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Running Head: TREATMENT INTEGRITY AND CONJOINT BEHAVIORAL

CONSULTATION

Parent and Teacher Treatment Integrity and Conjoint Behavioral Consultation

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The beginning is the half of every action.
- Greek Proverb

Abstract

This present study examined parent and teacher treatment integrity during conjoint behavioral consultation (CBC) in the remediation of behavioral problems in children at home and at school. A primary purpose of the study examined the relationship between treatment integrity and treatment outcome. A second purpose was to investigate the association between the integrity with which interventions were implemented and treatment acceptability. More specifically, the relationships between parent and teacher treatment integrity and (a) time to effectiveness; and (b) intervention difficulty were examined. An A/B design was used and participants included 12 children, their parents, and their teachers. Results indicate that parent and teacher treatment integrity was moderately related to the effectiveness of interventions. Results also indicate that treatment integrity and parent and teacher perceptions of treatment acceptability were minimally related. However, strong relationships were found between treatment integrity and parent and teacher perceptions of time to effectiveness and a moderate relationship was found with treatment integrity and parent ratings of program difficulty. Moreover, the directions of the treatment integrity relationships with treatment acceptability and intervention difficulty factors were in the direction hypothesized with the exception of teacher perceptions of treatment acceptability. The theoretical and practical implications of these findings, limitations of this study, and future research directions are discussed.

Résumé

Cette étude examine l'intégrité de l'implantation des interventions pendant la

consultation conjointe du comportement (CCC) avec les parents et les enseignants qui ont

à leur charge des enfants ayant des troubles de comportement. Le but principal de cette

étude était d'examiner la relation entre l'intégrité des interventions et les changements de

comportements. Le deuxième éxaminait la relation entre l'intégrité des interventions et

l'acceptation de ces interventions. Plus précisément, la relation entre l'intégrité et le

temps d'implantation pour que un, l'intervention soit efficace, et deux, le niveau de

difficulté du programme d'intervention. La méthode utilisée pour cette recherche fut le

'A/B' et le groupe de sujets incluait 12 enfants, leurs parents et leurs enseignants. Les

résultats ont indiqué que l'intégrité de l'implantation des interventions est reliée de façon

modérée quant à l'efficacité de l'intervention. Les résultats indiquent aussi que l'intégrité

de l'implantation est faiblement reliée avec les perceptions d'acceptation des parents et

les enseignants. Par contre l'intégrité de l'implantation est fortement reliée avec le temps

d'implantation pour que l'intervention soit efficace par rapport aux parents et enseignants

et reliée de façon modéré avec les perceptions de la difficulté de l'intervention chez les

parents. De plus, la direction des relations entre l'intégrité des interventions et de

l'acceptation des interventions ainsi que tous les facteurs reliés à l'acceptations des

interventions respectent la direction formulée dans les premiers hypothèses sauf que pout

l'acceptation de l'intervantion chez les ensignants. Les résutats sont discutés en fonction

des trouvailles des implications pratiques et théoriques, des limites de cette étude et des

directions futures de ces recherches.

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CHAPTER 1

Introduction

Statement of the Problem

Children who present with behavioral difficulties are of grave concern to parents,

educators and mental health care providers. Children exhibiting severe and persistent

behavior problems constitute the majority of referrals to mental health agencies (Kazdin,

1985; Patterson, 1982; Robins, 1981; Sholevar & Sholevar, 1995). Behavioral difficulties

exist along a continuum, varying from externalizing symptoms such as aggression,

impulsivity, hyperactivity and non-compliance to internalizing symptoms such as

anxiety, depression, fear, and social withdrawal (Achenbach, 1991a; Achenbach &

Edelbrock, 1978; Edelbrock & Costello, 1988). Recent literature suggests that children

who manifest chronic externalizing behaviors are at risk for peer and parental rejection,

parental abuse, academic failure, along with legal and psychological problems as they

progress through adolescence and adulthood (Greenbaum & Auerbach, 1992; Horowitz,

1992; Kazdin, 1977; Offord & Bennett, 1994; Quay & Hogan, 1999; Richardson, Koller

& Katz, 1985; Thomas & Chess, 1984). These possible long-term outcomes have been

found to be at a considerable financial and emotional cost to these children, their families,

and the communities in which they live and work (Beitchman, Inglis, & Schachter, 1992

a, b).

The possible negative outcomes associated with childhood behavior difficulties

have prompted researchers and psychologists to outline techniques to remediate these

behaviors. Behavioral interventions have been utilized to remediate a wide range of

behavior problems such as aggression, obsessions, conduct problems, shyness, and

inattention (Crnic & Reid, 1989; Didden, Duker, & Korzilius, 1997; LaGrow & Repp, 1984). In the past, remediation has usually been provided to families through behavioral parent training (Baker, Heifetz, & Murphy, 1980; Baker, Landen, & Kashima, 1981; Breiner & Beck, 1984; Kashima, Baker, & Landen, 1988; Kramer, 1990) and to schools via implementation of behavior modification techniques by teachers (Carr, Newson, & Binkoff, 1980; Haring, Breen, Pitts-Conway, & Gaylord-Ross, 1986; Sugai & Rowe, 1984). Although interventions at home or at school have shown some success in remediating behavioral problems, focusing on only one milieu at a time has neglected the global environmental context within which the child's problems occur (Christensen, 1995; Conoley, 1987; Kratochwill, Elliott, & Carrington-Rotto, 1995, Sheridan, Kratochwill, & Elliott, 1990). Recently, researchers have advocated the use of remedial programs that target interventions across multiple settings (e.g., home, school, and community) and individuals (e.g., parents and teachers) (Crnic & Reid, 1989; Sheridan et al., 1996; Webster-Stratton, 1993; Webster-Stratton & Herbert, 1994; Wielkiewincz, 1992). Addressing behavior difficulties within a multi-context approach permits for a more complete understanding of the contextual factors that may precede and or maintain the problematic behaviors.

