine whether there is a change in perceived social support for parents of children with ADHD who complete a parent training program and how gains in social support following treatment are related to other outcomes of parent training. The program is entitled "ADHD Parent Training" (Baker, Kottman, Askins, Robert, Huzinec, & McCall, 1991) and includes information about ADHD, behavior management strategies, child advocacy, and a social support component. Upon completing the ADHD Parent Training program, parents are expected to perceive a significantly greater amount of social support than they did prior to treatment. The relevance of perceived social support needs to be anchored in the current literature on parent training as an

intervention for parents of children with ADHD. Consequently, an important consideration is whether change in social support is related to parents' satisfaction with treatment, parents' perception of child's progress, and teachers' perception of child's progress.

Hypotheses

Hypothesis 1. On the Social Provisions Scale (Russell & Cutrona, 1984), participants will make significant gains on the Social Integration, Reassurance of Worth and Obtaining of Guidance subscales.

Hypothesis 2. Changes on the subtotal of the Social Provisions subscales of Social Integration, Reassurance of Worth and Obtaining of Guidance (Russell & Cutrona, 1984) will be related to the Parent's Consumer Satisfaction Questionnaire (Forehand & McMahon, 1981), the Child Behavior Checklist Parent's Report Form Global Scale (Achenbach & Edelbrock, 1983), and the Child Behavior Checklist Teacher's Report Form Global Scale (Achenbach & Edelbrock, 1983).

CHAPTER II

METHOD

Participants

Thirty-eight parents of children with ADHD were selected. Inclusion criteria included a primary DSM-III-R diagnosis of ADHD and a score of at least 1.5 standard deviations above the mean on the Hyperactivity Index of the Revised Conners Parent Rating Scale (Goyette, Conners, & Ulrich, 1978). The participants' child with ADHD was between the ages of 6 and 12. Both married and single parents participated and spouse attendance was encouraged. Parents were self-referred.

The group facilitators were well versed in ADHD literature, had a working clinical knowledge of ADHD, knew the principles of behavior management, and had a working knowledge of implementing behavior management programs. The facilitators held Master's degrees and were University of North Texas Counseling Psychology doctoral candidates. They co-authored the training program presented and had presented several parent training programs over the last three years.

Limitations of this study included the lack of a control group and sample size. Subjects were limited due to the prevalence rate of ADHD and the population density of the surrounding geographical area. Attempts were made to

limit the scope of the proposed research questions to accommodate the design, while simultaneously exploring questions that would contribute to the current body of research.

Materials

The Conners Parent Rating Scale. The 48-item revised version of the Conners Parent Rating Scale (CPRS-R) (Goyette, Conners, & Ulrich, 1978) was utilized to qualify parents as participants (see Appendix A). The CPRS-R is a paper and pencil questionnaire that requires 5 to 10 minutes to complete. The CPRS-R Hyperactivity Index score was used in combination with a primary DSM-III-R diagnosis of ADHD. Research has shown the CPRS-R Hyperactivity Index to be useful where a brief evaluation of hyperactivity is sought (Barkley, 1990). Sex-by-age normative data are available for children ages 3 to 17 years (n = 570) (Goyette, Conners, & Ulrich, 1978). Symptoms are rated on a 4-point scale (0-3). The CPRS-R Hyperactivity Index raw score was transformed into a T score (M = 50, SD = 10). The norms utilized are printed in Sattler (1988, pp. 889 & 890). A T score 1.5 standard deviations above the mean ($T \geq 65$) established the cut-off score for the purposes of this study.

The Social Provisions Scale. The Social Provisions Scale (SPS) (Russell & Cutrona, 1984) is a 24-item paper and pencil measure developed to assess the six relational

provisions identified by Weiss (1974) (see Appendix B). Respondents rate the degree to which their social relationships currently supply each of six types of social support. Each provision is assessed by four questions, two of which are phrased in the positive direction and two in the negative direction. Labels and descriptions for the six types of provisions are the following: 1) attachment--feelings of safety and security in a close emotional bond; 2) social integration--interests and concerns are shared by others; 3) reassurance of worth--having skills and abilities which are acknowledged by others; 4) reliable alliance--assurance that one can count on assistance being available if needed; 5) guidance--availability of confidants or authoritative others to provide advice; 6) opportunity for nurturance--the sense of being needed in vital ways by others.

Respondents indicate on a Likert scale ranging from (1) strongly agree to (4) strongly disagree to the extent that the statement applies to them. No norms have been published to date. Responses are summed to get a total score and subscale scores for each provision. A high subscale score indicates that the respondent is receiving that particular provision from all of their relationships. The total score is a measure of the provisions they are receiving from all of their relationships.

In support of subscale reliability, coefficient alphas range from .653 to .760. Reliability of the total Social Provisions score (.915) was estimated based on the formula for the reliability of a linear combination of scores given by Nunnaly (1978, p. 248, cited in Cutrona & Russell, 1987; see Table 1, Appendix H).

In support of the validity of this scale, Cutrona (1982) found that the six provisions accounted for 66% of the variance in scores on the UCLA Loneliness Scale among first-year college students. A study by Russell, Cutrona, Rose, and Yurko (1984) provided support for the construct validity of the instrument. Russell et al. (1984) investigated Weiss's predictions of association between measures of the individual's interpersonal relationships and each of the social provisions. In addition, evidence clearly supports the discriminant validity of the Social Provisions Scale (Russell & Cutrona, 1987). Though the measure does appear to be related to measures of social desirability, introversion-extraversion, and neuroticism (Dohrenwend, B. S., Dohrenwend, B. P., Dodson, M., & Shrout, P. E., 1984; Gottlieb, 1984; Henderson, Byrne, & Duncan-Jones, 1982), current multiple regression analyses assess a construct that is distinct from these latter measures. The Social Provisions Scale appears to add to the explanation of psychological distress over and above the influence of these related variables (Cutrona & Russell, 1987).

Intercorrelations between the scales range from .10 to .51. Factor analysis suggests that the measures of individual social provisions form separate and highly correlated factors. The correlations among the social provisions appear to represent the influence of a general or global social support factor. However, the individual provisions also appear to reflect distinct aspects of support (Russell & Cutrona, 1987).

In summary, findings indicate that the Social Provisions Scale is a reliable and valid measure of the social provisions described by Weiss (1974). Reliabilities of the individual subscales assessing each of the six social provisions appear to be adequate for use of the instrument in research contexts. Construct validity of the instrument is supported by findings concerning the relationship between the social provisions and measures of loneliness and interpersonal relationships. Age and sex differences were found, though small in magnitude (Cutrona & Russell, 1987).

Child Behavior Checklist Parent Report Form (CBCL). The CBCL Global Behavior Problem Scale developed by Achenbach and Edelbrock (1981, 1983) is for use with children 2 to 16 years of age and takes approximately 20 minutes to complete (see Appendix D). The Global Behavior Problem Scale was utilized. The form is self-explanatory and can be filled out by most parents who have at least fifth-grade reading skills (Achenbach & McConaughy, 1987).

The parent scores the child's behavior on a 3-point scale (0 = "not true"; 1 = "somewhat or sometimes true"; 2 = "very true or often true"). The Global Behavior Problem Scale contains 113 child behaviors rated on a 3-point scale (0 = "not true"; 1 = "somewhat or sometimes true"; 2 = "very true or often true").

Different versions of the CBCL are utilized for children ages 2-3 years and 4-16 years. Normative data for the CBCL Parent Report for boys and girls ages 4-16 are based on 1,300 randomly selected nonreferred children between 4 and 16 years of age (Achenbach & Edelbrock, 1981, 1983). For boys and girls ages 2-3 normative data are based on parent completed checklists of 398 children between the ages of two and three. The sample was equally divided between boys and girls and consisted of clinic referred and normal children (Achenbach, Edelbrock, & Howell, 1987).

Studies of the psychometric properties of the CBCL Parent Report for children 4-16 years of age have shown it to be a reliable and valid instrument (Achenbach & Edelbrock, 1983). Test-retest reliabilities range from .89 for 1 week to .64 for over 4 months, and the CBCL has been shown to correlate highly with other behavior rating scales. Similar findings have been reported from the CBCL Teacher Report (Edelbrock & Achenbach, 1984). The CBCL appears well suited for use in identifying children with externalizing behavior problems. Mash and Johnston (1983b) found that the

parent CBCL could significantly discriminate children with ADHD. In addition, the CBCL Parent Report has been shown to be sensitive to the treatment effects of parent training for conduct disorders (Webster-Stratton, 1984, 1985).

Child Behavior Checklist Teacher Report Form (CBCL). The CBCL Teacher Report Form (Edelbrock & Achenbach, 1984) is modeled after the parent version, with changes made to reflect school related behaviors (see Appendix E). The Global Behavior Problem Scale was utilized. The CBCL Teacher Report Form has 93 of the same items as the CBCL Parent Report. Twenty-five CBCL Parent Report items are replaced on the CBCL Teacher Report with items specific to the school setting.

Normative data for the CBCL Teacher Report for boys and girls ages 6-16 are based on 1,700 children referred for mental health or special school services. The scales were constructed and normed separately for boys and girls at ages 6 to 11 and 12 to 16 (Achenbach & Edelbrock, 1986). Edelbrock, Costello, and Kessler (1984) found that the Teacher Report Form could significantly discriminate children with ADHD. The CBCL Teacher Report has also been shown to correlate highly with various scales of the revised Conners Teacher Rating Scale that assess externalizing behavior problems (Edelbrock, Greenbaum, & Conover, 1985) and to discriminate between clinic-referred and nonreferred children (Edelbrock & Achenbach, 1984).

Parent's Consumer Satisfaction Questionnaire. The Parent's Consumer Satisfaction Questionnaire consists of five items adapted from Forehand and McMahon's (1981) Parent's Consumer Satisfaction Questionnaire (see Appendix F). All items are scored on a 7-point Likert scale. Items 1, 3, 4, and 5 are scored on a 1- to 7-point scale (i.e., if first answer is circled, the item is assigned a point value of 1, if second answer is circled, the item is assigned a point value of 2, etc.), while item 2 is scored on a 7- to 1-point scale.

Procedure

Six weeks prior to the start date of the parent training program, the local newspaper, school district, and ADHD support group were sent registration information. The parents committed to an eight session program, with six being training sessions and two being data collection sessions. Families were charged a one time fee of $25.00.

Parents were mailed a packet of materials that included the Information Sheet (see Appendix C) and the Consent for Participation form (see Appendix G). Parents brought the completed forms to the first parent training session. During the first session, parents completed the Revised Conners Parent Rating Scale (Goyette, Conners, & Ulrich, 1978), the Social Provisions Scale (Russell & Cutrona, 1984), and the Child Behavior Checklist Parent Rating Form. The parents were asked to bring the Child Behavior Checklist

Teacher Rating Form (Achenbach & Edelbrock, 1983) to their child's teacher, and the teacher in turn returned the form by mail.

Parents attended at least four of the six training sessions in order to complete the program. The six training sessions are outlined in "Parent training for ADHD" (Baker, in press). Topics include education about ADHD, treatment options, behavior management skills, communication with school personnel, and parental advocacy. The format includes 45 minutes of didactic and 45 minutes of group process (Christiansen, Johnson, Phillips, & Glassgow, 1980; Kashima, Baker, & Landen, 1988). The 45 minutes of group process constitutes the social support component.

On the eighth week, parents met to complete post-measures. Incentives for attending the eighth session included a complete fee rebate if 4 of 6 training sessions were attended, a pot-luck dinner, and group closure (presented to the parents as a time to "wrap-up").

If a participant attended at least four of the six training sessions but did not attend the seventh session during which post-measures were completed, the participant was contacted by telephone. Within a week, an appointment was scheduled during which the measures were completed.

Statistical Analysis

Hypothesis 1. The dependent variable in this study is perceived social support as measured by the three subscale

scores of the Social Provisions Scale on which significant gains were predicted. Time (pre and post) is the within-subjects variable. Data was analyzed using a one-way MANOVA with post hoc ANOVA's as appropriate. A separate MANOVA was conducted on the three subscales of the Social Provisions Scale not included in this hypothesis.

Hypothesis 2. Multiple correlation and stepwise regression were conducted with change in perceived social support as a criterion and parent satisfaction with treatment, change in parent's perception of the child's behavior, and change in teacher's perception of the child's behavior as the predictor variables. Change is defined as the difference between pre and post measures.

CHAPTER III

RESULTS

Throughout the course of three parent training groups, 38 families began the parent training program, with 27 families completing the program. Though 27 families completed the program by meeting the attendance requirement, three of these families failed to complete the post-measures, resulting in a 37% attrition rate.

The participants were predominantly middle-class, married, and of varied family constellations (see Table 2, Appendix I). Of the 24 families who completed the program, 14 (58%) of the families were represented by two caregivers, while 10 (42%) of the families were represented by one caregiver. All families were Caucasian, with the exception of one African-American family and one Asian-American family.

The following is a summary of the descriptive data on the children. For detailed frequency counts and percentages, see Table 3, Appendix J. The children ranged in age from 6 to 12, with the mean age being nine (SD = 1.8). Eighty-five percent were male (n = 23) and 15% female (n = 4). The study was originally designed to assess males only; however, given that four families with girls completed

the treatment program successfully, their inclusion was explored as they contributed to the number of available participants. The vast majority of the children (> 80%) were diagnosed ADHD (versus undifferentiated attention deficit disorder), did not have a concomitant mental disorder, and had received medication as a treatment intervention for ADHD. About half of the children used medication holidays and received special school services. About one-third of the children had previously tried another medication and had a concomitant learning disability. The majority of families in this study had tried various treatments for ADHD both prior to and during the parent training program.

Preliminary Analyses

In order to identify any pre-treatment differences which may have confounded or mediated the study variables, a series of preliminary analyses were conducted. Participants who completed the parent training program and those who did not were compared by Mann-Whitney U tests on the pre-test measures (see Table 4, Appendix K). Both the ratings of child's behavior and perceived levels of social support were commensurate between parents who completed the program and parents who did not.

Consideration was given as to how differences in the participants' social support structures impacted the pre-treatment measures of social support. Mann-Whitney U tests

were computed to assess pre-treatment differences on the Social Provisions Scale between parents who attended the program as single caregivers and parents who attended with a co-caregiver. No significant differences were found between groups on any of the subscales or the Total Score of the Social Provisions Scale.

Pre-treatment behavioral comparisons were made between genders to establish that the inclusion of girls would not statistically compromise the study. Girls and boys were compared on the Child Behavior Checklist--Parent Form, Child Behavior Checklist--Teacher Form, and Conners Hyperactivity Index by the use of Mann-Whitney U tests and significant differences between genders were not found (see Table 5, Appendix L). In addition, differences between parents of boys and girls were examined by comparing their pre-measure of perceived social support (see Table 5, Appendix L). By the use of Mann-Whitney U tests, parents of girls and boys were not found to be significantly different when comparing their scores on the Social Provisions Scale. The extremely small sample size for girls makes any conclusion regarding the failure to demonstrate gender differences inappropriate. The purpose of the analysis is to demonstrate a statistical basis for pooling subjects.

In considering the pre-treatment differences between children with ADHD and ADD, the children with ADHD were consistently rated as more behaviorally disruptive across

all subscales of the Child Behavior Checklist by mothers with statistically significant differences noted on the Total score, the Externalizing Domain, the Delinquent Behavior subscale, and the Aggressive Behavior subscale (see Table 6, Appendix M). Teachers and fathers showed no consistent trend in assessments. The issue of differential assessments by raters is elaborated on in the Discussion section of this paper.

Consideration was then given to the degree of elevation of the subscale T-scores on the CBCL to assess those areas rated as most problematic for each group (see Table 7, Appendix N). The Attention subscale was the most elevated of the scales for both groups by all three sets of raters. The significant differences between children with ADHD and children with ADD on the CBCL Delinquent Behavior subscale, Aggressive Behavior subscale, Externalizing Domain, and Total score as rated by mothers raised the issue of separate analyses for families with a child with ADD so as to not confound the study results. Due to small sample size, further loss of subjects was not desirable, yet insufficient sample size in the ADD group ($n = 5$) prevented separate analyses. The resolution was to document the noted differences but to pool the ADD subjects with the ADHD subjects.

Given that nine children (33%) had a concomitant learning disability, pre-treatment differences between

children with and without a concomitant learning disability were assessed with Mann-Whitney U tests (see Table 8, Appendix O). No consistent differences were detected.

Overall on the pre-measures and across raters, children on medication were rated as less behaviorally disruptive than non-medicated children (see Table 9, Appendix P). By the use of Mann-Whitney U tests, significant differences were found on the CBCL subtests of Anxious/Depressed and Attention Problems when rated by mothers. Though the children on medication were rated as less severe on the Anxious/Depressed (M = 64; SD = 10) and Attention Problems (M = 72; SD = 10) subscales as compared to non-medicated children, both the scores for children on and off medication were nonetheless elevated and different from normal children. Fathers and teachers scores reflected no consistent trends.

Differences between children on medication for one year or longer were compared with children on medication for less than one year by the use of Mann-Whitney U tests. A marginally significant difference was found for children on medication for a year or more having fewer social concerns as perceived by mothers on the CBCL Social Problems subscale (M rank = 12.13) compared to children on medication for less than one year (M rank = 18.44; z = 1.87, $p < .06$). All other pre-treatment scores by mothers were remarkably similar, as well as for father and teacher ratings.

Pearson Product-Moment Correlations between all interval level demographic data and all pre-measures found a significant negative correlation between child's age and mother's CBCL Total score (r = -.41, n = 27, p = .03) and the Social Problems subscale score (r = -.49, n = 27, p = .01). As noted above, there was a significant difference on the CBCL Social Problems subscale score between children on medication more than one year versus less than one year, with children on medication longer displaying lower Social Problems scores. The question arises as to the possible covariance between age and length of time on medication, i.e., older children will have been on medication longer. To address this issue an Analysis of Covariance (ANCOVA) was conducted, testing for differences on the CBCL scales between children on medication for more than one year (n = 19) versus less than one year (n = 5) with age covaried out. Results indicated that when age was covaried out, a significant interaction between length of time on medication and the mothers' pre-CBCL Social Problems subscale score was not found. Only age was found to have a significant interaction with the mothers' pre-CBCL Social Problems subscale score (F = 8.24, p < .01). In order to more clearly understand this finding, the distribution of child's age by mother's pre-CBCL Social Problems subscale score by length of time on medication was examined via scatterplot (see Figure 1, Appendix Q). A scatterplot of the

distribution indicated that the younger children (7 to 9 years of age) had an equal distribution of high scores (> 72) and low scores (< 72) on mother's CBCL Social Problems subscale. For this younger group of children, those on medication less than a year had an even distribution between high (> 72) and low scores (< 72) on the mother's pre-CBCL Social Problems subscale score, as well as those children on medication for more than one year. For the older group of children (10 to 12 years of age), all but one child had CBCL Social Problems subscale score lower than 72, and all but one child had been on medication for more than one year. Thus, not only did younger children have higher Social Problems scores than older children but, more importantly, length of time on medication did not aid in predicting high versus low scores for younger children. As children age and after they have been on medication for more than one year, mothers reported fewer social problems.

Teachers reported a significant difference on the CBCL Social Problems subscale score between children on medication more than one year versus less than one year (F = 5.22, p < .03), as well as an interaction effect between age and length of time on medication (F = 5.08, p < .04). Children having been on medication for a longer period of time had fewer social problems and were more likely to be older. Fathers reported a significant difference on the CBCL Attention subscale score between children on medication

more than one year versus less than one year ($F = 4.51$, $p < .05$), while no effects for age or interaction were found. No other age, length of time on medication, or interaction effects were reported by either teachers or fathers on the remaining seven subscales of the CBCL.

In summary, mothers consistently report fewer social problems in older children, as compared to younger children. Fathers and teachers report fewer social problems in children on medication more than one year as compared to children on medication less than one year. The issue of differential assessment by raters is noted once again, and the inexorable link between developmental maturation and length of time on medication is highlighted: older children tend to have been on medication longer.

Data collection was conducted at two sites in North Texas. Participants from each of the two sites were compared by Mann-Whitney U tests on the pre-treatment measures (CBCL scales, Conner's Hyperactivity Index, and Social Provisions scales) (see Table 10, Appendix R). At pre-test, between group differences were found with mothers at Site One reporting significantly lower CBCL Somatic subscale scores than mothers at Site Two, indicating that Site One mothers perceive their children to be less somatic than Site Two mothers. Fathers at Site One reported lower CBCL Internalizing Domain scores and Anxiety/Depression scores than fathers at Site Two, indicating that fathers at

Site Two assess their children as being more anxious than fathers at Site One. Also on the pre-test measures, fathers at Site One reported significantly higher Social Provisions Scale Total score, Reliable Alliance subscale score, Attachment subscale score, and Guidance subscale score than fathers at Site Two. Thus, at pre-testing, fathers at Site Two perceived that they had much less social support than fathers at Site One. At post-testing, however, fathers scores at Site One decreased on all of the Social Provisions Scale scores, while fathers scores at Site Two remained remarkably similar (see Table 11, Appendix S). Thus, as Site One fathers markedly decreased their perceived level of social support, they became similar to Site Two fathers. All other post-treatment between site differences were not significant.

Teachers from each of the two sites were compared by Mann-Whitney U tests on the pre- and post-CBCL. At pre-test, between group differences were found (see Table 10, Appendix R). Teachers at Site One reported significantly lower CBCL scores on three of eight subscales (Social Problems, Thought Problems, Aggression), and significantly higher CBCL scores on the Attention subscale. At time of post-measurement, teachers at Site One reported significantly lower CBCL subscale scores on Anxiety/ Depression and Thought Problems (see Table 11, Appendix S).

None of the three total scores were significant at time of pre- or post-measurement.

Given the site differences at pre-testing, cross-tabulations were calculated on site by demographics. Chi-squares were calculated on nominal and ordinal level data, and Mann-Whitney U tests were calculated on all interval level data. The only significant difference on site by demographics was child's gender. Of the 23 male children, 26% (n = 6) were from Site One versus 74% (n = 17) from Site Two. This pattern was reversed for girls, with 75% (n = 3) at Site One and 25% (n = 1) at Site Two. The fact that Site One had three out of the four girls and n for both genders is very small within subgroupings, gender may have influenced pre-test score differences. The impact of gender differences can not be assessed in the present study and should be addressed directly in future studies.

The decision to pool subjects across sites was made since only one of eight subscales for each parent proved to be problematic. At Site Two, fathers reported higher scores on the CBCL Anxiety/Depression subscale and mothers reported higher scores on the CBCL Somaticism subscale. The fact that Site Two had proportionally more boys raised the possibility that a parent gender by child gender interaction could have accounted for the observed subscale differences. Since parent's gender by child's gender is beyond the scope of this study, and since score differences on the

Anxiety/Depression and Somatic subscales disappeared on the post-treatment scores, the decision was made to pool the sites.

An Analysis of Variance (ANOVA) on pre- and post-test Social Provisions Scale Guidance, Social Integration, and Reassurance of Worth subscale scores revealed no significant differences between mothers' and fathers' scores. Using this as an indicator of homogeneity, pre- and post-Social Provisions Scale scores for mothers and fathers were pooled.

Pre-scores on the subscales of the Social Provisions Scale pertinent to Hypothesis One (Guidance, Social Integration, Reassurance of Worth) all correlated (r = .66 to .71), supporting the extraction of the social support dimensions (see Table 12, Appendix T). The significant moderately high positive correlations between the three subscales in Hypothesis One are evidence of construct validity for the Social Provisions Scale. A similar pattern of significant correlation of moderate magnitude (r = .43 to .53) was also found between post-scores on the three scales (see Table 13, Appendix U).

Pre- and post-scores on the remaining three Social Provisions Scale subscales (Reliable Alliance, Attachment, and Nurturance) were also examined for construct validity (see Table 14, Appendix V & Table 15, Appendix W). Reliable Alliance and Attachment highly correlate at both pre- and post-testing (r = .73 and .75, respectively), supporting the

extraction of the social support dimensions. However, the Nurturance subscale did not correlate significantly with either of the other scales. The Nurturance subscale was not predicted to change in a particular direction or be related to treatment and was not a planned part of the hypotheses testing; however, the finding is inconsistent with previously conducted studies of validity on the subscales of the Social Provisions Scale.

Analysis of Hypothesis One

A multiple analysis of variance (MANOVA) for repeated measures was conducted to test the effects of parent training on parents' perception of social support as measured by the Social Provisions subscales of Guidance, Social Integration, and Reassurance of Worth. No significant differences were detected (see Table 16, Appendix X). Thus, failure to detect a difference between parents' pre- and post-treatment perception of social support warrants a failure to reject the null hypothesis, i.e., no difference. It is worth noting that endorsed scores were high at pre-treatment, and either decreased or remained the same following treatment (see Table 17, Appendix Y).

Analysis of Hypothesis Two

A backward regression was conducted to assess whether the change score (the difference between pre- and post-scores) on the total score of the three relevant subscales

of the Social Provisions Scale (Guidance, Social Integration, and Reassurance of Worth subscale scores) was related to Consumer Satisfaction, change in parents' CBCL Total scores, or change in teachers' CBCL Total scores. All variables failed to reach significance to stay in the model. Thus, neither change in the teachers' CBCL Total scores, change in the parents' CBCL Total scores, nor the parents' Consumer Satisfaction Questionnaire scores were predictive or related to change on the parents' Social Provisions Scale scores. The backward regression approach is the most lenient approach and failure to find significant relationships between study variables precludes the more rigorous stepwise forward regression.

Additional Analyses

Within group repeated measures ANOVAs were conducted on all scales for mothers, fathers, and teachers (see Table 18, Appendix Z). On the CBCL, mothers' scores decreased significantly on the Total, Internalizing, Externalizing, Social Problems, Thought Problems, Attention Problems, Delinquent Behavior, and Aggressive Behavior scales. Fathers' and teachers' scores on the CBCL did not change significantly on any scale. To compare T-scores between pre- and post-measurement, see Table 19 and Figures 2-12, Appendix AA.

The Parent's Consumer Satisfaction Questionnaire was administered at post-treatment and examined descriptively

(see Table 20, Appendix BB). Parents' overall feeling about the treatment program was positive. With regard to recommending the program to a friend or relative, responses covered the full range, with a neutral mean. Parents believed that this type of parent training program was appropriate for treating their child's behavior problems. The major problem area that prompted parents to initiate treatment for their child with ADHD was slightly improved. Parents' expectation for a satisfactory outcome of treatment was optimistic. Though the situation of having a child with ADHD had not changed, parents reported that they were better able to cope with their child, felt more comforted about their situation, and felt slightly more accepting of their child. As a working unit, parents perceived that they were working slightly better with their spouse. Thus, the majority of parents endorsed positive outcomes, although parents varied in their desire to recommend the program a friend or relative. Mann-Whitney U tests were conducted to compare differences between sub-groups on the Parent's Consumer Satisfaction Questionnaire scores and significant differences were not detected.

CHAPTER IV

DISCUSSION

This study examined perceived social support for parents of children with ADHD who completed a parent training program. The program included information about ADHD, behavior management strategies, child advocacy, and a social support component. Upon completing the ADHD Parent Training program, parents were expected to perceive a significantly greater amount of social support than they did prior to treatment. In addition, the relationship between change in perceived social support and the more traditionally assessed outcomes of parent training were examined (parent's satisfaction with treatment, parent's perception of child's progress, and teacher's perception of child's progress).

Intervention Effects on Children

Study findings indicated that mothers reported that the behavior of their children improved following treatment, with significant decreases on the CBCL Total, Internalizing, Externalizing, Social Problems, Thought Problems, Attention Problems, Delinquent Behavior, and Aggressive Behavior scales. These findings are consistent with previously conducted parent training outcome effectiveness studies

(Pisterman et al., 1989; Pollard, Ward, & Barkley, 1983). The majority of previous studies explored how the increase in parental behavior management skills as the agent of change affected the child's behavior. Findings have consistently supported the positive relationship between increased parental behavior management skills and improved child behavior. Thus, the parent training program utilized in this study demonstrated changes in maternal reports of child behavior similar to changes detected through other parent training programs designed for parents of children with ADHD.

Fathers did not perceive similar progress. However, fathers had slightly lower post-test scores on the CBCL as compared to pre-test scores. The fact that the post-test scores decreased across all domains as measured by the CBCL is a tentative indication that intervention had some effect. A small n decreases the likelihood of detecting significance when present, and given the sample size limitation of the present study the current findings warrant further exploration of treatment outcomes with fathers.

The effects of parent training on fathers of children with ADHD is not clearly documented in the literature. Fathers of children with ADHD have been studied in two ways. First, fathers have been studied interacting with their child with ADHD (Tallmadge & Barkley, 1983). Children were less negative and off task with their fathers than with

their mothers. In the current study, parent-child interactions were not measured. A second mode of examining fathers' perceptions of their children has been through child behavior rating scales. Fathers report similarly to mothers on the CBCL ($\underline{r}$ = .67 to .74) and Conners' Abbreviated Rating Scale ($\underline{r}$ = .71) (Mash & Johnston, 1983). In the current study, fathers and mothers scores were remarkably similar on the pre-treatment CBCL and Conner's Hyperactivity Index; however, fathers' scores did not decrease significantly following treatment as mothers' scores had.

Teachers did not perceive behavioral improvement in the children between pre- and post-treatment. Several reasons can be proposed for this finding: a) behavioral improvements in the home due to changes in parenting skills had not generalized to the school setting, b) children had not improved significantly, and mothers were reporting a placebo effect, or c) the child improved but the teachers had an inadequate time span in which to detect a difference because school issues were addressed at the end of the parent training program.

No reports of treatment effects of parent training for parents of children with ADHD on child's behavior have been reported by fathers or teachers in the literature. Thus, comparisons of fathers and teachers outcome ratings with other studies can not be made, unlike with mothers. The

reason for inclusion of fathers and teachers in this study was to access multiple perspectives on the child's progress, verify reporter consensus, and examine how behavior at home corresponds to behavior at school consequent to treatment.

Given that reporters did not reach a consensus about change raises considerations which warrant exploration in future studies. Speculations about factors that influence reporters include a) the type of relationship the child has to the person reporting, e.g., role restriction, learned patterns of interactions between an adult and child, b) the child's transfer of behavioral gains to interactions with other adults who did not participate in the treatment, and c) reporter bias, e.g., experience of placebo effects, maintenance of negative bias toward child though the child's behavior improved. Inclusion of multiple raters and parent training of both parents is recommended for future studies related to outcome effectiveness of parent training programs for reevaluation of change discrepancies between raters.

Intervention Effects on Parents

Parents reported that they had improved their behavior management skills. On the Parent's Consumer Satisfaction Questionnaire, parents reported having an improved ability to cope with their child, which is consistent with outcome studies that measure parents' behavior management skills (Barkley, 1981; Horn & Ialongo, 1986). The majority of parents endorsed positive outcomes, although parents varied

in their desire to recommend the program a friend or relative. However in practice, parents often referred other parents to the program. Perhaps this discrepancy was due to the reverse scoring and phrasing of the question. This item was the only reverse scored item and parents were asked: "Would you recommend the program to a friend or relative?" In an attempt to clarify the issues, it may be more appropriate to score the item in the same direction as other items and ask: "If you knew of a parent in the community who has a child with ADHD, would you recommend this program to that parent?"

The Intervention Process

This study also attempted to examine how parental needs impact child behavior by examining the extent to which perceived social support would contribute to positive changes in the child behavior. Thus, the question was posed as to whether parents experienced more social support when involved in a parent training group and if so, did the change in perceived social support relate to parents' perception of their children's behavior.

The Social Provisions Scale did not detect any changes in parental perceptions of social support following the parent training program. Several explanations are possible. Perhaps the main agent of change in parent training groups is increased parenting skill. Parents may learn skills and believe their child's behavior to be improved, but they may

not benefit from parent training in regard to their own personal need for support, validation of parenting competence, reassurance of positive outcome for their child, and reliance on a professional expert.

Also, the program presented to parents in this study may have been ineffective in facilitating parents in experiencing support. While improving reports of child behavior problems, the treatment modality imposed a large amount of information and skill development demands on parents, which may have been distressing. This outcome was not considered, but trends on the Social Provisions Scale and parent feedback highlighted the experience of personal discomfort while attending the program. Endorsed scores on the Social Provisions Scale were high at pre-treatment, and either decreased or remained the same following treatment. Of interest, a subgroup of fathers (fathers at Site One) markedly decreased in their perceived level of social support. During the course of the program, parents reported having negative emotional experiences.

In regard to self-disclosure at meetings, parents reported that increased awareness about the disorder was discomforting. Parents who persisted in the program and reflected on their reactions to the information presented, spoke of how pained they felt consequent to focusing on their child as being "handicapped." For example, one parent noted that although she cognitively felt compelled to

attend, the negative emotions consequent to hearing that ADHD can persist into adulthood was almost unbearable. Most parents spoke of having to confront the loss of their "healthy child" dream, that of having a child who was free from distressing obstacles in life. Parents who had similar behavioral difficulties during their own childhood years, noted that they had a persistent drive to challenge the diagnosis because of the pain they experienced when misunderstood by others during their childhood years. Parents who did not complete the program were likely to question the accuracy of their child's diagnosis or perceive the disorder as minimally disruptive, prior to dropping out. Based on the pre-test measures, fathers who dropped out of the program saw their child as having fewer behavioral problems than parents who remained in the program. Anecdotally, during the first session after introductions when parents disclosed what brought them to treatment at this time, two parents concluded that their child did not have ADHD.

Such reactions were not anticipated. Perhaps timing in the process of change needs to be considered. Parents who are considering more fully the breadth of the disorder during the course of treatment may be more likely to experience increased distress, while parents who are reorganizing information which they have previously considered may be more focused on empowering themselves to

be more effective parents and as a result may experience minimal distress both prior to and following treatment.

Knowing that perceptions of social support are fairly stable across time (Cutrona & Russell, 1987), it could be the case that perceptions of social support did not change because there was only an evaluation period of eight weeks. An alternative model of assessing change in perceived social support may require a more long-term treatment model.

Another consideration is that parents sampled in this program were parents with a history of seeking out and utilizing multiple services. About one-third had previously involved their children in psychotherapy, tried behavior modification in the home, and participated in family counseling. Half were currently using behavior modification in the home, and one-third were currently members of a support group and involving their child in psychotherapy. These parents may be unique in their ability to access services and have their needs met, which may explain the high scores endorsed at pre-treatment on the Social Provisions Scale. These parents, knowing how to find services that benefit themselves, their children, and their families, may feel competent, supported, and guided at the onset of the program because of previously developed skills which have facilitated their managing the difficult situation of having a child with ADHD.

Additional Issues

An important aspect of this study is the inclusion of fathers, which was highlighted by the differential assessment of the child between the fathers and mothers. Fathers have not typically been included in outcome studies. Recruitment and retention is difficult, and even with strong encouragement that fathers attend, only 14 were represented in this study. The differential assessments by mothers and fathers were pervasive. Mothers reported significant differences and consistent trends that were not reported by fathers and teachers. Fathers failed to report significant change in their child's behavior following treatment, which sharply contrasts to the significant improvements in the behavior as reported by mothers. Another example is the pre-treatment differences between children with ADHD and ADD. Where mothers showed a consistent trend across an entire domain of the externalizing behaviors, reflecting that children with ADHD have significantly worse behavioral problems than ADD children, fathers did not perceive such behavioral differences. Though not a focus of this study and given the serious limitation of a small sample size (n = 5 children with ADD), an exploratory examination of the differences between raters appears warranted in future investigations.

A second issue that surfaced during the data analysis was the possibility of a parent gender by child gender

differential assessment. Children in a group having proportionally more boys than girls were reported by their mothers to be more somatic and by their fathers to be more anxious/depressed. Fathers also reported that they perceived significantly less social support than fathers in the group with more girls. This raises the question as to whether fathers of boys with ADHD have a different parenting experience than fathers of girls with ADHD or mothers of boys or girls with ADHD. Hopefully, researchers will pay more attention to such issues in future research.