Behavioral consultation provides an empirically reliable structure for providing indirect services to clients through consultants. The seminal work of Bergan and Kratochwill (Bergan & Kratochwill, 1990) provides a systematic framework for the practice of behavioral consultation through a four-stage process (problem identification, problem analysis, treatment implementation, and treatment evaluation) defined by a series of standardized behavioral interviews.

Christensen (1995), Comer and Haynes (1991), and Levin (1987) have described exemplary home-school collaboration models that demonstrate effective and cooperative relationships between parents and teachers. However, few models are available that provide a framework for educators and parents to address the unique circumstances of individual children. Conjoint behavioral consultation (CBC; Sheridan & Kratochwill, 1996; Sheridan et al., 1990) is one such model. CBC is an indirect form of service delivery, identical to behavioral consultation in its stages, in which a consultant works collaboratively with consultees (i.e., parents and teachers) in order to improve the consultees' knowledge and skills so that they can deal more effectively with the child's current behavioral difficulties and to address similar difficulties in the future (Kratochwill, Elliott, & Busse, 1995; Sheridan, 1993b; Sheridan & Kratochwill, 1992). Specifically, parents and teachers work together as co-consultees to identify the problematic behavior to be targeted for consultation as well as to identify factors across settings (home, school and the community) that might influence the behavior of concern.

In CBC, parents and teachers engage in a series of three structured behavioral interviews with a consultant. During the first interview, the Conjoint Problem Identification Interview (CPII), the consultant and consultees discuss the behavior of the child, identify a behavior to be targeted for change, and agree upon a baseline data collection procedure. The target behavior may be different for the parent and the teacher. During the second interview, the Conjoint Problem Analysis Interview (CPAI), an individualized treatment plan is developed collaboratively with parents and teachers. During the intervention phase, which immediately follows the CPAI, the consultees implement the treatment plan developed during the CPAI and continue to collect data in

the same fashion as during the baseline phase. Treatment acceptability and treatment integrity ratings are also collected at various junctures of the intervention phase. During the final interview, the Conjoint Treatment Evaluation Interview (CTEI), the consultees and the consultant review the data and determine the effectiveness of the treatment plan and decide whether treatment should be modified, continued, or terminated.

Despite the numerous studies providing positive evidence in support of the effectiveness of conjoint behavioral consultation (Colton & Sheridan, 1998; Fine & Gardner, 1994; Finn, Sladeczek, & Illsley, 1997; Illsley & Sladeczek, 1999; Kratochwill, Elliott, Loitz, Sladeczek, & Carlson, 1999; Sheridan & Colton, 1994; Sheridan et al., 1996; Sladeczek, 1996), only one study has simultaneously investigated the four basic components necessary for successful consultation. Peterson and McConnell (1996) investigated the reciprocal relationship between assessment of treatment acceptability, integrity of treatment implementation, treatment use and child outcomes.

Treatment Integrity

In behavioral consultation, identifying an appropriate and acceptable intervention, however, is a necessary but not a sufficient requisite for targeted behavior change in children; parents and teachers should implement the recommended intervention as intended or outlined in the intervention protocol. Unfortunately research investigating treatment acceptability has outpaced that of treatment use and integrity.

Psychologists and researchers frequently evaluate intervention approaches based on outcome assessments of their effectiveness in terms of change in presenting symptoms (Hibbs & Jensen, 1996). However, assessing behavior change is only possible if the components of the behavioral intervention (e.g., effective praising, time out, and

rewarding) are actually implemented as designed and instructed. Treatment integrity refers to the degree to which an intervention is implemented as intended (Yeaton & Sechrest, 1981). Integrity is an important consideration in the evaluation and use of treatments because the lack of treatment integrity has been related to the failure of numerous interventions (Boruch & Gomez, 1977, Gresham, 1989; Noell & Witt, 1996; Robbins & Gutkin, 1994; Watson, Sterling, & McDade. 1997; Wickstrom, 1995; Yeaton & Sechrest, 1981).