A third issue that surfaced was that child age and length of time on medication significantly impacted child behavior rating scales and needs to be accounted for in the methodology of future studies. Developmental maturation and length of time on medication are inexorably linked as older children tend to have been on medication longer. Though not a focus of this study, the preliminary analyses highlighted findings that suggest the CBCL is sensitive to child's age and length of time on medication. This may also mean that medication plays an important and positive role in improving behavior and needs to be considered, or medication may account for more change than other interventions. Those who will be conducting future studies in which treatment outcome is the focus should be sensitive to the confounds of age and length of time on medication.

Fourth, understanding more about the reasons for drop-out may shape the interpretation of outcome effectiveness. The attrition rate of 37% is consistent with the attrition rates ranging between 40% and 50% of other child-focused treatment programs (Kazdin, 1988); however, the reasons for drop-out are unclear. Though some parents volunteered feedback as to why they would no longer be participating (e.g., heard the information previously, unable to access a babysitter, conflicting commitments, decided their child did not have ADHD), the feedback was not systematically gathered and such information may prove to be enlightening. Future studies on the effectiveness of the parent training program may benefit from assessing reasons for drop out.

Final Summary

This study examined perceived social support for parents of children with ADHD who completed a parent training program. Upon completing the ADHD Parent Training program, parents did not perceive a greater amount of social support than they did prior to treatment, and no relationship was detected between change in perceived social support and the more traditionally assessed outcomes of parent training (parent's satisfaction with treatment, parent's perception of child's progress, and teacher's perception of child's progress).

Mothers reported significant decreases in their children's problem behaviors as measured by the CBCL, and

overall parents endorsed a satisfaction with services as measured by the Parent's Consumer Satisfaction Questionnaire. Thus, parents endorsed several personal gains such as improved behavior management skills and ability to cope, and mothers believed their children's behaviors had improved.

Thus, the findings contribute to the preliminary support in the literature for utilizing parent training with parents of children with ADHD to improve child behavior, parent knowledge about ADHD, and behavior management skills. Though direct benefits were detected and significant in and of themselves, the indirect parental benefits were not detected. Parental concerns such as high parenting stress and low parenting self-esteem continue to be of concern and warrant future outcome research.

APPENDIX A

REVISED CONNERS PARENT RATING SCALE

Revised Conners Parent Rating Scale

Read each item carefully and decide how much you think your child is bothered by these problems. Put your check in the one box that is true of your child at the present time.

	Not At All	Just A Little	Pretty Much	Very Much
1. Picks at things (nails, fingers, hair, clothing).	____	____	____	____
2. Sassy to Grown-ups.	____	____	____	____
3. Problems with making and keeping friends.	____	____	____	____
4. Excitable, impulsive.	____	____	____	____
5. Wants to run things.	____	____	____	____
6. Sucks or chews (thumb, clothing, blankets).	____	____	____	____
7. Cries easily or often.	____	____	____	____
8. Carries a chip on his shoulder.	____	____	____	____
9. Day dreams.	____	____	____	____
10. Difficulty in learning.	____	____	____	____
11. Restless in the "squirmy" sense.	____	____	____	____
12. Fearful (of new situations, new people or places, going to school.	____	____	____	____
13. Restless, always up and on the go.	____	____	____	____
14. Destructive.	____	____	____	____
15. Tells lies or stories that are not true.	____	____	____	____

Appendix A--continued

16. Shy.	____	____	____	____
17. Gets into more trouble than others the same age.	____	____	____	____
18. Speaks differently from others the same age (i.e., baby talk, stuttering, hard to understand).	____	____	____	____
19. Denies mistakes and blames others.	____	____	____	____
20. Quarrelsome.	____	____	____	____
21. Pouts and sulks.	____	____	____	____
22. Steals.	____	____	____	____
23. Disobedient.	____	____	____	____
24. Worries more than others (about being alone, illness or death).	____	____	____	____
25. Fails to finish things.	____	____	____	____
26. Feelings easily hurt.	____	____	____	____
27. Bullies others.	____	____	____	____
28. Unable to stop a repetitive activity.	____	____	____	____
29. Cruel.	____	____	____	____
30. Childish or immature (wants help she or he should not need, clings, needs constant reassurance).	____	____	____	____
31. Distractibility or attention span is a problem.	____	____	____	____

Appendix A--continued

32.	Headaches.	_____	_____	_____	_____
33.	Mood changes quickly and drastically.	_____	_____	_____	_____
34.	Does not like or does not follow restrictions.	_____	_____	_____	_____
35.	Fights constantly.	_____	_____	_____	_____
36.	Does not get along well with sisters and brothers.	_____	_____	_____	_____
37.	Easily frustrated in efforts.	_____	_____	_____	_____
38.	Disturbs other children.	_____	_____	_____	_____
39.	Basically an unhappy child.	_____	_____	_____	_____
40.	Problems with eating (poor appetite, up between bites).	_____	_____	_____	_____
41.	Stomach aches.	_____	_____	_____	_____
42.	Problems with sleep.	_____	_____	_____	_____
43.	Other aches and pains.	_____	_____	_____	_____
44.	Vomiting or nausea.	_____	_____	_____	_____
45.	Feels cheated in family circle.	_____	_____	_____	_____
46.	Boasts and brags.	_____	_____	_____	_____
47.	Lets self be pushed around.	_____	_____	_____	_____
48.	Bowel problems (frequently loose, irregular habits, constipation).	_____	_____	_____	_____

Appendix A--continued

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APPENDIX B

SOCIAL PROVISIONS SCALE

Social Provisions Scale

WHEN ANSWERING, ANSWER SPECIFICALLY TO YOUR ROLE AND EXPERIENCES RELATED TO YOUR CHILD WITH ADHD.

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

1. There are people I can depend on to help me if I really need it. _____
2. I feel that I do not have any close personal relationships with other people. _____
3. There is no one I can turn to for guidance in times of stress. _____
4. There are people who depend on me for help. _____
5. There are people who enjoy the same social activities I do. _____
6. Other people do not view me as competent. _____
7. I feel personally responsible for the well-being of another person. _____
8. I feel part of a group of people who share my attitudes and beliefs. _____
9. I do not think other people respect my skills and abilities. _____
10. If something went wrong, no one would come to my assistance. _____
11. I have close relationships that provide me with a sense of emotional security and well-being. _____
12. There is someone I could talk to about important decisions in my life. _____
13. I have relationships where my competence and skill are recognized. _____
14. There is no one who shares my interests and concerns. _____
15. There is no one who really relies on me for their well-being. _____

Appendix B--continued

Strongly Disagree	Disagree	Agree	Strongly Agree
1	2	3	4

16. There is a trustworthy person I could turn to for advice if I were having problems. _____

17. I feel a strong emotional bond with at least one other person. _____

18. There is no one I can depend on for aid if I really need it. _____

19. There is no one I feel comfortable talking about problems with. _____

20. There are people who admire my talents and abilities. _____

21. I lack a feeling of intimacy with another person. _____

22. There is no one who likes to do the things I do. _____

23. There are people I can count on in an emergency. _____

24. No one needs me to care for them anymore. _____

Note. Permission Granted by Carolyn Cutrona, Ph.D., and Daniel Russell, Ph.D., to reprint.

APPENDIX C

INFORMATION SHEET

Information Sheet

Subject #: _____ Date:_____

CHILD: Age: _____ Date of Birth: _____

Grade: _____ Race: _____ Sex: _____
Ethnicity: _____Caucasian _____Asian _____Hispanic
_____African American _____Native American _____Other

Check applicable diagnoses:
_____ Attention Deficit Hyperactivity Disorder
_____ Undifferentiated Attention-Deficit Disorder (previously ADD without Hyperactivity)
_____ Oppositional-Defiant Disorder
_____ Conduct Disorder
_____ Learning Disability. If so, please describe type _____
_____ Other. Please list_____

At school, does your child qualify for special services?
__yes__no

If yes, how did the school classify your child?
_____emotionally disabled _____mentally retarded
_____gifted _____other health impaired
_____learning disabled

Check the behavior(s) your child displays more than her or his peers:
_____impulsive _____inattentive _____hyperactive

Is your child currently taking medication? ___yes ___no

If yes, please indicate which type:

_____Methylphenidate (Ritalin) _____Dexedrine _____Cylert
_____Anti-depressant _____Other. Type:_____

What are the total mg per day taken by your child?_____mg

Have other medications been tried? _____yes _____no

If yes, which medications were tried and why were they discontinued? _____
_____

When did your child begin taking medication?
____1 mo. ago ____2-3 mos. ago ____4 mos.-1 yr. ____+ 1 yr.

Appendix C--continued

Does your child take medication holidays?_____yes _____no

ADHD or ADD Undifferentiated **Current** Treatments used:

_____ Behavior modification techniques used at home
_____ Parent training group
_____ Parent training in either individual or family counseling
_____ Individual counseling or play therapy for child
_____ Cognitive-behavioral training for child
_____ Social skills training for child
_____ Family counseling where child's ADHD was addressed
_____ School or educational interventions
_____ Parent support group, i.e., CHAD, Parents of ADD
_____ Modification of diet. If so, what was modified
_____
_____ Other. If so, describe_____

ADHD or ADD Undifferentiated **Previous** Treatments used:

_____ Behavior modification techniques used at home
_____ Parent training group
_____ Parent training in either individual or family counseling
_____ Individual counseling or play therapy for child
_____ Cognitive-behavioral training for child
_____ Social skills training for child
_____ Family counseling where child's ADHD was addressed
_____ School or educational interventions
_____ Parent support group, i.e., CHAD, Parents of ADD
_____ Modification of diet. If so, what was modified
_____
_____ Other. If so, describe_____

With whom does the child reside?
_____both parents _____mother only
_____mother & stepfather _____father only
_____father & stepmother _____other:_____

MOTHER OR PRIMARY FEMALE CAREGIVER: Age:_____ DOB:_____

Marital status: _____Single _____Married ____Divorced
_____Remarried _____Widowed

Appendix C--continued

Highest Education Level:

_____less than 8th grade	_____some college or training
_____completed 8th grade	_____college graduate
_____some high school	_____some graduate work
_____completed high school	_____graduate degree

Current occupation:_____

FATHER OR PRIMARY MALE CAREGIVER: Age: _____ DOB: ____

Marital status: _____Single _____Married _____Divorced
_____Remarried _____Widowed

Highest Education Level:

_____less than 8th grade	_____some college or training
_____completed 8th grade	_____college graduate
_____some high school	_____some graduate work
_____completed high school	_____graduate degree

Current occupation:_____

FAMILY:
Number of children in household: _____

Number of people living in the household: _____

Total household income:

_____less than $10,000	_____55,001 - 70,000
_____10,000 - 25,000	_____70,001-85,000
_____25,001 - 40,000	_____85,001 - 100,000
_____40,001 - 55,000	_____more than 100,000

APPENDIX D

CHILD BEHAVIOR CHECKLIST PARENT REPORT FORM

CHILD BEHAVIOR CHECKLIST FOR AGES 4-18

For office use only
ID #

CHILD'S NAME

SEX ☐ Boy ☐ Girl

AGE

ETHNIC GROUP OR RACE

TODAY'S DATE Mo. _____ Date _____ Yr. _____

CHILD'S BIRTHDATE Mo. _____ Date _____ Yr. _____

GRADE IN SCHOOL _____

NOT ATTENDING SCHOOL ☐

Please fill out this form to reflect *your* view of the child's behavior even if other people might not agree. Feel free to write additional comments beside each item and in the spaces provided on page 2.

PARENTS' USUAL TYPE OF WORK, even if not working now. *(Please be specific – for example, auto mechanic, high school teacher, homemaker, laborer, lathe operator, shoe salesman, army sergeant.)*

FATHER'S TYPE OF WORK: _____

MOTHER'S TYPE OF WORK: _____

THIS FORM FILLED OUT BY:

☐ Mother (name): _____

☐ Father (name): _____

☐ Other – name & relationship to child: _____

I. Please list the sports your child most likes to take part in. For example: swimming, baseball, skating, skate boarding, bike riding, fishing, etc.

☐ None

Compared to others of the same age, about how much time does he/she spend in each?

	Don't Know	Less Than Average	Average	More Than Average
a. _____	☐	☐	☐	☐
b. _____	☐	☐	☐	☐
c. _____	☐	☐	☐	☐

Compared to others of the same age, how well does he/she do each one?

	Don't Know	Below Average	Average	Above Average
a. _____	☐	☐	☐	☐
b. _____	☐	☐	☐	☐
c. _____	☐	☐	☐	☐

II. Please list your child's favorite hobbies, activities, and games, other than sports. For example: stamps, dolls, books, piano, crafts, cars, singing, etc. (Do not include listening to radio or TV.)

☐ None

Compared to others of the same age, about how much time does he/she spend in each?

	Don't Know	Less Than Average	Average	More Than Average
a. _____	☐	☐	☐	☐
b. _____	☐	☐	☐	☐
c. _____	☐	☐	☐	☐

Compared to others of the same age, how well does he/she do each one?

	Don't Know	Below Average	Average	Above Average
a. _____	☐	☐	☐	☐
b. _____	☐	☐	☐	☐
c. _____	☐	☐	☐	☐

III. Please list any organizations, clubs, teams, or groups your child belongs to.

☐ None

Compared to others of the same age, how active is he/she in each?

	Don't Know	Less Active	Average	More Active
a. _____	☐	☐	☐	☐
b. _____	☐	☐	☐	☐
c. _____	☐	☐	☐	☐

IV. Please list any jobs or chores your child has. For example: paper route, babysitting, making bed, working in store, etc. (Include both paid and unpaid jobs and chores.)

☐ None

Compared to others of the same age, how well does he/she carry them out?

	Don't Know	Below Average	Average	Above Average
a. _____	☐	☐	☐	☐
b. _____	☐	☐	☐	☐
c. _____	☐	☐	☐	☐

Appendix D--continued

V. 1. About how many close friends does your child have? (Do not include brothers & sisters) ☐ None ☐ 1 ☐ 2 or 3 ☐ 4 or more

2. About how many times a week does your child do things with any friends outside of regular school hours? (Do not include brothers & sisters) ☐ Less than 1 ☐ 1 or 2 ☐ 3 or more

VI. Compared to others of his/her age, how well does your child:

	Worse	About Average	Better	
a. Get along with his/her brothers & sisters?	☐	☐	☐	☐ Has no brothers or sisters
b. Get along with other kids?	☐	☐	☐	
c. Behave with his/her parents?	☐	☐	☐	
d. Play and work by himself/herself?	☐	☐	☐	

VII. 1. For ages 6 and older – performance in academic subjects. If child is not being taught, please give reason _____

	Failing	Below average	Average	Above average
a. Reading, English, or Language Arts	☐	☐	☐	☐
b. History or Social Studies	☐	☐	☐	☐
c. Arithmetic or Math	☐	☐	☐	☐
d. Science	☐	☐	☐	☐
Other academic subjects – for example: computer courses, foreign language, business. Do not include gym, shop, driver's ed., etc. e. _____	☐	☐	☐	☐
f. _____	☐	☐	☐	☐
g. _____	☐	☐	☐	☐

2. Is your child in a special class or special school? ☐ No ☐ Yes – what kind of class or school?

3. Has your child repeated a grade? ☐ No ☐ Yes – grade and reason

4. Has your child had any academic or other problems in school? ☐ No ☐ Yes – please describe

When did these problems start?

Have these problems ended? ☐ No ☐ Yes – when?

Does your child have any illness, physical disability, or mental handicap? ☐ No ☐ Yes – please describe

What concerns you most about your child?

Please describe the best things about your child:

Appendix D--continued

Below is a list of items that describe children and youth. For each item that describes your child now or within the past 6 months, please circle the 2 if the item is very true or often true of your child. Circle the 1 if the item is somewhat or sometimes true of your child. If the item is not true of your child, circle the 0. Please answer all items as well as you can, even if some do not seem to apply to your child.

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

0 1 2 1. Acts too young for his/her age
0 1 2 2. Allergy (describe): _____
_____
0 1 2 3. Argues a lot
0 1 2 4. Asthma
0 1 2 5. Behaves like opposite sex
0 1 2 6. Bowel movements outside toilet
0 1 2 7. Bragging, boasting
0 1 2 8. Can't concentrate, can't pay attention for long
0 1 2 9. Can't get his/her mind off certain thoughts; obsessions (describe): _____
_____
0 1 2 10. Can't sit still, restless, or hyperactive
0 1 2 11. Clings to adults or too dependent
0 1 2 12. Complains of loneliness
0 1 2 13. Confused or seems to be in a fog
0 1 2 14. Cries a lot
0 1 2 15. Cruel to animals
0 1 2 16. Cruelty, bullying, or meanness to others
0 1 2 17. Day-dreams or gets lost in his/her thoughts
0 1 2 18. Deliberately harms self or attempts suicide
0 1 2 19. Demands a lot of attention
0 1 2 20. Destroys his/her own things
0 1 2 21. Destroys things belonging to his/her family or others
0 1 2 22. Disobedient at home
0 1 2 23. Disobedient at school
0 1 2 24. Doesn't eat well
0 1 2 25. Doesn't get along with other kids
0 1 2 26. Doesn't seem to feel guilty after misbehaving
0 1 2 27. Easily jealous
0 1 2 28. Eats or drinks things that are not food — *don't* include sweets (describe): _____
_____
0 1 2 29. Fears certain animals, situations, or places, other than school (describe): _____
_____
0 1 2 30. Fears going to school
0 1 2 31. Fears he/she might think or do something bad
0 1 2 32. Feels he/she has to be perfect
0 1 2 33. Feels or complains that no one loves him/her
0 1 2 34. Feels others are out to get him/her
0 1 2 35. Feels worthless or inferior
0 1 2 36. Gets hurt a lot, accident-prone
0 1 2 37. Gets in many fights
0 1 2 38. Gets teased a lot
0 1 2 39. Hangs around with others who get in trouble
0 1 2 40. Hears sounds or voices that aren't there (describe): _____
_____
0 1 2 41. Impulsive or acts without thinking
0 1 2 42. Would rather be alone than with others
0 1 2 43. Lying or cheating
0 1 2 44. Bites fingernails
0 1 2 45. Nervous, highstrung, or tense
0 1 2 46. Nervous movements or twitching (describe): _____
_____
0 1 2 47. Nightmares
0 1 2 48. Not liked by other kids
0 1 2 49. Constipated, doesn't move bowels
0 1 2 50. Too fearful or anxious
0 1 2 51. Feels dizzy
0 1 2 52. Feels too guilty
0 1 2 53. Overeating
0 1 2 54. Overtired
0 1 2 55. Overweight
56. Physical problems without known medical cause:
0 1 2 a. Aches or pains (*not* headaches)
0 1 2 b. Headaches
0 1 2 c. Nausea, feels sick
0 1 2 d. Problems with eyes (describe): _____
_____
0 1 2 e. Rashes or other skin problems
0 1 2 f. Stomachaches or cramps
0 1 2 g. Vomiting, throwing up
0 1 2 h. Other (describe): _____
_____

Please see other side

Appendix D--continued

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

0 1 2 57. Physically attacks people
0 1 2 58. Picks nose, skin, or other parts of body (describe): _____

0 1 2 59. Plays with own sex parts in public
0 1 2 60. Plays with own sex parts too much

0 1 2 61. Poor school work
0 1 2 62. Poorly coordinated or clumsy

0 1 2 63. Prefers being with older kids
0 1 2 64. Prefers being with younger kids

0 1 2 65. Refuses to talk
0 1 2 66. Repeats certain acts over and over; compulsions (describe): _____

0 1 2 67. Runs away from home
0 1 2 68. Screams a lot

0 1 2 69. Secretive, keeps things to self
0 1 2 70. Sees things that aren't there (describe):

0 1 2 71. Self-conscious or easily embarrassed
0 1 2 72. Sets fires

0 1 2 73. Sexual problems (describe): _____

0 1 2 74. Showing off or clowning

0 1 2 75. Shy or timid
0 1 2 76. Sleeps less than most kids

0 1 2 77. Sleeps more than most kids during day and/or night (describe): _____

0 1 2 78. Smears or plays with bowel movements

0 1 2 79. Speech problem (describe): _____

0 1 2 80. Stares blankly

0 1 2 81. Steals at home
0 1 2 82. Steals outside the home

0 1 2 83. Stores up things he/she doesn't need (describe): _____

0 1 2 84. Strange behavior (describe): _____

0 1 2 85. Strange ideas (describe): _____

0 1 2 86. Stubborn, sullen, or irritable

0 1 2 87. Sudden changes in mood or feelings
0 1 2 88. Sulks a lot

0 1 2 89. Suspicious
0 1 2 90. Swearing or obscene language

0 1 2 91. Talks about killing self
0 1 2 92. Talks or walks in sleep (describe): _____

0 1 2 93. Talks too much
0 1 2 94. Teases a lot

0 1 2 95. Temper tantrums or hot temper
0 1 2 96. Thinks about sex too much

0 1 2 97. Threatens people
0 1 2 98. Thumb-sucking

0 1 2 99. Too concerned with neatness or cleanliness
0 1 2 100. Trouble sleeping (describe): _____

0 1 2 101. Truancy, skips school
0 1 2 102. Underactive, slow moving, or lacks energy

0 1 2 103. Unhappy, sad, or depressed
0 1 2 104. Unusually loud

0 1 2 105. Uses alcohol or drugs for nonmedical purposes (describe): _____

0 1 2 106. Vandalism

0 1 2 107. Wets self during the day
0 1 2 108. Wets the bed

0 1 2 109. Whining
0 1 2 110. Wishes to be of opposite sex

0 1 2 111. Withdrawn, doesn't get involved with others
0 1 2 112. Worries

113. Please write in any problems your child has that were not listed above:

0 1 2 _____
0 1 2 _____
0 1 2 _____

Appendix D--continued

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APPENDIX E

CHILD BEHAVIOR CHECKLIST TEACHER REPORT FORM

TEACHER'S REPORT FORM

For office use only
ID #

Your answers will be used to compare the pupil with other pupils whose teachers have completed similar forms. The information from this form will also be used for comparison with other information about this pupil. Please answer as well as you can, even if you lack full information. Scores on individual items will be combined to identify general patterns of behavior. Feel free to write additional comments beside each item and in the space provided on page 2.

PUPIL'S NAME

PUPIL'S SEX ☐ Boy ☐ Girl

PUPIL'S AGE

ETHNIC GROUP OR RACE

TODAY'S DATE Mo.____ Date____ Yr.____

PUPIL'S BIRTHDATE (if known) Mo.____ Date____ Yr.____

GRADE IN SCHOOL

NAME OF SCHOOL

PARENTS' USUAL TYPE OF WORK, even if not working now. *(Please be as specific as you can – for example, auto mechanic, high school teacher, homemaker, laborer, lathe operator, shoe salesman, army sergeant.)*

FATHER'S TYPE OF WORK: _____

MOTHER'S TYPE OF WORK: _____

THIS FORM FILLED OUT BY:

☐ Teacher (name) _____

☐ Counselor (name) _____

☐ Other (specify) name: _____

I. How long have you known this pupil?_____ months

II. How well do you know him/her? 1. ☐ Not Well 2. ☐ Moderately Well 3. ☐ Very Well

III. How much time does he/she spend in your class per week?

IV. What kind of class is it? (Please be specific, e.g., regular 5th grade, 7th grade math, etc.)

V. Has he/she ever been referred for special class placement, services, or tutoring?
☐ Don't Know 0. ☐ No 1. ☐ Yes – what kind and when?

VI. Has he/she ever repeated a grade?
☐ Don't Know 0. ☐ No 1. ☐ Yes – grade and reason

VII. Current school performance – list academic subjects and check appropriate column:

Academic subject	1. Far below grade	2. Somewhat below grade	3. At grade level	4. Somewhat above grade	5. Far above grade
1. _____	☐	☐	☐	☐	☐
2. _____	☐	☐	☐	☐	☐
3. _____	☐	☐	☐	☐	☐
4. _____	☐	☐	☐	☐	☐
5. _____	☐	☐	☐	☐	☐
6. _____	☐	☐	☐	☐	☐

Appendix E--continued

VIII. Compared to typical pupils of the same age:	1. Much less	2. Somewhat less	3. Slightly less	4. About average	5. Slightly more	6. Somewhat more	7. Much more
1. How hard is he/she working?	☐	☐	☐	☐	☐	☐	☐
2. How appropriately is he/she behaving?	☐	☐	☐	☐	☐	☐	☐
3. How much is he/she learning?	☐	☐	☐	☐	☐	☐	☐
4. How happy is he/she?	☐	☐	☐	☐	☐	☐	☐

IX. Most recent achievement test scores (if available):

Name of test	Subject	Date	Percentile or grade level obtained

X. IQ, readiness, or aptitude tests (if available):

Name of test	Date	IQ or equivalent scores

Does this pupil have any illness, physical disability, or mental handicap? ☐ No ☐ Yes – please describe

What concerns you most about this pupil?

Please describe the best things about this pupil:

Please feel free to write any comments about this pupil's work, behavior, or potential, using extra pages if necessary.

Appendix E--continued

Below is a list of items that describe pupils. For each item that describes the pupil now or within the past 2 months, please circle the 2 if the item is very true or often true of the pupil. Circle the 1 if the item is somewhat or sometimes true of the pupil. If the item is not true of the pupil, circle the 0. Please answer all items as well as you can, even if some do not seem to apply to this pupil.

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

0 1 2 1. Acts too young for his/her age
0 1 2 2. Hums or makes other odd noises in class
0 1 2 3. Argues a lot
0 1 2 4. Fails to finish things he/she starts
0 1 2 5. Behaves like opposite sex
0 1 2 6. Defiant, talks back to staff
0 1 2 7. Bragging, boasting
0 1 2 8. Can't concentrate, can't pay attention for long
0 1 2 9. Can't get his/her mind off certain thoughts; obsessions (describe):_____
0 1 2 10. Can't sit still, restless, or hyperactive
0 1 2 11. Clings to adults or too dependent
0 1 2 12. Complains of loneliness
0 1 2 13. Confused or seems to be in a fog
0 1 2 14. Cries a lot
0 1 2 15. Fidgets
0 1 2 16. Cruelty, bullying, or meanness to others
0 1 2 17. Daydreams or gets lost in his/her thoughts
0 1 2 18. Deliberately harms self or attempts suicide
0 1 2 19. Demands a lot of attention
0 1 2 20. Destroys his/her own things
0 1 2 21. Destroys property belonging to others
0 1 2 22. Difficulty following directions
0 1 2 23. Disobedient at school
0 1 2 24. Disturbs other pupils
0 1 2 25. Doesn't get along with other pupils
0 1 2 26. Doesn't seem to feel guilty after misbehaving
0 1 2 27. Easily jealous
0 1 2 28. Eats or drinks things that are not food – don't include sweets (describe):_____
0 1 2 29. Fears certain animals, situations, or places other than school (describe): _____
0 1 2 30. Fears going to school
0 1 2 31. Fears he/she might think or do something bad
0 1 2 32. Feels he/she has to be perfect
0 1 2 33. Feels or complains that no one loves him/her
0 1 2 34. Feels others are out to get him/her
0 1 2 35. Feels worthless or inferior
0 1 2 36. Gets hurt a lot, accident-prone
0 1 2 37. Gets in many fights
0 1 2 38. Gets teased a lot
0 1 2 39. Hangs around with others who get in trouble
0 1 2 40. Hears sounds or voices that aren't there (describe):
0 1 2 41. Impulsive or acts without thinking
0 1 2 42. Likes to be alone
0 1 2 43. Lying or cheating
0 1 2 44. Bites fingernails
0 1 2 45. Nervous, high-strung, or tense
0 1 2 46. Nervous movements or twitching (describe):
0 1 2 47. Overconforms to rules
0 1 2 48. Not liked by other pupils
0 1 2 49. Has difficulty learning
0 1 2 50. Too fearful or anxious
0 1 2 51. Feels dizzy
0 1 2 52. Feels too guilty
0 1 2 53. Talks out of turn
0 1 2 54. Overtired
0 1 2 55. Overweight
56. Physical problems without known medical cause:
0 1 2 a. Aches or pains
0 1 2 b. Headaches
0 1 2 c. Nausea, feels sick
0 1 2 d. Problems with eyes (describe): _____
0 1 2 e. Rashes or other skin problems
0 1 2 f. Stomachaches or cramps
0 1 2 g. Vomiting, throwing up
0 1 2 h. Other (describe): _____

Please see other side

Appendix E--continued

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

0 1 2 57. Physically attacks people
0 1 2 58. Picks nose, skin, or other parts of body (describe): _____

0 1 2 59. Sleeps in class
0 1 2 60. Apathetic or unmotivated

0 1 2 61. Poor school work
0 1 2 62. Poorly coordinated or clumsy

0 1 2 63. Prefers being with older children
0 1 2 64. Prefers being with younger children

0 1 2 65. Refuses to talk
0 1 2 66. Repeats certain acts over and over, compulsions (describe): _____

0 1 2 67. Disrupts class discipline
0 1 2 68. Screams a lot

0 1 2 69. Secretive, keeps things to self
0 1 2 70. Sees things that aren't there (describe): _____

0 1 2 71. Self-conscious or easily embarrassed
0 1 2 72. Messy work

0 1 2 73. Behaves irresponsibly (describe): _____

0 1 2 74. Showing off or clowning

0 1 2 75. Shy or timid
0 1 2 76. Explosive and unpredictable behavior

0 1 2 77. Demands must be met immediately, easily frustrated
0 1 2 78. Inattentive, easily distracted

0 1 2 79. Speech problem (describe): _____

0 1 2 80. Stares blankly

0 1 2 81. Feels hurt when criticized
0 1 2 82. Steals

0 1 2 83. Stores up things he/she doesn't need (describe): _____

0 1 2 84. Strange behavior (describe): _____

0 1 2 85. Strange ideas (describe): _____

0 1 2 86. Stubborn, sullen, or irritable

0 1 2 87. Sudden changes in mood or feelings
0 1 2 88. Sulks a lot

0 1 2 89. Suspicious
0 1 2 90. Swearing or obscene language

0 1 2 91. Talks about killing self
0 1 2 92. Underachieving, not working up to potential

0 1 2 93. Talks too much
0 1 2 94. Teases a lot

0 1 2 95. Temper tantrums or hot temper
0 1 2 96. Seems preoccupied with sex

0 1 2 97. Threatens people
0 1 2 98. Tardy to school or class

0 1 2 99. Too concerned with neatness or cleanliness
0 1 2 100. Fails to carry out assigned tasks

0 1 2 101. Truancy or unexplained absence
0 1 2 102. Underactive, slow moving, or lacks energy

0 1 2 103. Unhappy, sad, or depressed
0 1 2 104. Unusually loud

0 1 2 105. Uses alcohol or drugs for nonmedical purposes (describe): _____

0 1 2 106. Overly anxious to please

0 1 2 107. Dislikes school
0 1 2 108. Is afraid of making mistakes

0 1 2 109. Whining
0 1 2 110. Unclean personal appearance

0 1 2 111. Withdrawn, doesn't get involved with others
0 1 2 112. Worrying

113. Please write in any problems the pupil has that were not listed above:

0 1 2 _____

0 1 2 _____

0 1 2 _____

PLEASE BE SURE YOU HAVE ANSWERED ALL ITEMS

Appendix E--continued

APPENDIX F

PARENT'S CONSUMER SATISFACTION QUESTIONNAIRE

Parent's Consumer Satisfaction Questionnaire

1. My overall feeling about the treatment program is

very negative	negative	somewhat negative	neutral	slightly positive	positive	very positive

2. Would you recommend the program to a friend or relative?

strongly recommend	recommend	slightly recommend	neutral	slightly not recommend	not recommend	strongly not recommend

3. I feel the approach to treating my child's behavior problems in the home by using this type of parent training program is

very inappropriate	inappropriate	slightly inappropriate	neutral	slightly appropriate	appropriate	very appropriate

4. The major problem(s) that originally prompted me to begin treatment for my child is (are) at this point

considerably worse	worse	slightly worse	the same	slightly improved	improved	greatly improved

5. At this point, my expectation for a satisfactory outcome of the treatment is

very pessimistic	pessimistic	slightly pessimistic	neutral	slightly optimistic	optimistic	very optimistic

6. Though the situation has not changed, I am

much less able to cope	less able to cope	slightly less able to cope	the same	slightly better able to cope	better able to cope	much better able to cope

7. Though the situation has not changed, I feel

much less comforted	less comforted	slightly less comforted	the same	slightly more comforted	more comforted	much more comforted

Appendix F--continued

8. I feel _____ of my child as she or he is.

very unac- cepting	unac- cepting	slightly unac- cepting	the same level of accep- tance	slightly more accepting	more accepting	much more accep- ting

9. Though the situation has not changed, my spouse and I as a parental unit are

working much worse	working worse	working slightly worse	working the same	working slightly better	working better	working much better

10. Is there any other way you have changed that we have not asked you about? If so, please comment _____

_____

_____

_____

_____

_____

_____

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APPENDIX G

CONSENT FOR PARTICIPATION: ADHD PARENT TRAINING FORM

Consent for Participation: ADHD Parent Training Form

University of North Texas

I, _____, and my child(ren) _____ _____, agree to participate in a study of parents and children associated with the Parent Training Program for parents of children with Attention Deficit Hyperactivity Disorder (ADHD) conducted at the Psychology Clinic of the University of North Texas. The Parent Training Program is an 8-week program that meets once a week for 1.5 hours and is designed to provide parents of children with ADHD an opportunity to learn more about ADHD and ways to effectively deal with the behavioral manifestations of the disorder. The purpose of this study is to evaluate the effectiveness of the Parent Training Program. The information obtained from this study will be used to further develop the Parent Training Program in an effort to better meet the needs of parents and their children. As a participant, I understand that my involvement in the Parent Training Program will be coincident with my participation in this research project.

I understand that before and after the program my child and I will be asked to complete a number of experimental tasks including the completion of forms, checklists, and questionnaires relating to my attitudes and behaviors as well as the attitudes and behaviors of my child with ADHD. I give permission for Martha Askins to contact my child's

Appendix G--continued

elementary school and for my child to complete his or her questionnaires during one 40-minute session at _____ _____ (his or her elementary school). I understand that this will be done once before the program begins, immediately upon completion of the program, and two months after the end of the program.

I have been informed that any information obtained in this study will be recorded with a code number and that neither I nor my child(ren) will be personally identified with any of the information provided. Under this condition, I agree that any information obtained from this research may be used in any way thought best for publication or education.

I understand that there is no personal risk or discomfort directly involved with this research and that I am free to withdraw my consent and discontinue participation in this study at any time. A decision to withdraw from the study will not affect the services available to me or my participation in the Parent Training Program.

If any questions or problems arise in connection with my participation in this study, I may contact Dr. David B. Baker, the research director at (817) 565-2671.

_____ _____

Signature of the Participant Date

_____ _____

Signature of the Participant Date

APPENDIX H

DESCRIPTIVE STATISTICS AND RELIABILITIES FOR THE SOCIAL PROVISIONS SCALE

Table 1

Descriptive Statistics and Reliabilities for the Social Provisions Scale

Provision	M	SD	a	Average r*
Attachment	13.72	2.42	.747	.441
Social Integration	14.01	1.90	.673	.346
Reassurance of Worth	13.29	2.02	.665	.336
Reliable Alliance	14.43	1.91	.653	.324
Guidance	14.18	2.23	.760	.451
Opportunity for Nurturance	12.82	2.28	.655	.320
Total Social Provision Score	82.45	9.89	.915	.293

*These are the average inter-item correlations.

Note: From "The Provisions of Social Relationships and Adaptation to Stress" (p. 46) by C. E. Cutrona and D. W. Russell. In W. H. Jones and D. Perlman (Eds.), Advances in personal relationships (Vol.. 1, pp. 37-67). Greenwich, CT: JAI Press Inc.