Based on the results of research examining the criteria that make certain treatments acceptable to CBC consultees (Peterson & McConnell, 1996; Reimers, Wacker, Derby, & Cooper, 1995; Reimers, Wacker, & Koeppl, 1987; Witt & Elliott, 1985), researchers have tried to establish a hypothesized relationship among treatment acceptability, treatment effectiveness and treatment integrity. It has been proposed that perceptions of treatment acceptability affect a consultee's willingness to implement a proposed intervention, with lower perceived acceptability related to lower treatment integrity (Elliott, 1988; Reimers et al., 1987). A model outlined by Witt and Elliott (1985) described four factors with reciprocal influence: treatment acceptability, treatment use, treatment integrity, and intervention effectiveness. Witt and Elliott proposed that interventions that are perceived as acceptable by the consultee are not only more likely to be used, but will be used with a high degree of integrity and therefore lead to desired outcomes. Treatment integrity is essential for determining if changes in target behavior are due to treatment effects (Bahr, 1994; Galloway & Sheridan, 1994; Gresham, 1989; Hibbs & Jensen, 1996; Noell & Witt, 1996; Noell, Witt, Gilbertson, Rainier, & Freeland, 1997; Sheridan & Colton, 1994). When treatment integrity is not assessed, it is very

difficult to determine if the lack of change in targeted behavior is due to the treatment itself or a failure to implement the treatment as prescribed.

Treatment Acceptability

Social validity refers to the clinical meaningfulness of treatment outcomes (Kazdin, 1977). Treatment acceptability is a special form of social validity and was defined by Kazdin (1980a, 1980b, 1981) as "judgements by laypersons, clients, and others of whether treatment procedures are appropriate, fair, and reasonable for the problem of the client" (Kazdin, 1980a, p. 483). Assessing the acceptability of proposed treatment interventions is important for many reasons. Interventions that a consultant considers appropriate and acceptable are more likely to be perceived by consultees as acceptable than one that is not so considered. Additionally, two equally viable interventions may not be perceived as equally acceptable to a consultee (Gutkin, 1980; Kazdin, 1980a).

Consequently, determining the acceptability of several effective interventions could aid in identifying which intervention is most acceptable for a particular consultee. Furthermore, assessing the acceptability of interventions may help to identify the variables (e.g., time to implement and difficulty of intervention) that may influence a consultee's acceptance and implementation of a particular intervention (Duggan, 2000; Elliott, 1988; Elliott, Turco, & Gresham, 1987; Elliott, Witt et al., 1984; Frentz & Kelly, 1986; Reimers, Wacker, Cooper, & De Raad, 1992; Wickstrom, 1995; Witt, Elliott, & Martens, 1984; Witt, Martens, & Elliott, 1984; Witt, Moe, Gutkin, & Andrews, 1984). Furthermore, several aspects of behavioral interventions have been found to influence the assessment of treatment acceptability: (a) problem severity and type of problem , (b) time

requirements, type of treatment, and reported effectiveness, (c) parent and teacher race, income, experience, and knowledge of behavioral principles, and (d) consultant use of psychological jargon and the amount of consultant involvement (Clark & Elliott, 1988; Elliott et al., 1984; Elliott et al., 1987; Frentz & Kelly, 1986; Kazdin, 1980a, b, 1982; Witt, Elliott, & Martens, 1984; Witt, Martens, & Elliott, 1984; Witt, Moe et al., 1984)

<u>Purpose of the Present Study</u>

The purpose of the present study is to evaluate the treatment integrity of behavioral interventions outlined in a self-help manual during conjoint behavioral consultation as a means of decreasing externalizing problem behaviors (e.g., aggression, non-compliance, and inattention) of children with behavior problems. Additionally, this study investigates the hypothesized relationship between treatment integrity, treatment acceptability and child outcomes. Specifically, this study in interested in the relationship between treatment integrity and child outcomes, treatment integrity and treatment acceptability, and treatment integrity and the treatment acceptability factors of time to effectiveness and intervention program difficulty.

CHAPTER 2

Literature Review

The review of the literature provides the background information out of which the rationale and predictions of this study have come forth. The first part of this chapter provides an overview of the literature on the effectiveness of conjoint behavioral consultation in the treatment of children with behavior problems. The second part of this chapter addresses the individual importance of treatment integrity and treatment acceptability when using behavioral consultation. The third part of this chapter explores the hypothetical relationship between treatment integrity, treatment acceptability, and treatment effectiveness in behavioral consultation. The main goal of this third section is to review the literature that links treatment acceptability and treatment integrity with a particular emphasis on the factors of treatment acceptability that influence treatment integrity.

<u>Effective Conjoint Behavioral Consultation</u>

Over the past decade, the consultation literature has provided the field of behavioral sciences with credible evidence of the positive relationship between parent/school partnerships and treatment of children with behavioral difficulties (Comer & Haynes, 1991; Christensen, 1995; Cole, 1990; Gresham & Noell, 1993; Illsley & Sladeczek, 1999; Kratochwill, Elliott, & Busse, 1995; Kratochwill et al., 1999; Sheridan, 1997; Sheridan & Colton, 1994; Sheridan, Colton, Eagle, Cowan, & Richards, 1999; Sheridan, Kratochwill, & Bergan, 1996; Sheridan, Welch & Orme, 1996). CBC is defined as an indirect approach to service delivery that involves collaborative problem solving by a consultant and consultees (e.g., parents and teachers). The conjoint approach to

consultation is an expansion of Bergan and Kratochwill's (1990) model of behavioral

consultation (Sheridan, Kratochwill, & Bergan, 1996). In contrast to parent or teacher-

only consultation, the consultant works with parents as well as teachers in an attempt to

resolve a child's behavioral, academic, or social problems. The consultant works with the

parents and teachers simultaneously to teach them skills that can be used to solve the

presenting problem and resolve similar problems in the future (Sheridan & Kratochwill,

1992; Sheridan, 1993a, b). The joint involvement of home and school can be used to

collect comprehensive data on behaviors occurring across various time frames and

settings which in turn may result in increased generalization and maintenance of

treatment effects (Sheridan, 1997; Sheridan & Kratochwill, 1992).