APPENDIX I

DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS

Table 2

Demographic Characteristics of Participants

Descriptive Category	Frequency	Percent
Family Constellation		
Both Parents	11	41
Mother and Step-father	6	22
Mother Only	7	26
Extended Family Member	3	11
Parent's Level of Education		
Mothers		
Began or Graduated High School	3	11
Some College or Training	17	63
College Degree or Graduate Work	7	26
Second Caregivers		
Began or Graduated High School	4	27
Some College or Training	8	53
College Degree or Graduate Work	3	2
Family Income		
≤ $10,000.00	2	7
$10,001.00 to $25,000.00	6	22
$25,001.00 to $40,000.00	10	37
$40,001.00 to $55,000.00	7	26
$55,001.00 to $70,000.00	2	7

APPENDIX J

DEMOGRAPHIC CHARACTERISTICS OF CHILDREN

Table 3

Demographic Characteristics of Children

Descriptive Category	Frequency	Percent
Subtypes of Attention Disorders		
ADHD	22	82
ADD (Undifferentiated)	5	18
Concomitant Mental Disorders		
Oppositional Defiant Disorder	2	7
Concomitant Developmental Disorders		
Learning Disability	9	33
Utilization of Medication Therapy		
Medicated	22	85
Non-Medicated	4	15
Type of Medication Utilized		
Methylphenidate	17	71
Dexedrine	2	8
Cylert	2	8
Anti-Depressant	1	5
Other Medications	3	13
Onset of Medication Therapy		
≥ 1 year	19	79
4 to 11 months	4	17
≤ 1 month	1	4

(table continued)

Descriptive Category	Frequency	Percent
Category of Eligibility for Special School Services		
Learning Disabled	9	53
Emotionally Disturbed	4	24
Gifted	2	12
Other Health Impaired	1	6
Other Treatments Currently Tried		
Behavior Modification	13	50
Parent Support Group	9	35
Child Psychotherapy	8	31
Parent Training	5	19
Modification of Child's Diet	1	4
Previously Tried Treatments		
Child Psychotherapy	10	39
Behavior Modification	9	35
Family Counseling	8	31
Parent Training	6	23
Parent Support Group	3	12
Modification of Child's Diet	3	12
Child Social Skills Training	1	4

APPENDIX K

COMPARISON OF PRE-TREATMENT DIFFERENCES BETWEEN PARENTS WHO COMPLETED THE PROGRAM AND THOSE WHO DID NOT

Table 4

Comparison of Pre-Treatment Differences Between Parents Who Completed the Program and Those Who Did Not

Scale	Completers Mean Rank	Non-Completers Mean Rank	U(z)
		Mothers[a]	
CBCL Total Score	19.87	16.65	-0.79
CBCL Attention Subscale Score	19.44	17.80	-0.40
Conner's Hyper-activity Index	19.63	17.30	-0.56
Social Provisions Scale Total Score	17.00	22.40	1.36
		Fathers[b]	
CBCL Total Score	12.91	6.70	-1.84
CBCL Attention Subscale Score	12.79	7.10	-1.69
Conner's Hyper-activity Index	11.53	8.75	-0.76
Social Provisions Scale Total Score	12.06	7.60	-1.37

Note. No statistical significance detected.

[a]n = 37, with 27 completing and 10 not completing the program.

[b]n = 22, with 17 completing and 5 not completing the program.

APPENDIX L

PRE-TREATMENT GENDER DIFFERENCES

Table 5

Pre-Treatment Gender Differences

Rater	Boys n	Boys M rank	Girls n	Girls M rank	U(z)
		CBCL Total Score			
Mother	23	14.00	4	14.00	0.03
Father	15	10.03	3	6.83	-0.89
Teacher	21	12.19	3	14.67	0.53
		Conner's Hyperactivity Index			
Mother	23	13.89	4	14.63	0.14
Father	14	9.57	3	6.33	-0.95
		Social Provisions Scale Total Score			
Mother	22	12.73	4	17.75	1.18
Fathers	15	9.13	2	8.00	-0.22

Note. No statistical significance was detected.

APPENDIX M

PRE-TREATMENT DIFFERENCES BETWEEN CHILDREN WITH ADHD AND ADD

Table 6

Pre-Treatment Differences Between Children with ADHD and ADD

Rater	ADHD n	ADHD M rank	ADD n	ADD M rank	U(z)
		CBCL Total Score			
Mother	22	15.86	5	5.80	-2.53**
Father	15	9.70	3	8.50	-0.30
Teacher	19	12.16	5	13.80	0.43
		CBCL Internalizing Domain Score			
Mother	22	15.16	5	8.90	-1.56
Father	15	9.33	3	10.33	0.24
Teacher	19	12.31	5	10.90	-0.37
		CBCL Externalizing Domain Score			
Mother	22	15.93	5	5.50	-2.63**
Father	15	10.20	3	6.00	-1.19
Teacher	19	12.69	5	9.50	-0.90
		CBCL Withdrawal Subscale Score			
Mother	22	14.52	5	11.70	-0.69
Father	15	9.17	3	11.17	0.54
Teacher	19	11.36	5	14.30	0.83
		CBCL Somatic Subscale Score			
Mother	22	14.59	5	11.40	-0.80
Father	15	9.90	3	7.50	-0.65
Teacher	19	10.33	5	18.00	2.31*

(table continued)

Rater	ADHD n	ADHD M rank	ADD n	ADD M rank	U(z)
CBCL Anxiety/Depression Subscale Score					
Mother	22	15.09	5	9.20	-1.47
Father	15	9.87	3	7.67	-0.60
Teacher	19	11.94	5	12.20	0.04
CBCL Social Problems Subscale Score					
Mother	22	14.68	5	11.00	-0.91
Father	15	9.90	3	7.50	-0.65
Teacher	19	11.78	5	12.80	0.26
CBCL Thought Problems Subscale Score					
Mother	22	13.84	5	14.70	0.19
Father	15	9.10	3	11.50	0.66
Teacher	19	12.42	5	10.50	-0.53
CBCL Attention Problems Subscale Score					
Mother	22	14.91	5	10.00	-1.23
Father	15	9.30	3	10.50	0.30
Teacher	19	11.67	5	13.20	0.41
CBCL Delinquent Behavior Subscale Score					
Mother	22	15.61	5	6.90	-2.20*
Father	15	10.13	3	6.33	-1.07
Teacher	19	12.67	5	9.60	-0.86

(table continued)

Rater	ADHD n	ADHD M rank	ADD n	ADD M rank	U(z)
CBCL Aggressive Behavior Subscale Score					
Mother	22	15.82	5	6.00	-2.47**
Father	15	9.77	3	8.17	-0.42
Teacher	19	13.31	5	7.30	-1.72
Conner's Hyperactivity Index					
Mother	22	14.64	5	11.20	-0.84
Father	14	9.46	3	6.83	-0.76
Social Provisions Scale Total Score					
Mother	21	14.40	5	9.70	-1.21
Fathers	14	8.79	3	10.00	0.32

*$p \leq .05$. **$p \leq .01$.

APPENDIX N

CBCL T-SCORE MEANS AND STANDARD DEVIATIONS ON CHILDREN WITH ADHD and ADD

Table 7

CBCL T-Score Means and Standard Deviations On Children with ADHD and ADD

Scale	ADHD x	ADHD SD	ADD x	ADD SD
Mothers CBCL Scores				
Total**	71.3	7.9	61.0	7.0
Internalizing Domain	65.7	10.7	56.2	13.0
Externalizing Domain**	68.6	8.7	55.6	7.4
Withdrawal	62.4	10.3	57.6	10.4
Somatic	60.4	8.1	56.8	6.3
Anxiety/Depression	66.8	12.9	58.0	11.1
Social Problems	70.0	11.0	64.0	13.4
Thought Problems	65.4	6.8	64.2	8.3
Attention Problems	75.0	10.5	68.6	8.6
Delinquent Behavior*	63.7	7.3	54.6	6.1
Aggressive Behavior**	71.6	2.1	56.8	6.4
Fathers CBCL Scores				
Total	70.3	7.0	68.7	8.7
Internalizing Domain	66.1	8.1	66.7	16.0
Externalizing Domain	68.5	7.3	64.3	5.7
Withdrawal	61.1	6.3	63.3	12.6
Somatic	67.8	11.2	62.7	17.8
Anxiety/Depression	66.3	11.4	65.7	20.6
Social Problems	67.8	11.2	62.7	17.8
Thought Problems	65.7	7.5	68.0	4.6

(table continued)

Scale	ADHD x	ADHD SD	ADD x	ADD SD
Attention Problems	72.6	9.5	74.7	8.5
Delinquent Behavior	63.5	8.6	57.0	2.6
Aggressive Behavior	70.7	10.3	66.3	7.0
Teachers CBCL Scores				
Total	64.5	7.2	65.6	6.7
Internalizing Domain	58.2	8.7	50.2	23.6
Externalizing Domain	61.6	9.2	56.6	9.7
Withdrawal	60.9	10.2	66.8	16.7
Somatic*	55.2	5.9	63.6	7.9
Anxiety/Depression	57.1	6.5	58.2	8.6
Social Problems	61.8	7.4	62.2	10.4
Thought Problems	61.6	9.2	59.0	9.8
Attention Problems	67.1	11.3	70.0	12.8
Delinquent Behavior	61.8	8.5	57.8	6.1
Aggressive Behavior	61.7	9.6	54.6	3.6

*$p \leq .05$. **$p \leq .01$.

APPENDIX O

PRE-TREATMENT DIFFERENCES BETWEEN CHILDREN WITH AND WITHOUT A CONCOMITANT LEARNING DISABILITY

Table 8

Pre-Treatment Differences Between Children With and Without a Learning Disability (LD)

Rater	With LD n	With LD M rank	Without LD n	Without LD M rank	U(z)
		CBCL Total Score			
Mother	9	7.89	8	10.25	0.92
Father	6	5.58	6	7.42	-0.80
Teacher	7	9.79	7	6.44	1.39
		CBCL Internalizing Domain Score			
Mother	9	8.72	8	9.31	0.19
Father	6	6.75	6	6.25	0.16
Teacher	7	9.43	7	5.57	1.67
		CBCL Externalizing Domain Score			
Mother	9	7.61	8	10.56	1.16
Father	6	5.17	6	7.83	-1.21
Teacher	7	8.00	7	7.00	0.38
		CBCL Withdrawal Subscale Score			
Mother	9	8.33	8	9.75	0.53
Father	6	6.50	6	6.50	0.08
Teacher	7	9.00	7	6.00	1.28
		CBCL Somatic Subscale Score			
Mother	9	10.28	8	7.56	-1.10
Father	6	6.58	6	6.42	0.00
Teacher	7	8.64	7	6.36	1.00

(table continued)

Rater	With LD n	With LD M rank	Without LD n	Without LD M rank	U(z)
CBCL Anxiety/Depression Subscale Score					
Mother	9	8.44	8	9.63	0.43
Father	6	6.17	6	6.83	-0.24
Teacher	7	8.36	7	6.64	0.71
CBCL Social Problems Subscale Score					
Mother	9	7.72	8	10.44	1.07
Father	6	5.50	6	7.50	-0.88
Teacher	7	8.07	7	6.93	0.45
CBCL Thought Problems Subscale Score					
Mother	9	10.89	8	6.88	-1.62
Father	6	6.67	6	6.33	0.08
Teacher	7	8.29	7	6.71	0.66
CBCL Attention Problems Subscale Score					
Mother	9	8.06	8	10.06	0.78
Father	6	4.92	6	8.08	-1.45
Teacher	7	8.86	7	6.14	1.16
CBCL Delinquent Behavior Subscale Score					
Mother	9	8.00	8	10.13	0.82
Father	6	4.67	6	8.33	-1.70
Teacher	7	7.21	7	7.79	-0.20

(table continued)

Rater	With LD n	With LD M rank	Without LD n	Without LD M rank	U(z)
CBCL Aggressive Behavior Subscale Score					
Mother	9	7.50	8	10.69	1.25
Father	6	5.83	6	7.17	-0.57
Teacher	7	7.64	7	7.36	0.06
Conner's Hyperactivity Index					
Mother	9	8.56	8	9.50	0.34
Father	6	4.00	6	8.40	2.11*
Social Provisions Scale Total Score					
Mother	9	8.00	7	9.14	0.42
Fathers	6	6.67	6	5.20	-0.64

Note. Ten families did not endorse whether or not their child had a concomitant learning disability.

*$p \leq .05$.

APPENDIX P

PRE-TREATMENT DIFFERENCES BETWEEN MEDICATED AND NON-MEDICATED CHILDREN

Table 9

Pre-Treatment Differences Between Medicated and Non-Medicated Children

Rater	Medicated n	Medicated M rank	Non-Medicated n	Non-Medicated M rank	U(z)
		CBCL Total Score			
Mother	22	12.34	4	19.88	1.78
Father	14	9.36	3	7.33	-0.57
Teacher	19	13.03	4	7.13	-1.55
		CBCL Internalizing Domain Score			
Mother	22	12.32	4	20.00	1.81
Father	14	9.00	3	9.00	0.06
Teacher	19	12.25	4	8.13	-1.11
		CBCL Externalizing Domain Score			
Mother	22	12.61	4	18.38	1.35
Father	14	9.21	3	8.00	-0.32
Teacher	19	12.47	4	7.13	-1.45
		CBCL Withdrawal Subscale Score			
Mother	22	12.98	4	16.38	0.79
Father	14	8.96	3	9.17	0.00
Teacher	19	12.50	4	7.00	-1.51
		CBCL Somatic Subscale Score			
Mother	22	13.09	4	15.75	0.62
Father	14	9.04	3	8.83	0.00
Teacher	19	11.72	4	10.50	-0.31

(table continued)

Rater	Medicated n	Medicated M rank	Non-Medicated n	Non-Medicated M rank	U(z)
CBCL Anxiety/Depression Subscale Score					
Mother	22	12.25	4	20.38	1.93*
Father	14	8.89	3	9.50	0.13
Teacher	19	11.64	4	10.88	-0.17
CBCL Social Problems Subscale Score					
Mother	22	12.73	4	17.75	1.18
Father	14	9.04	3	8.83	0.00
Teacher	19	12.08	4	8.88	-0.85
CBCL Thought Problems Subscale Score					
Mother	22	14.41	4	8.50	-1.42
Father	14	10.21	3	3.33	-2.11*
Teacher	19	11.89	4	9.75	-0.56
CBCL Attention Problems Subscale Score					
Mother	22	12.09	4	21.25	2.18*
Father	14	9.36	3	7.33	-0.57
Teacher	19	12.69	4	6.13	-1.79
CBCL Delinquent Behavior Subscale Score					
Mother	22	12.57	4	18.63	1.43
Father	14	8.68	3	10.50	0.51
Teacher	19	11.97	4	9.38	-0.69

(table continued)

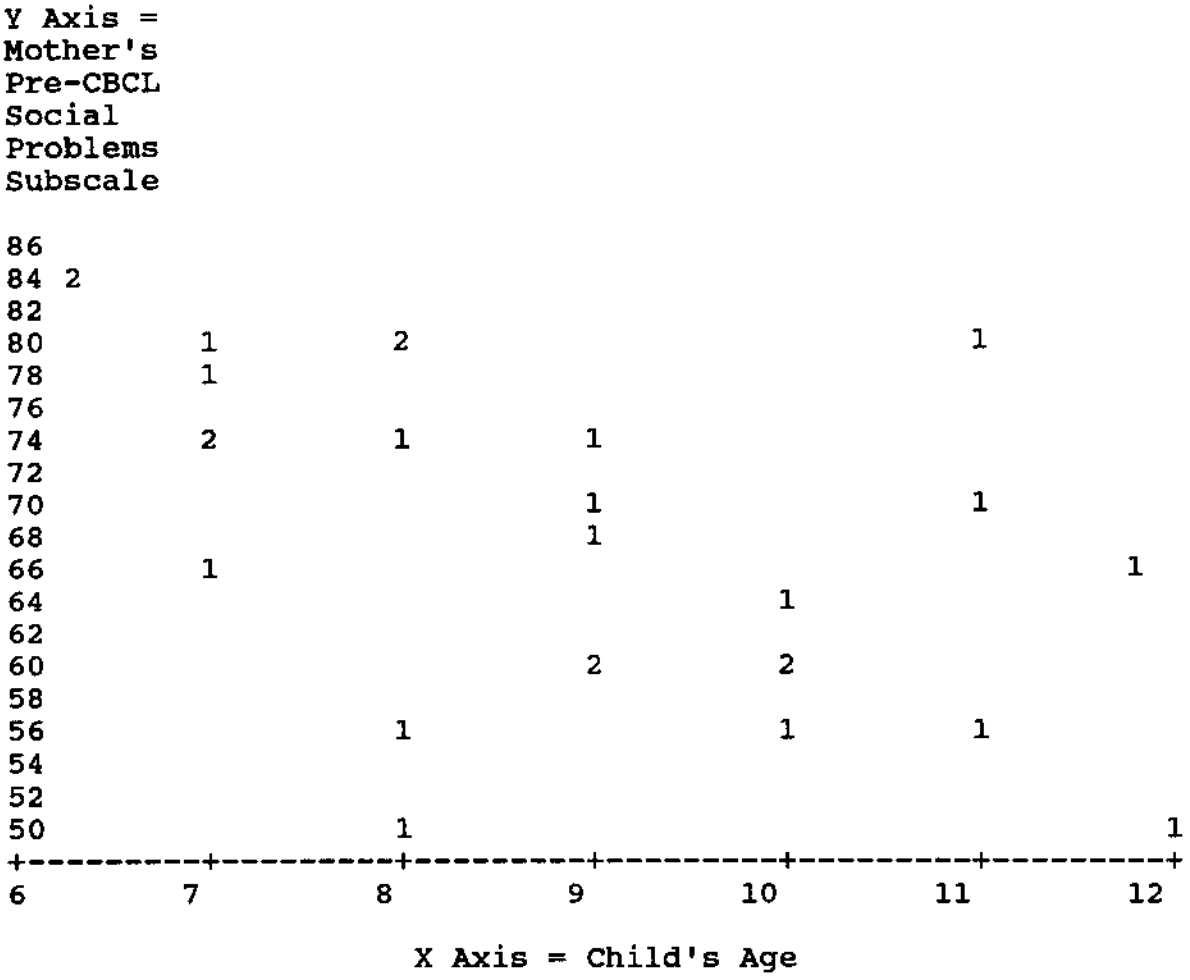
Rater	Medicated n	Medicated M rank	Non-Medicated n	Non-Medicated M rank	U(z)
CBCL Aggressive Behavior Subscale Score					
Mother	22	12.80	4	17.38	1.07
Father	14	9.25	3	7.83	-0.38
Teacher	19	12.42	4	7.38	-1.37
Conner's Hyperactivity Index					
Mother	22	12.82	4	17.25	1.03
Father	14	8.71	2	7.00	-0.40
Social Provisions Scale Total Score					
Mother	22	12.59	3	16.00	0.71
Fathers	14	9.43	3	7.00	-0.69

*$p \leq .05$.

APPENDIX Q

SCATTERPLOT: RELATIONSHIP BETWEEN CHILD'S AGE AND MOTHER'S PRE-CBCL SOCIAL PROBLEMS SUBSCALE SCORE

Figure 1. Scatterplot: Relationship Between Child's Age and Mother's Pre-CBCL Social Problems Subscale Score.



1 = Onset of medication ≥ one year.

2 = Onset of medication < one year.

NOTE: 4 observations are hidden.

APPENDIX R

PRE-TREATMENT DIFFERENCES BETWEEN CHILDREN AT SITE ONE AND SITE TWO

Table 10

Pre-Treatment Differences Between Children at Site One and Site Two

Rater	Site Two n	Site Two M rank	Site One n	Site One M rank	U(z)
		CBCL Total Score			
Mother	18	15.08	9	11.83	-0.98
Father	12	11.00	6	6.50	-1.65
Teacher	15	12.33	9	12.78	0.12
		CBCL Internalizing Domain Score			
Mother	18	15.47	9	11.06	-1.34
Father	12	11.25	6	6.00	-1.92*
Teacher	15	13.03	9	10.06	-0.97
		CBCL Externalizing Domain Score			
Mother	18	13.72	9	14.56	0.23
Father	12	10.25	6	8.00	-0.80
Teacher	15	12.87	9	10.38	-0.81
		CBCL Withdrawal Subscale Score			
Mother	18	13.86	9	14.28	0.10
Father	12	10.71	6	7.08	-1.32
Teacher	15	12.73	9	10.63	-0.69
		CBCL Somatic Subscale Score			
Mother	18	16.28	9	9.44	-2.13*
Father	12	11.04	6	6.42	-1.69
Teacher	15	11.90	9	12.19	0.07

(table continued)

Rater	Site Two n	Site Two M rank	Site One n	Site One M rank	U(z)
CBCL Anxiety/Depression Subscale Score					
Mother	18	15.36	9	11.28	-1.24
Father	12	11.33	6	5.83	-2.02*
Teacher	15	13.80	9	8.63	-1.74
CBCL Social Problems Subscale Score					
Mother	18	15.75	9	10.50	-1.60
Father	12	11.04	6	6.42	-1.69
Teacher	15	14.20	9	7.88	-2.10*
CBCL Thought Problems Subscale Score					
Mother	18	14.03	9	13.94	0.00
Father	12	10.08	6	8.33	-0.62
Teacher	15	14.23	9	7.81	-2.17*
CBCL Attention Problems Subscale Score					
Mother	18	15.17	9	11.67	-1.06
Father	12	10.50	6	7.50	-1.08
Teacher	15	9.87	9	16.00	2.04*
CBCL Delinquent Behavior Subscale Score					
Mother	18	14.17	9	13.67	-0.13
Father	12	9.79	6	8.92	-0.28
Teacher	15	10.63	9	14.56	1.30
CBCL Aggressive Behavior Subscale Score					
Mother	18	13.56	9	14.89	0.39
Father	12	10.17	6	8.17	-0.71
Teacher	15	14.13	9	8.00	-2.04*

(table continued)

Rater	Site Two n	Site Two M rank	Site One n	Site One M rank	U(z)
Conner's Hyperactivity Index					
Mother	18	13.39	9	15.22	0.54
Father	12	10.08	6	6.40	-1.32
Social Provisions Scale Total Score					
Mother	18	13.22	8	14.13	0.25
Fathers	12	6.75	4	13.75	2.49**
Social Provisions Reliable Alliance Subscale Score					
Mother	18	13.78	8	12.88	-0.25
Fathers	12	6.58	4	14.25	2.77**
Social Provisions Attachment Subscale Score					
Mother	18	13.42	9	13.69	0.56
Fathers	12	6.79	4	13.63	2.47**
Social Provisions Guidance Subscale Score					
Mother	18	13.39	9	13.75	0.09
Fathers	12	7.04	4	12.88	2.13*
Social Provisions Nurturance Subscale Score					
Mother	18	14.22	9	11.88	-0.71
Fathers	12	8.25	4	9.25	0.32
Social Provisions Social Integration Subscale Score					
Mother	18	13.58	9	13.31	-0.06
Fathers	12	7.29	4	12.13	1.76
Social Provisions Reassurance of Worth Subscale Score					
Mother	18	13.83	9	12.75	-0.31
Fathers	12	7.58	4	11.25	1.33

*$p \leq .05$. **$p \leq .01$.

APPENDIX S

POST-TREATMENT DIFFERENCES BETWEEN CHILDREN AT SITE ONE AND SITE TWO AS MEASURED BY THE MANN-WHITNEY U TEST

Table 11

Post-Treatment Differences Between Children at Site One and Site Two as Measured by the Mann-Whitney U Test

Rater	Site Two n	Site Two M rank	Site One n	Site One M rank	U(z)
		CBCL Total Score			
Mother	16	14.47	9	10.39	-1.30
Father	9	7.89	5	6.80	-0.40
Teacher	17	14.09	8	10.69	-1.05
		CBCL Internalizing Domain Score			
Mother	16	13.88	9	11.44	-0.77
Father	9	7.67	5	7.20	-0.13
Teacher	17	14.41	8	10.00	-1.37
		CBCL Externalizing Domain Score			
Mother	16	13.41	9	12.28	-0.34
Father	9	7.50	5	7.50	0.07
Teacher	17	13.79	8	11.31	-0.76
		CBCL Withdrawal Subscale Score			
Mother	16	13.53	9	12.06	-0.47
Father	9	7.39	5	7.70	0.07
Teacher	17	14.35	8	10.13	-1.32
		CBCL Somatic Subscale Score			
Mother	16	13.28	9	12.50	-0.23
Father	9	6.56	5	9.20	1.07
Teacher	17	12.65	8	13.75	0.33

(table continued)

Rater	Site Two n	Site Two M rank	Site One n	Site One M rank	U(z)
CBCL Anxiety/Depression Subscale Score					
Mother	16	14.78	9	9.83	-1.60
Father	9	8.44	5	5.80	-1.07
Teacher	17	14.97	8	8.81	-1.93*
CBCL Social Problems Subscale Score					
Mother	16	14.28	9	10.72	-1.15
Father	9	8.50	5	5.70	-1.14
Teacher	17	13.85	8	11.19	-0.82
CBCL Thought Problems Subscale Score					
Mother	16	15.22	9	9.06	-2.03
Father	9	6.89	5	8.60	0.67
Teacher	17	15.00	8	8.75	-2.11*
CBCL Attention Problems Subscale Score					
Mother	16	14.69	9	10.00	-1.51
Father	9	6.28	5	9.70	1.41
Teacher	17	12.50	8	14.06	0.47
CBCL Delinquent Behavior Subscale Score					
Mother	16	12.56	9	13.78	0.38
Father	9	7.56	5	7.40	0.00
Teacher	17	13.44	8	12.06	-0.41
CBCL Aggressive Behavior Subscale Score					
Mother	16	13.84	9	11.50	-0.75
Father	9	7.17	5	8.10	0.33
Teacher	17	13.97	8	10.94	-0.93

(table continued)

Rater	Site Two n	Site Two M rank	Site One n	Site One M rank	U(z)
Social Provisions Scale Total Score					
Mother	16	12.70	8	12.17	-0.15
Fathers	9	6.83	5	8.70	0.73
Social Provisions Reliable Alliance Subscale Score					
Mother	16	13.69	8	11.78	-0.60
Fathers	9	6.83	5	8.70	0.74
Social Provisions Attachment Subscale Score					
Mother	16	13.03	9	12.94	0.00
Fathers	9	6.11	5	10.00	1.65
Social Provisions Guidance Subscale Score					
Mother	16	13.16	9	12.72	-0.12
Fathers	9	6.67	5	9.00	0.96
Social Provisions Nurturance Subscale Score					
Mother	16	14.59	9	10.17	-1.44
Fathers	9	6.06	5	10.10	1.71
Social Provisions Social Integration Subscale Score					
Mother	16	14.03	9	11.17	-0.93
Fathers	9	6.72	5	8.90	0.96
Social Provisions Reassurance of Worth Subscale Score					
Mother	16	12.03	9	14.72	0.86
Fathers	9	7.06	5	8.30	0.50

$^{*}p \leq .05$. $^{**}p \leq .01$.

APPENDIX T

PRE-TREATMENT INTERCORRELATIONS BETWEEN THE GUIDANCE, SOCIAL INTEGRATION, AND REASSURANCE OF WORTH SUBSCALES OF THE SOCIAL PROVISIONS SCALE

Table 12

Pre-Treatment Intercorrelations Between the Guidance, Social Integration, and Reassurance of Worth Subscales of the Social Provisions Scale

Subscale	1	2	3
1. Guidance	--	.67****	.66****
2. Social Integration		--	.71****
3. Reassurance of Worth			--

Note. $n = 37$.

****$p \leq .0001$.

APPENDIX U

POST-TREATMENT INTERCORRELATIONS BETWEEN THE GUIDANCE, SOCIAL INTEGRATION, AND REASSURANCE OF WORTH SUBSCALES OF THE SOCIAL PROVISIONS SCALE

Table 13

Post-Treatment Intercorrelations Between the Guidance, Social Integration, and Reassurance of Worth Subscales of the Social Provisions Scale

Subscale	1	2	3
1. Guidance	--	.43**	.49**
2. Social Integration		--	.53***
3. Reassurance of Worth			--

Note. $n = 37$.

**$p \leq .01$. ***$p \leq .001$.

APPENDIX V

PRE-TREATMENT INTERCORRELATIONS BETWEEN THE RELIABLE ALLIANCE, ATTACHMENT, AND NURTURANCE SUBSCALES OF THE SOCIAL PROVISIONS SCALE

Table 14

Pre-Treatment Intercorrelations Between the Reliable Alliance, Attachment, and Nurturance Subscales of the Social Provisions Scale

Subscale	1	2	3
1. Reliable Alliance	--	.73****	.22
2. Attachment		--	.53
3. Nurturance			--

Note. $n = 37$.

****$p \leq .0001$.

APPENDIX W

POST-TREATMENT INTERCORRELATIONS BETWEEN THE RELIABLE ALLIANCE, ATTACHMENT, AND NURTURANCE SUBSCALES OF THE SOCIAL PROVISIONS SCALE

Table 15

Post-Treatment Intercorrelations Between the Reliable Alliance, Attachment, and Nurturance Subscales of the Social Provisions Scale

Subscale	1	2	3
1. Reliable Alliance	--	.75****	.21
2. Attachment		--	.18
3. Nurturance			--

Note. $n = 37$.

****$p \leq .0001$.

APPENDIX X

REPEATED MEASURES MANOVA OF THE SOCIAL PROVISIONS SUBSCALES OF GUIDANCE, SOCIAL INTEGRATION, AND REASSURANCE OF WORTH

Table 16

Repeated Measures MANOVA of the Social Provisions Subscales of Guidance, Social Integration, and Reassurance of Worth

Source of Variation	df	F
Subscale	2,34	1.09
Trial	1,35	0.01
Parent	6,30	0.44
Subscale x Parent	2,34	0.05
Trial x Parent	1,35	1.57
Subscale x Trial	2,34	0.48
Subscale x Trial x Parent	2,34	0.71

Note. n = 37. No significance detected.

APPENDIX Y

SOCIAL PROVISIONS SCALE PRE- AND POST-RAW SCORES

Table 17

Social Provisions Scale Pre- and Post-Raw Scores

Scale	Pre-Mean	SD	Post-Mean	SD
Total Score				
Mothers[a]	76.77	10.88	73.79	9.49
Fathers[b]	75.29	10.26	74.50	13.48
Guidance				
Mothers	12.69	2.63	11.68	2.34
Fathers	12.53	2.65	12.50	3.23
Social Integration				
Mothers	12.27	2.05	12.16	1.97
Fathers	12.00	1.54	12.57	2.71
Reassurance of Worth				
Mothers	12.12	2.41	11.52	2.04
Fathers	11.94	2.25	12.14	1.61
Reliable Alliance				
Mothers	13.31	1.91	12.48	2.50
Fathers	12.94	2.77	12.29	3.20
Attachment				
Mothers	12.54	2.79	11.96	2.91
Fathers	12.00	2.45	12.36	2.95
Nurturance				
Mothers	13.85	1.78	13.64	1.68
Fathers	13.41	1.54	12.64	1.65

[a]n = 25. [b]n = 14.

APPENDIX Z

REPEATED MEASURES ANOVA SUMMARY TABLE

MOTHERS' CBCL SCORES

Table 18

Repeated Measures ANOVA Summary Table: Mothers' CBCL Scores

Scale	MS Between[a]	MS Within[b]	F
Total	420.50	36.92	11.39**
Internalizing	124.82	27.20	4.59*
Externalizing	1095.12	60.08	18.23***
Withdrawal	50.00	26.42	1.89
Somatic	0.08	25.21	0.01
Anxiety	46.08	21.25	2.17
Social	359.12	35.04	10.25**
Thought	292.82	28.07	10.43**
Attention	233.28	49.66	4.70*
Delinquent	242.00	31.50	7.68**
Aggressive	531.38	45.63	11.65**

Note. $n = 25$.

[a]$df = 1$. [b]$df = 24$.

*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

APPENDIX AA

CBCL PRE- AND POST-SCORES

Table 19

CBCL Pre- and Post-Scores

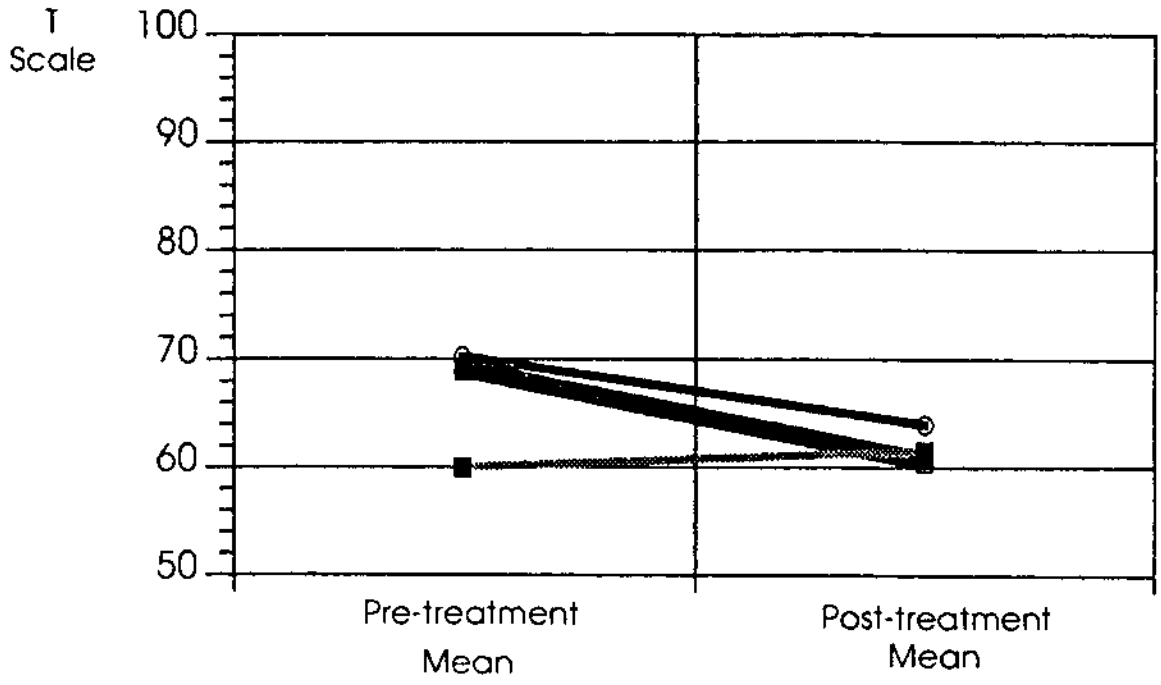
Scale	Pre-Mean	SD	Post-Mean	SD
Total Score				
Mothers[a]	69.01	7.74	62.68	11.47
Fathers[b]	69.00	7.20	67.29	5.28
Teachers[c]	64.64	7.21	65.92	10.64
Internalizing Score				
Mothers	64.32	10.24	59.56	13.00
Fathers	65.32	9.21	63.50	8.54
Teachers	56.64	12.04	61.42	12.61
Externalizing Score				
Mothers	65.82	9.73	55.76	14.26
Fathers	66.63	7.23	63.64	6.99
Teachers	60.34	9.02	61.94	10.83
Withdrawal Subscale				
Mothers	61.52	10.29	59.32	9.74
Fathers	61.88	7.18	61.00	7.11
Teachers	62.17	11.73	63.48	13.30
Somatic Subscale				
Mothers	59.70	7.84	58.80	8.60
Fathers	63.53	7.18	63.00	8.46
Teachers	57.04	7.09	58.68	12.76

(table continued)

Scale	Pre-Mean	SD	Post-Mean	SD
Anxiety/Depression Subscale				
Mothers	65.15	12.89	61.40	11.73
Fathers	67.06	12.37	62.00	8.98
Teachers	57.35	6.81	59.36	9.91
Social Problems Subscale				
Mothers	68.93	11.43	62.68	11.82
Fathers	67.12	12.36	62.29	10.47
Teachers	61.87	7.87	63.92	9.16
Thought Problems Subscale				
Mothers	65.15	6.97	60.40	6.47
Fathers	66.65	6.83	64.57	5.49
Teachers	61.04	9.15	59.12	11.66
Attention Problems Subscale				
Mothers	73.81	10.35	68.28	10.81
Fathers	73.71	8.84	70.79	7.26
Teachers	67.70	11.42	65.96	10.27
Delinquent Behavior Subscale				
Mothers	62.00	7.87	56.80	7.55
Fathers	61.82	8.07	61.57	7.80
Teachers	60.91	8.06	63.48	10.69
Aggressive Behavior Subscale				
Mothers	68.89	12.59	60.52	10.67
Fathers	70.41	9.93	64.00	8.24
Teachers	60.13	9.05	61.48	10.91