There have been a number of case studies that have illustrated the effectiveness of

the CBC approach in addressing behavior problems in young children such as tantrums,

aggression, and bedtime fears (e.g., Robertson, 1996; Sheridan & Colton, 1994; Sheridan,

Kratochwill, & Bergan, 1996; Sladeczek, 1996). In addition, several small-n and large-

scale studies employing quasi-experimental and experimental research designs have

documented the effectiveness of CBC (Kratochwill & Bergan, 1990; Sheridan et al.,

1999).

Case Studies

Case studies have illustrated that CBC is an effective method of delivering

treatment to children with externalizing behavior problems. Sladeczek (1996)

demonstrated the utility of CBC with a 3-year, 11-month-old boy. "Ken" was referred by

his mother for conduct problems which included temper tantrums, aggressive behavior,

and difficulties with cooperation and self-control. Ken's teacher reported that social skill

deficits were also present, such as territorial behavior with peers, screeching when children intruded upon his area and solitary play. The implemented intervention consisted of a manual-based treatment program developed for children evidencing externalizing behavior problems. The intervention was evaluated on a continual basis via: (a) teacher and parent observations of Ken's aggressive and territorial behaviors; (b) independent and comparison observations of Ken's target behaviors at school, (c) weekly goal attainment ratings by Ken's mother and teacher, and (d) measurements of treatment integrity. Ken's mother and teacher observed significant decreases in Ken's aggressive/territorial behaviors from baseline to treatment. Additionally, an independent observer reported a minimal number of aggressive/territorial behaviors at school. Finally, posttreatment measures indicated improvements in Ken's social skills and a reduction in problem behaviors.

Treatment integrity was measured by asking Ken's mother and teacher how many skills they were able to complete during the different phases of the intervention. Completion of skills varied between 60% and 80% for Ken's mother who reported that ignoring and time-away procedures were difficult for her to implement. Ken's teacher reported being able to implement between 80% and 100% of the interventions. The high level of integrity with which interventions were implemented further support the results that CBC was effective in treating Ken's conduct problems.

Another case study demonstrating the effective use of CBC in the treatment of externalizing behavior problems is the case of "Suzanne" (Robertson, 1996). Suzanne was a 4-year-old preschool girl referred by her mother for aggressive behaviors (e.g., hitting, kicking and destruction of material objects). However, aggressive behaviors were

not identified as a concern at school. Nevertheless, Suzanne's teacher reported that she

had difficulty paying attention during structured activities (i.e., circle time). Prior to the

intervention, Suzanne's mother completed the Parent version of the Social Skills Rating

System (SSRS; Gresham & Elliott, 1990a) and the Child Behavior Checklist (CBCL;

Achenbach, 1991b). In addition, Suzanne's teacher also completed the Teacher version of

the SSRS and the Teacher Report Form (TRF; Achenbach, 1991c). Ratings on these

measures indicated that Suzanne had significant deficits in social skills and several

problem behaviors both at home and at school. Following the implementation phase of

CBC, which was coupled with a manual-based treatment program, posttest scores on the

SSRS revealed substantial improvements in social skills across both settings.

Furthermore, ratings on the CBCL also indicated that problem behaviors decreased at

home. Both Suzanne's mother and teacher reported that the goal of increasing Suzanne's

appropriate behavior was achieved and that the program was responsible for the change

in Suzanne's behavior. Furthermore, both Suzanne's mother and teacher reported high

levels of treatment integrity.

Small-*n* and Large Scale Studies

Other research documenting the effectiveness of conjoint behavioral consultation

is slowly emerging. Initially, researchers used small-*n* samples to demonstrate the

effectiveness of CBC. However, as CBC gained popularity as a viable treatment option,

studies using larger samples have also been conducted

Sheridan, Kratochwill, and Elliott (1990) tested the empirical effectiveness of

conjoint behavioral consultation as a means of increasing the social initiations of

withdrawn children. Four elementary school children aged 9 to 12 years were selected for

treatment based on their specific difficulty of initiating interaction with peers. In this study, two forms of consultation were being investigated such that two subjects received conjoint (parent and teacher) behavioral consultation, while two participants received teacher-only consultation. The intervention procedure was identical across the four cases. Based on direct observation, rating scales, and self-report data, conjoint behavioral consultation was found to be an effective means of increasing social initiation both at home and at school. In addition, teacher only consultation was found to be an effective method of increasing the social initiation of withdrawn children at school. Furthermore, the maintenance of treatment effects was greater when parents and teachers worked together in the consultation process. This research suggests that conjoint behavioral consultation is an effective means for increasing the social behavior of withdrawn children both at home and at school.

In another study, Galloway and Sheridan (1994) examined CBC as a means of improving academic performance in underachieving children. Six students from grades 1 through 3 and their parents and teachers participated in the study. With the goal of improving accuracy and task-completion in mathematics, each of the six students was randomly assigned to one of the two conditions. The first condition utilized a home note procedure, and the second consisted of the same home note procedure implemented within a conjoint behavioral consultation framework. Results showed that all six children exhibited improvement in accuracy and task-completion from baseline through intervention. However, consistent performance and statistically significant differences between baseline and treatment conditions were documented only by those children

receiving CBC. Furthermore, the maintenance of treatment gains was stronger for those receiving home notes with consultation than the home-note only group.

CBC has been used to deliver behavioral interventions for children with Attention Deficit Hyperactivity Disorder (ADHD). In a study by Johnson (1994), parents and teachers implemented interventions through conjoint behavioral consultation to reduce noncompliance and aggression. Four children between the ages of 7 and 13 years diagnosed with ADHD participated in this study. Teacher and parent reports of behavior as well as independent observations indicated positive changes in target behaviors.

Recently, Illsley and Sladeczek (1999) demonstrated the effectiveness of CBC combined with a self help manual based approach in decreasing children's conduct problems and increasing behavioral parenting skills and parental knowledge of behavioral principles. This study involved five children who were identified by their parents or teachers as exhibiting externalizing behavior problems either at home or at school. Direct observations revealed that CBC was an effective means of producing improvements in children's externalizing behaviors from baseline to treatment. In addition, children's social skills improved from pre-intervention to post. Furthermore, parents' behavior with their children was assessed and coded using three categories: total praise, total number of commands that the child was given no opportunity to comply to a command, and total critical statements. The frequency of each parenting behavior was measured across parent-child interactions. Collectively, parent skills improved as a result of participation in CBC. Parents used more praise, issued fewer no-opportunity commands and used less critical statements at post-intervention than at pre-intervention.

Although these case studies and small-n studies have adequately demonstrated the effectiveness of CBC, research involving larger sample sizes and control groups has also been conducted. Sladeczek, Kratochwill, and Elliott (1996) examined the effectiveness of a combined approach using CBC and a self-help manual based intervention for children experiencing social withdrawal or conduct problems. The sample consisted of 39 Head Start children. CBC consisted of the three behavioral interviews proposed by Bergan and Kratochwill (1990). The self-help manual (Kratochwill & Elliott, 1991) focused on helping parents and teachers work together to improve the social skills of the children. The self-help manual is comprised of four sections: skill selection and goal setting procedures, peer activities, positive reinforcement, and child management. Results indicated that the children's social skills increased and problem behaviors decreased. Although these gains did not reach statistical significance on standardized measures, parent and teacher reports of treatment acceptability, effectiveness and satisfaction were high. The researchers hypothesized that the lack of statistical significance may have been due to small sample size.

To date, the largest investigation of CBC as an effective mode of service delivery is a five-year study of children with internalizing and externalizing behavior problems (Kratochwill et al., 1999). A sample of 123 preschool children who attended Head Start programs were randomly assigned to either an experimental or a control condition. CBC was used to introduce an intervention program carried out over two phases. During the first two years of the project (phase 1), parent and teacher consultees implemented behavioral strategies (e.g., ignoring, timeout) through a manual-based approach. In the last three years of the study (Phase 2), parents and teachers implemented behavioral

strategies based on Webster-Stratton's (1982, 1992) videotape training program. Pretest and posttest parent and teacher ratings on standardized measures revealed no statistically significant differences when large scale, between-group analyses were carried out. However, use of small-n statistics such as effect sizes and reliability of change indices indicated stronger behavior change in the manual-based group than is the videotape or control groups. The videotape group demonstrated only slight improvement when compared to the control group.

In summary, the research evidence presented in this section demonstrates the effectiveness and utility of parent-teacher collaboration approaches to remediate children's behavior problems. Although providing effective strategies for consultees to implement during intervention is essential, there are also two other important aspects of intervention strategies that need to be evaluated: integrity of intervention implementation and intervention acceptability. When investigating whether a behavioral strategy is effective or not, it is essential that the person implementing the strategy implement it as intended. In other words, that the strategy is implemented with integrity. Furthermore, it is also important that the person implementing the strategy perceives the strategy as acceptable.

<div align="center">Treatment Integrity</div>

An important consideration in behavioral research is the extent to which the intervention recommended is being implemented as desired. There is little or no evidence to indicate that the behavioral consultation itself brings about behavior change in a client (Gresham, 1989; Gresham & Kendall, 1987; Shapiro, 1987; Watson et al., 1997; Yeaton & Sechrest, 1981). In other words, simply talking to consultees without making sure that

strategies are actually being implemented is not sufficient to ensure that changes in behavior are the result of effective consultation between consultant and consultees (Robbins & Gutkin, 1994; Wickstrom, 1995). Rather it is appropriate and effective interventions that are recommended during behavioral consultation that, when implemented correctly, bring about the desired behavior change.

Without treatment integrity data, it is impossible to say that adherence to the behavioral strategies prescribed during behavioral consultation are important for producing significant client outcomes (Watson et al., 1997). For example, Wickstrom (1995) in a study investigating the integrity of treatment implementation of teacher consultees found that all 33 teachers reported high levels of treatment integrity. However, direct observation in the classroom revealed that the teachers were implementing the intervention on less than 10% of the relevant occasions, despite the fact that an observer was present. Similarly, in a study by Kratochwill, Elliot, and Busse (1995) in the 44 cases presented, only 11 (25%) fully achieved the goals stated during consultation. In other words, although outcomes were positive, the researchers could not be absolutely certain that these outcomes were the direct result of a particular intervention plan. In summary, it is essential that when effectiveness is attributed to a behavioral plan, that researchers have confidence via high treatment integrity data, that the intervention plan was implemented as prescribed.