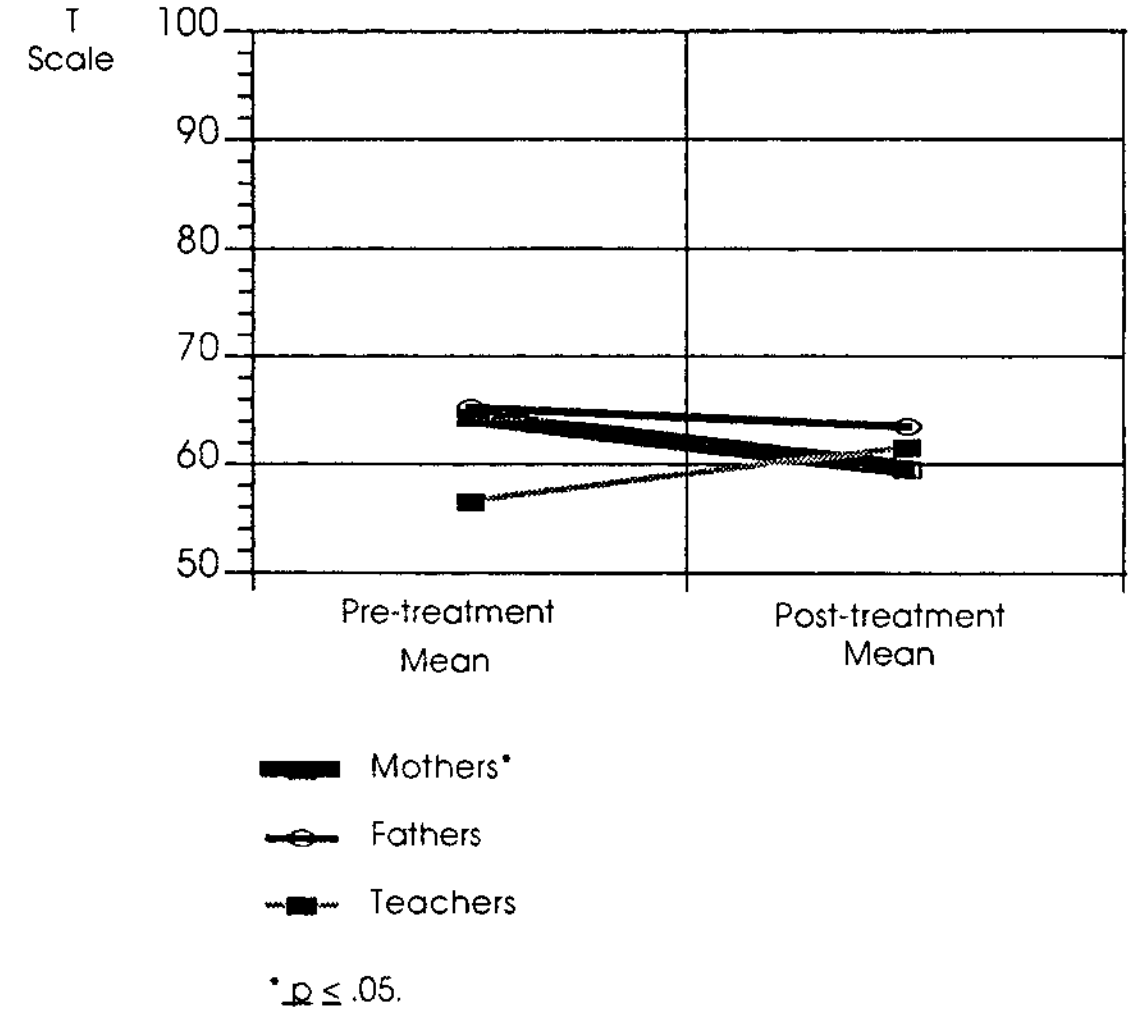
[a]n = 25. [b]n = 14. [c]n = 23.

Figure 2. CBCL Pre- and Post-Treatment Total Scale Scores



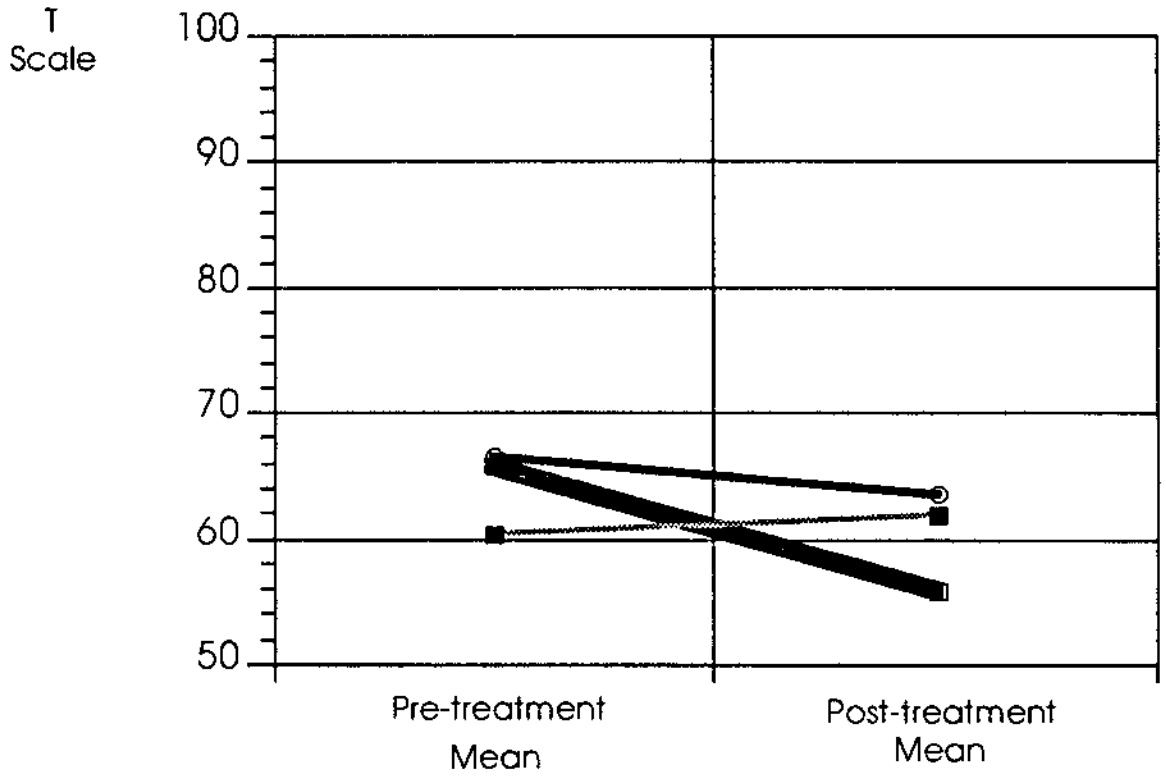
** $p \leq .01$.

Figure 3. CBCL Pre- and Post-Treatment Internalizing Scale Scores



*$p \leq .05$.