Although treatment integrity has been recognized as crucial for assessing the effectiveness of behavioral interventions, until the last decade, consultation literature was surprisingly devoid of empirical evaluations of treatment integrity (Gresham, 1989; Gresham & Kendall, 1987; Noell & Witt, 1996; Yeaton & Sechrest, 1981). Reports on

how often social validity and treatment integrity were reported in intervention studies published in the Journal of Developmental and Physical Disabilities from 1991 through 1995 was investigated by Ehrhardt, Cool, and Poling (1997). Remarkably, social validity data were presented in 5 of 39 (13%) treatment acceptability articles and treatment integrity data were presented in 9 of 39 (23%). Moreover, when social validity and treatment integrity data were presented, the reliability and validity of the measures were not discussed. In light of these findings, Ehrhardt and colleagues (1997) hypothesized that some failures to replicate past research demonstrating significant behavior change in children using consultation and effective interventions may be attributed to the fact that intervention plans were not implemented as intended in these replication studies.

Documentation of treatment integrity is important for research, practical and ethical purposes. Researchers who examine treatment effectiveness need to provide detailed descriptions of measures and procedures as well as evidence that the intervention strategies were implemented precisely as prescribed. Checks on treatment integrity are necessary and can be made in several relatively simple and straightforward ways (Gresham, 1989). For example, direct observations of the consultees (e.g., parent, teacher) can be conducted during treatment sessions. Likewise, checklists can be devised that outline the steps of the intervention procedures for self-monitoring purposes. Furthermore, Gresham (1989) identified several factors that appear to be related to the integrity of treatment implementation. Firstly, more complex treatments tend to result in lower integrity as they require more effort. Secondly, the time required to implement treatments is inversely related to integrity. Thirdly, interventions that require minimal extra materials and resources are more likely to result in higher integrity. Fourthly,

multiple consultees may result in decreased integrity. And finally, the consultee's perception that treatment is effective may enhance treatment integrity that in turn may affect the motivation level of the consultee.

The time required to implement interventions is an important factor when assessing treatment integrity. Time is a universally valued commodity among teachers. Anecdotally, perhaps the most frequent reason given by teachers for not implementing a consultation plan is the lack of time (Gresham, 1989; Noell & Witt, 1996). Furthermore, Noell and Witt (1996) hypothesize that an interaction exists between the complexity of an intervention, treatment integrity, and the amount of time required for implementation. Complex intervention strategies usually require more time to implement than simple ones. For example, the consultant who devises a plan consisting of "token reinforcement, school home notes, frequent monitoring of behavior, and time-out is asking teachers to invest a great deal of time which they probably do not have or are not willing to invest" (Gresham, 1989, p. 39). Most likely the result of such a plan will be poor treatment integrity. Consequently, the effectiveness in changing behavior will be compromised (Gresham, 1989).

There has been an increase in the number of research studies assessing and empirically demonstrating the impact of treatment integrity on the effectiveness of behavioral consultation. When the degree to which interventions have been implemented with integrity has been assessed, there has been almost exclusive reliance on teacher self-report (Witt, Gresham, & Noell, 1996). In other words, teachers indicate whether they have used the treatment as explicitly outlined by the consultant. In addition, direct manipulation of treatment integrity is infrequently used as a means of investigating how

integrity of intervention implementation can be maintained or even improved. However, two studies (Jones, Wickstrom, & Friman, 1997; Witt, Noel, LaFleur, & Mortenson, 1997) have attempted to manipulate treatment integrity by including consultant feedback as an added condition in their research methodology.

Teacher Self Reports

Unfortunately our knowledge of treatment efficacy has outpaced our knowledge of the integrity with which these treatments are implemented. However, in the last decade several studies investigating the effectiveness of behavioral interventions have included an assessment of treatment integrity. Wilkinson (1997) examined the efficacy of school-based behavioral consultation as a method of delivering treatment for children with externalizing problems. The treatment integrity of the behavioral plan was evaluated through observation and self report by the teacher. All teachers maintained monitoring records and subsequently showed them to the consultant during treatment evaluation. Teachers reported that rewards were provided for all occasions on which pre-established criteria were met. A joint (teacher and consultant) decision was reached regarding the level of overall treatment integrity. All teachers reported that they were able to implement the behavioral treatment plan with their students. However, the degree of implementation varied. Teachers 1 and 2 reported 100% implementation and significant improvements in their students' behavior. In contrast, Teacher 3 indicated 53% adherence to the plan and modest treatment improvements in their student' behavior. These data suggest that fidelity to behavioral treatment plans was adequate for Teachers 1 and 2 but equivocal for Teacher 3 and underscore the importance of monitoring treatment integrity. This study provides support for research in which higher integrity levels are generally associated

with larger treatment effects (Gresham, 1989; Gresham & Noell, 1993; Jones et al., 1997; Noell & Witt, 1996; Noell, Witt, Gilbertson, Ranier, & Freeland, 1997; Witt, Noell, et al, 1997).

In a recent study, Wickstrom, Jones, LaFleur, and Witt (1998) using traditional problem identification and problem analysis interviews according to Bergan's (1977) behavioral consultation model, examined the treatment integrity of behavioral interventions for 27 elementary school teachers. The primary purpose of this study was to assess the effects of behavioral consultation on teachers' use of recommended interventions (treatment integrity). The second goal of this study was to assess the relationship between outcomes (effectiveness) and treatment integrity. The mean integrity of a monitoring system based on teacher self-report was 54%. During the intervention, teachers reported implementing prescribed behavioral strategies 62% of the time. However, direct observations of teachers revealed that teachers implemented the treatment as planned only 4% of the time. Multiple indices of child outcomes indicated reductions in disruptive behavior despite low levels of observed integrity. Unfortunately, none of the treatment integrity variables were related to problem severity and treatment acceptability. Consequently, it was impossible to attribute changes in behavior to the intervention.

Consultation and Consultant Feedback

Direct manipulation of treatment integrity has been rare in school-based consultation research (Gresham, 1989). Recent research however has indicated that when simple verbal instructions fail to improve teacher implementation of an intervention,

consultant feedback can be an effective way to increase treatment integrity (Jones et al., 1997; Noell et al., 1997; Witt et al, 1997).

In a recent study by Jones, Wickstrom, and Friman (1997) the effects of observational feedback on treatment integrity in school based behavioral consultation (Bergan and Kratochwill, 1990) was assessed. Three teachers participated in this study where treatment integrity was defined as the percentage of two-minute intervals during which a positive consequence was delivered by a teacher, contingent on student on-task behavior. The consultant served as the primary observer for each case. Teacher and child behaviors were monitored across baseline, consultation, and consultation with performance feedback conditions in a multiple baseline design. Following both the PII and PAI, mean levels of treatment integrity for the three teachers ranged from 9% to 37%. Anecdotal observations indicated that in all three cases, frequent disruptive behaviors necessitating reprimands were observed. The addition of a performance package increased treatment integrity for all three teachers to levels ranging form 60% to 83%. Moreover, child behavior did not change significantly for all three cases.

The fact that all three teachers implemented interventions with low levels of treatment integrity during the consultation alone phase raises questions about the assumption that traditional behavioral consultation results in adequate levels of treatment integrity (Bergan, 1977). However, the consistent low levels of treatment integrity gives support to recent investigations (Noell & Witt, 1996; Robbins & Gutkin, 1994; Wickstrom, 1995) that hypothesized that simply asking a teacher to implement interventions may result in inadequate levels of integrity. As suggested by Watson, Sterling and McDade (1997) it better to rely on treatments that are supported by data

(effective) than to rely on the principle of the treatment model alone. It is also interesting that even with daily performance feedback, the overall mean level of treatment integrity did not exceed 83% for any of the teachers.

In a similar study, Witt, Noell, LaFleur, and Mortenson (1997) examined teacher integrity for a behavioral intervention for students with poor academic performances. The study consisted of two phases: implementation and implementation with performance feedback. Witt et al. found that in the first phase, teachers implemented interventions with integrity for several days following a behavioral training program. However, treatment integrity rapidly decreased to very low levels after one week. Although during the second phase, teachers exhibited substantial increases in treatment integrity, nevertheless integrity levels fell slightly when performance feedback was withdrawn.

Noell, Witt, Gilbertson, Rainer, and Freeland (1997) also investigated teacher integrity for an intervention targeting student academic performance. This study is a replication and extension of the Witt, Noell, Lafleur, and Mortenson (1997) study. Noell, Witt, Gilbertson, Ranier and Freeland investigated the integrity with which general education teachers implemented a reinforcement-based intervention designed to improve the academic performance of elementary school students. Three children were referred for consultation services and were identified as exhibiting academic performance deficits. Treatment integrity was assessed via permanent products produced by the intervention. The results suggested that teachers were able to maintain treatment integrity for two to four days, after which implementation began to deteriorate. Subsequent implementation of daily performance feedback by a consultant markedly improved treatment integrity.

Conjoint Behavioral Consultation Studies

The number of studies using CBC and behavioral interventions empirically investigating the integrity with which interventions are being implemented is surprisingly few, in light of the recent awareness of the importance of this construct. A computer based literature review of the last 20 years yielded only two studies in which treatment integrity was systematically investigated.

Galloway and Sheridan (1994) utilized home note and home note plus consultation based interventions to improve task completion and accuracy in mathematics in elementary school children demonstrating performance difficulties. Self-monitoring data were collected to assess the integrity of the behavioral components. Specifically daily checklists were developed for the teachers and parents. The teacher checklist consisted of three items, which included checking for the presence of the note, scoring and recording daily math scores, and ensuring that the note was taken home. The parent checklist consisted of three items at the bottom of the home note for ease and efficiency: (a) check the home note, (b) praise child for good performance, and (c) provide agreed-upon reward when earned. Anecdotal interviews were conducted to informally assess parents' implementation of the program. An independent interviewer contacted the parent by telephone three times during the course of the treatment to ask parents (a) about their child's performance in math that day, (b) whether home rewards were provided, (c) what types of rewards were used, (d) whether any aversive consequences were employed if children failed to meet the performance criteria, and (e) whether the parent had had contact with the teacher during the week. Results indicated that both home note and home note plus consultation increased math completion and accuracy in identified children.