Figure 4. CBCL Pre- and Post-Treatment Externalizing Scale Scores



*** $p \leq .001$.

Figure 5. CBCL Pre- and Post-Treatment Withdrawal Subscale Scores

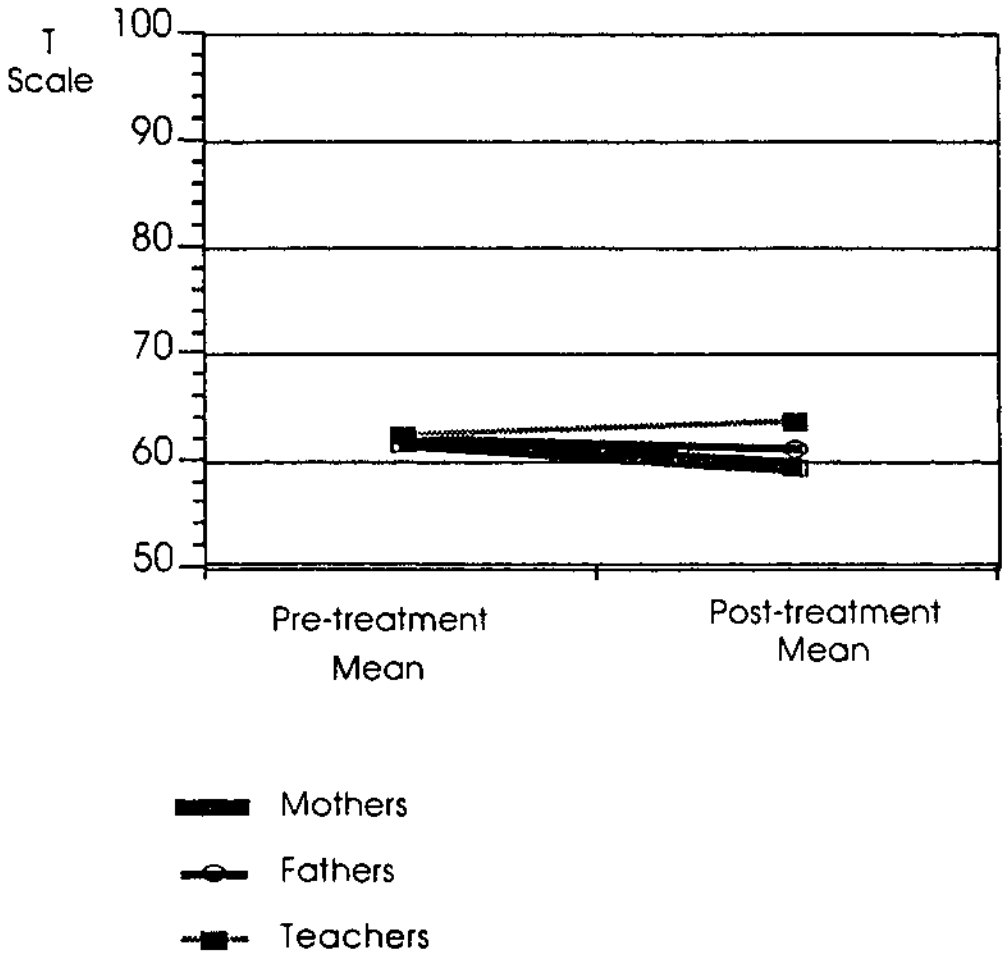


Figure 6. CBCL Pre- and Post-Treatment Somatic Subscale Scores

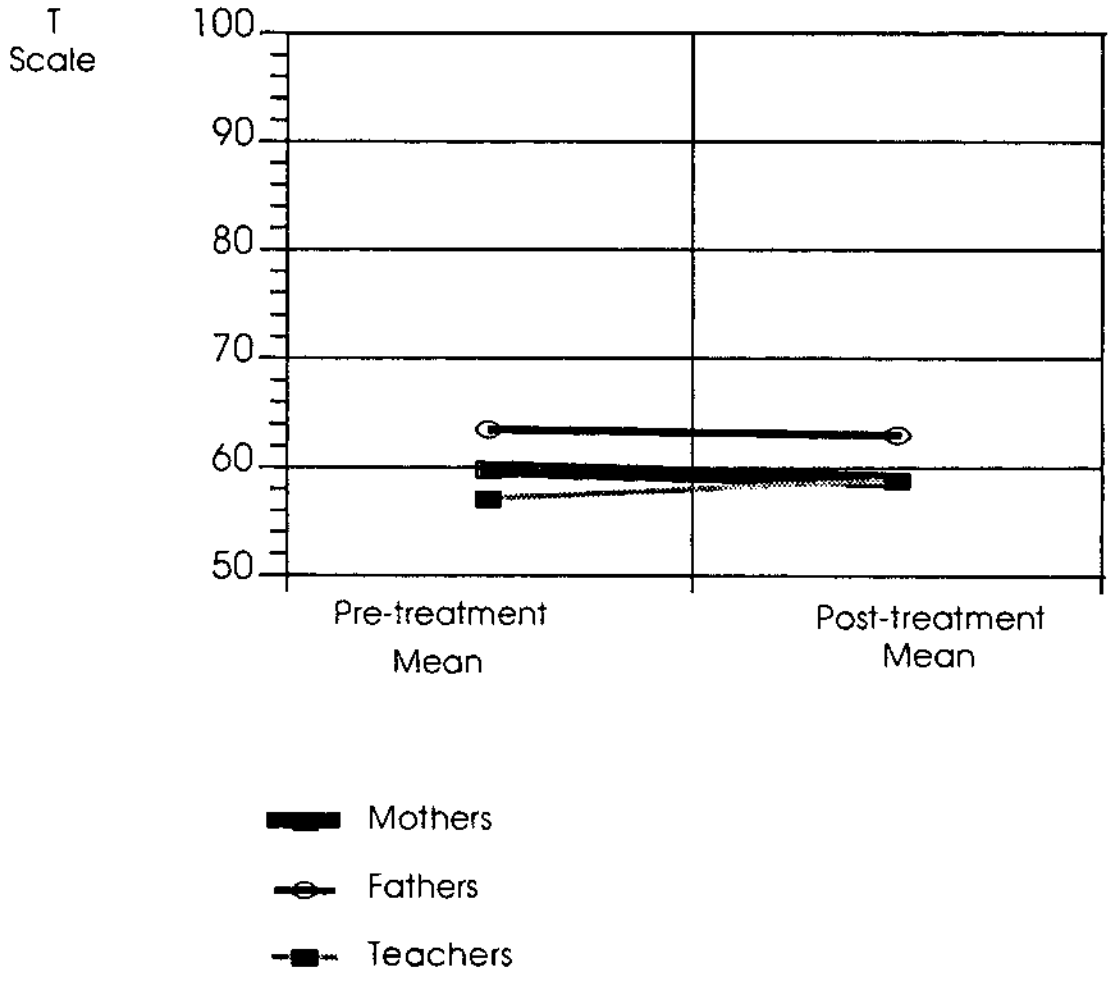


Figure 7. CBCL Pre- and Post-Treatment Anxiety/Depression Subscale Scores

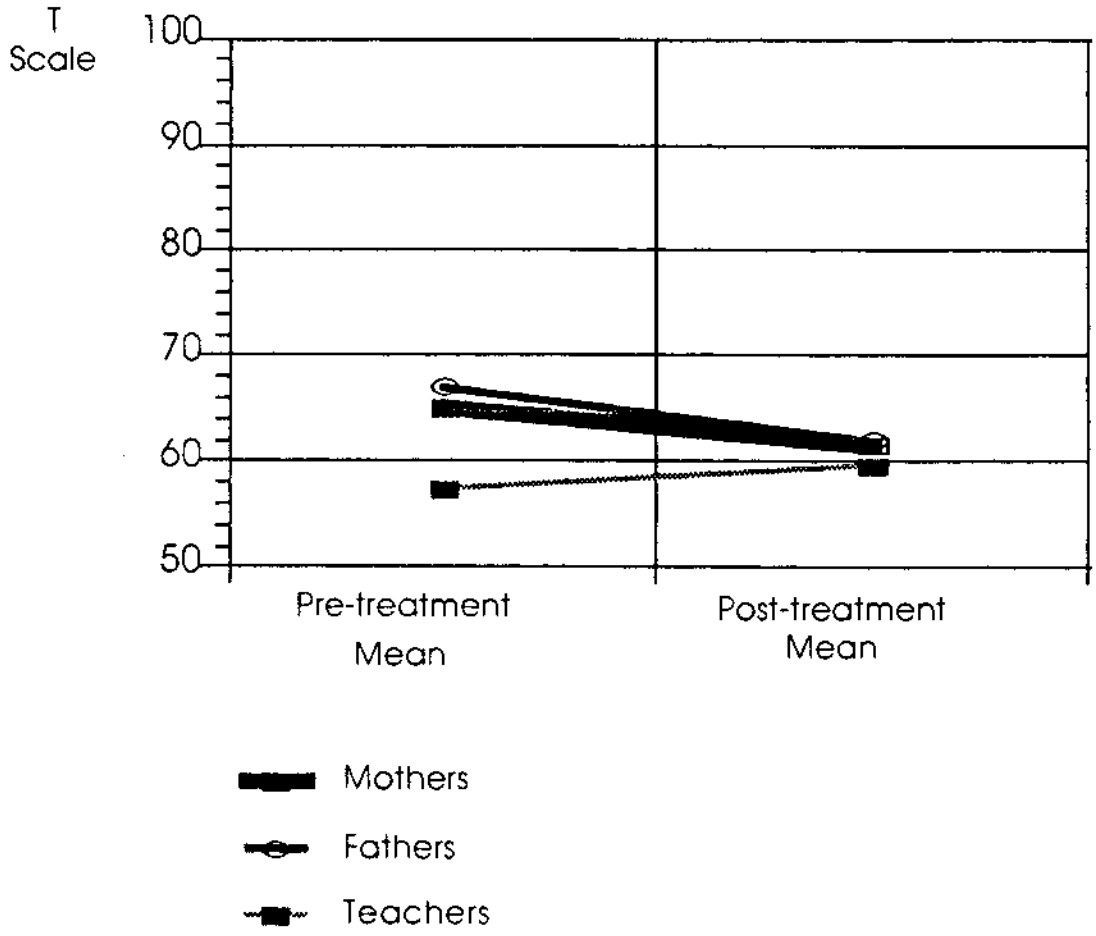
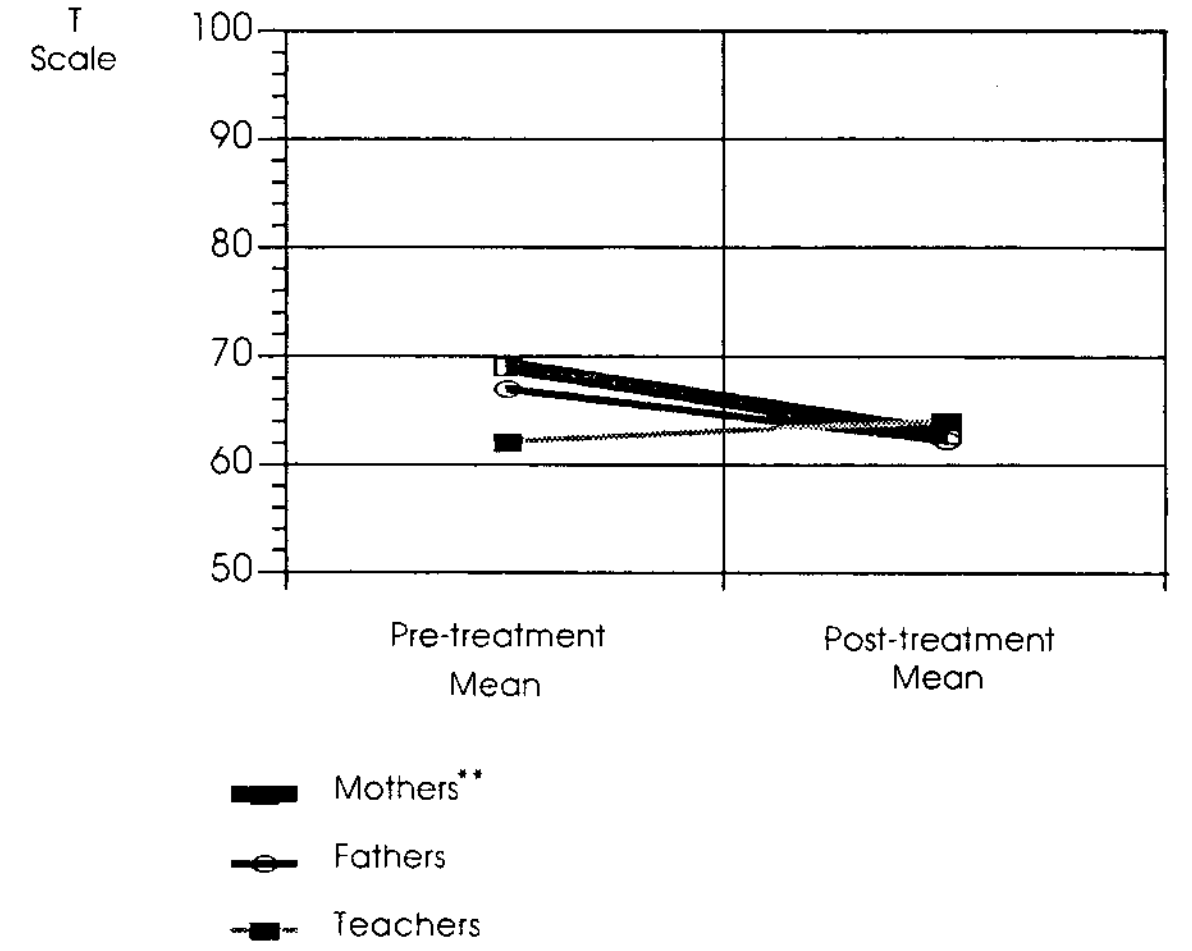
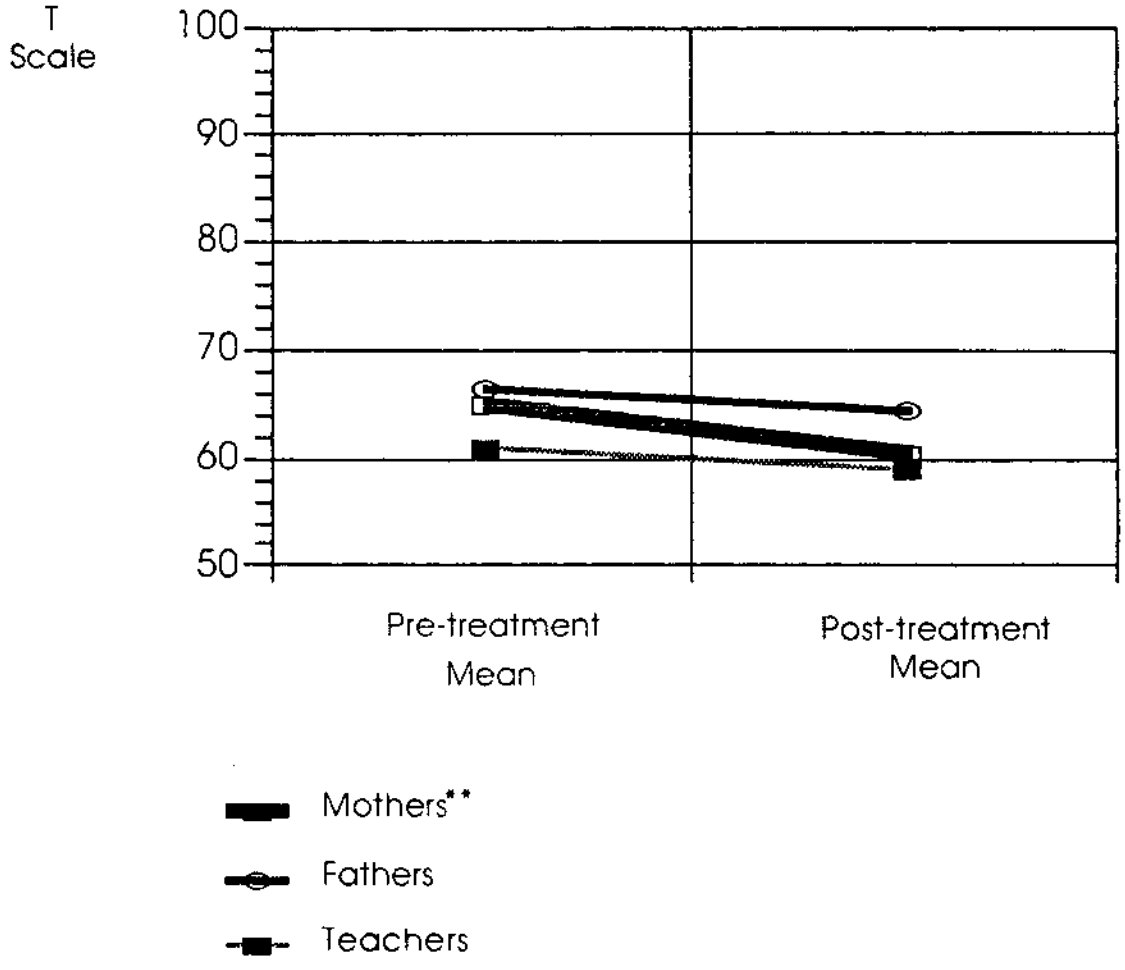


Figure 8. CBCL Pre- and Post-Treatment Social Problems Subscale Scores



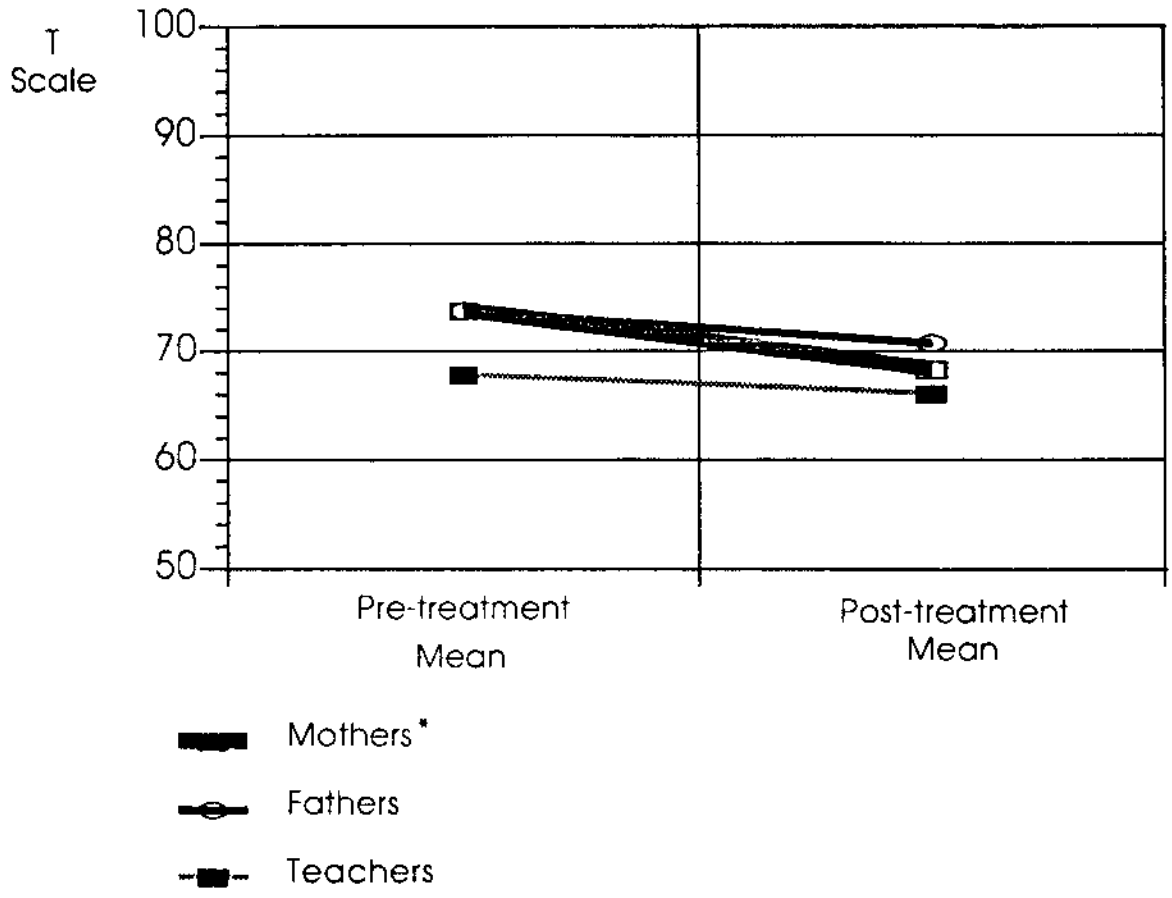
**$p \leq .01$.

Figure 9. CBCL Pre- and Post-Treatment Thought Problems Subscale Scores



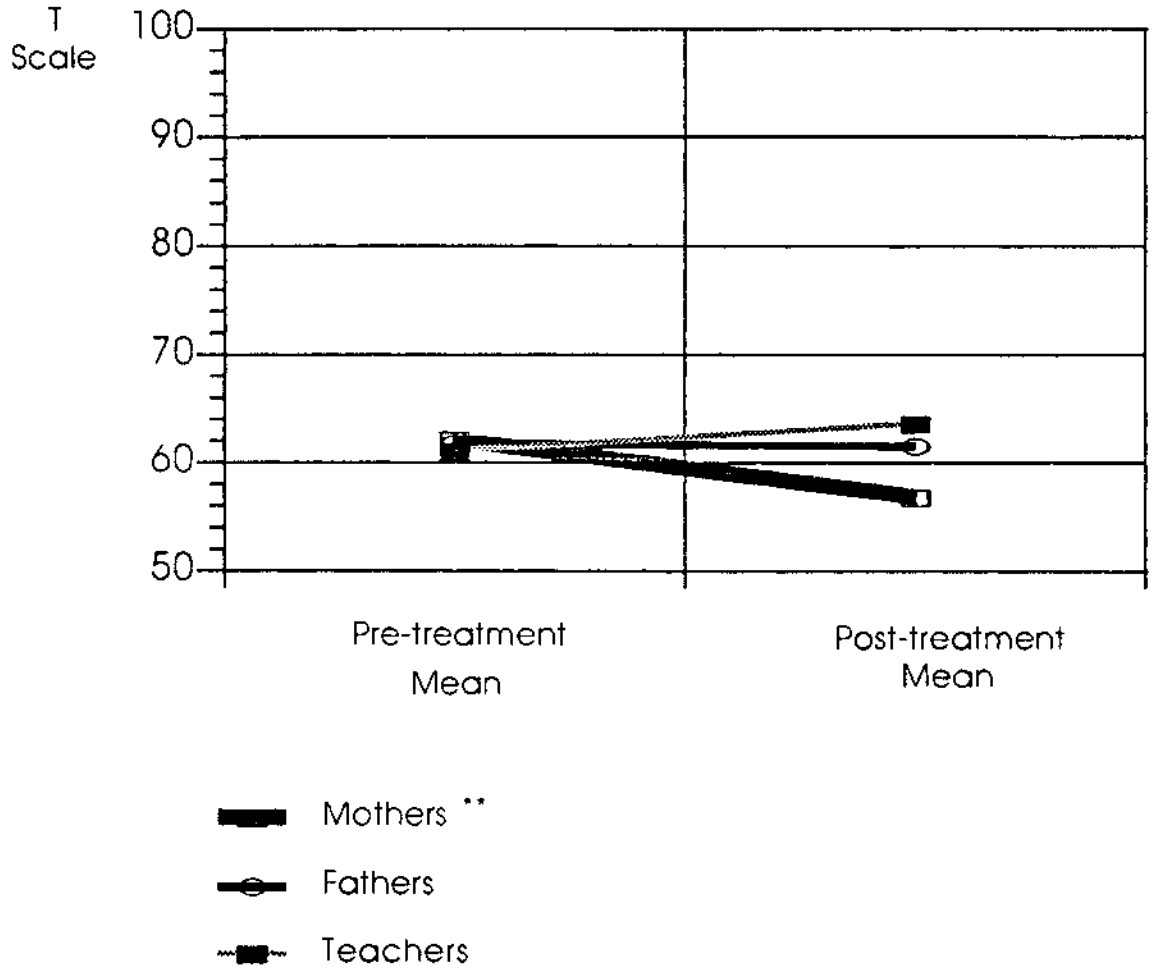
**$p \leq .01$.

Figure 10. CBCL Pre- and Post-Treatment Attention Problems Subscale Scores



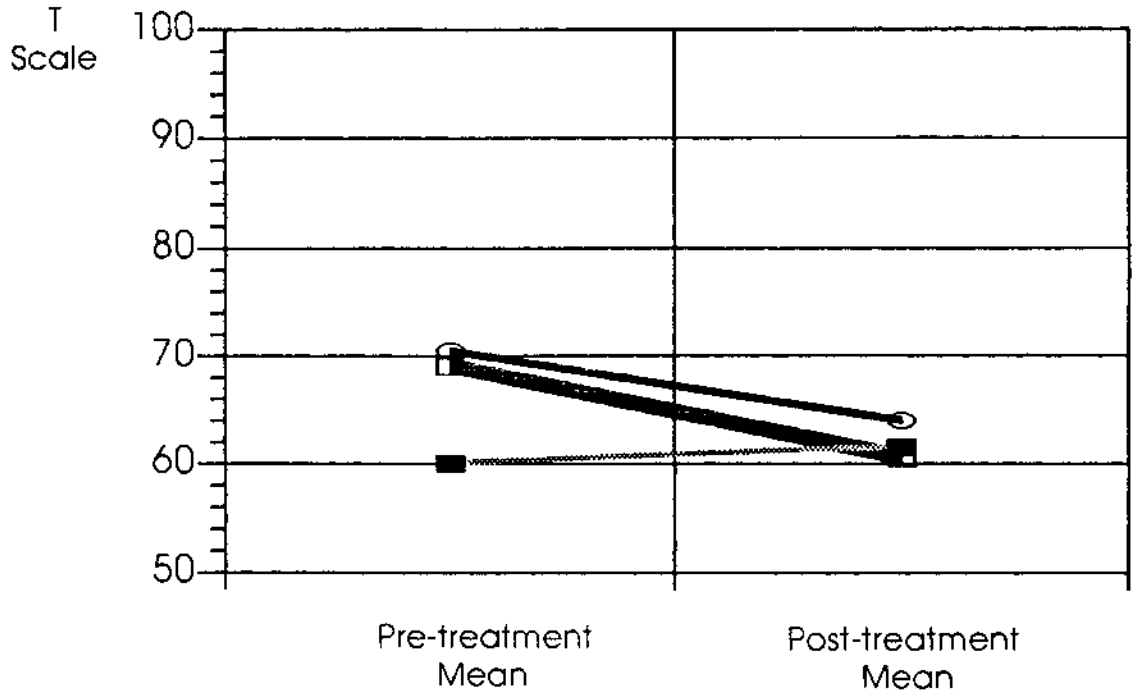
*$p \leq .05$.

Figure 11. CBCL Pre- and Post-Treatment Delinquent Behavior Subscale Scores



**$p \leq .01$.

Figure 12. CBCL Pre- and Post-Treatment Aggressive Behavior Subscale Scores



**$p \leq .01$.

APPENDIX BB

DESCRIPTIVE EXAMINATION OF

THE PARENT'S CONSUMER SATISFACTION QUESTIONNAIRE

Table 20

Descriptive Examination of the Parent's Consumer Satisfaction Questionnaire

Query		M	SD	Min. Score	Max. Score
1.	Overall feeling about the treatment program				
	Mothers[a]	6.04	0.84	4	7
	Fathers[b]	5.64	0.84	4	7
2.	Recommend the program to a friend or relative				
	Mothers	3.92	2.41	1	7
	Fathers	3.71	2.16	1	7
3.	Parent training is an appropriate treatment				
	Mothers	5.76	1.27	1	7
	Fathers	5.93	0.47	5	7
4.	Improvement in problem area that prompted treatment				
	Mothers	4.92	0.81	4	6
	Fathers	4.93	0.91	3	6
5.	Expectation of a satisfactory treatment outcome				
	Mothers	5.52	0.92	3	7
	Fathers	4.86	1.10	2	6
6.	Improved ability to cope				
	Mothers	5.56	0.77	4	7
	Fathers	5.29	0.61	4	6

(table continued)

Query	M	SD	Min. Score	Max. Score
7. Feel comforted				
Mothers	5.72	0.84	4	7
Fathers	5.29	0.61	4	6
8. Feel more accepting of child				
Mothers	5.28	1.14	3	7
Fathers	5.50	0.65	4	6
9. Parents functioning as a working unit				
Mothers	5.11	0.94	4	7
Fathers	5.21	0.70	4	6

[a]n = 25. [b]n = 14.

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