Furthermore, treatment integrity and treatment gains were stronger in the home note plus

consultation case studies.

In a study by Colton and Sheridan (1998), treatment integrity of parent and

teacher implementation of intervention procedures was assessed via completion of items

on the home-school note. Parents' adherence to procedures was assessed by their

response to eight items on the note and teachers' adherence was assessed via five items,

using similar self-report methods. The researchers attempted to demonstrate the

effectiveness of CBC using social skills interventions with three young boys with ADHD.

Positive changes were noted from pretreatment to posttreatment in children's social

skills. In all instances, all relevant home note items were completed by parents and

teachers suggesting 100% adherence to the social skills program. All participants

returned home school notes 100% of the time.

In summary, the relatively few studies systematically investigating treatment

integrity, the mixed results of these studies, and factors influencing treatment integrity

have several implications. The relationship between effectiveness, time constraints,

acceptability of treatment interventions, limitations of self report data, all influence the

degree to which interventions are adequately implemented. These studies make salient

the difficult nature of assessing the inter-relatedness of all of the components relating to

treatment integrity.

Treatment Acceptability

Assessing the acceptability of treatment interventions has been one way in which

researchers have attempted to identify factors that may potentially influence compliance

with behavioral strategies (Cross-Calvert & Johnson, 1990; Reimers, Wacker, & Koeppl,

1987; Witt & Elliott, 1985). Although initially interested in establishing the effectiveness of new treatment procedures, researchers have turned their attention toward a formal acknowledgement of the importance of the social validity for treatment approaches (Reimers et al., 1987). It is no longer sufficient for behavioral procedures to only be effective they must also be acceptable to the individuals who will implement them (Kazdin, 1977; Wolf, 1978).

The term social validity, first conceptualized by Wolf in 1978, has been used to collectively refer to judgments of the social significance of behaviors targeted for change, acceptability of treatment procedures, and the social importance of resulting behavioral changes. Treatment acceptability is one aspect of social validity and is defined as "judgements by laypersons, clients, and others of whether treatment procedures are appropriate, fair and reasonable for the problem or client" (Kazdin, 1980a, p. 483). Several important reasons exist for assessing the acceptability of proposed interventions. First, treatments deemed acceptable by a clinician might be more acceptable to a consumer than one that is not (Elliott, 1988). Second, assessing the acceptability of several effective interventions may help identify which intervention is most acceptable for the consultee (Reimers Wacker, & Koeppl, 1987). Third, assessing the acceptability of interventions may also help identify variables (e.g., time, side effects, difficulty) that could affect a consultee's use of a particular intervention (Reimers et al., 1992). Fourth, interventions that are reported to be acceptable may be more likely to be implemented than those that are reported to be unacceptable (Elliott, 1988). Finally, providing the most acceptable intervention strategies may result in greater behavior change since the

consumer's rating of the appropriateness of the recommended intervention may affect compliance with intervention procedures (Kazdin, 1980a).

Investigation of the acceptability of behavioral consultation interventions represents a growing area of inquiry for researchers. Several aspects of behavioral interventions have been found to influence the assessment of treatment acceptability: (a) problem severity and type of problem (Elliott et al., 1984; Elliott et al., 1987; Frentz & Kelly, 1986; Witt, Elliott, & Martens, 1984; Witt, Martens, & Elliott, 1984; Witt, Moe et al., 1984), (b) time requirements, type of treatment, and reported effectiveness (Elliott et al., 1984; Kazdin, 1980a, b, 1982; Witt, Elliott, & Martens, 1984; Witt & Martens, 1983; Witt & Robbins, 1985), (c) parent and teacher race, income, experience, and knowledge of behavioral principles (Clark & Elliott, 1988; Witt, Moe et al., 1984; Witt & Robins, 1985), and (d) consultant use of psychological jargon and the amount of consultant involvement (Kazdin & Cole, 1981; Witt, Moe et al., 1984).

Severity of the Problem and Difficulty of the Intervention Plan

Several researchers have suggested that the severity of a behavior problem can influence the acceptability ratings of an intervention plan (Elliott et al., 1984; Elliott et al., 1987; Frentz & Kelly, 1986; Kazdin, 1980a; Martens, Witt, Elliott, & Darveaux, 1985; Von Brock & Elliott, 1987; Witt, Martens, & Elliott, 1984; Witt, Moe et al., 1984). Generally, the results of these studies have on the whole demonstrated that the more severe a child's behavior problem, the more acceptable any given treatment will be.

In a two-part experiment, Elliott, Witt, Galvin, and Peterson (1984) examined teacher acceptability of behavioral interventions. In the first part of the study, teachers read one of three case descriptions of an elementary school student whose misbehaviors

were either low (daydreaming), moderate (obscene language), or severe (destruction of other's property). Teachers were also asked to rate the acceptability of one of three positive intervention methods whose complexity was either low (praise), moderate (home-based reinforcement), or high (token economy). The results suggested that the least complex positive intervention was the most acceptable treatment for the least severe problem behavior. Furthermore, the most complex intervention was rated as the most acceptable procedure for the most severe behavior problem. In the second part of the study, with behavior variables remaining the same, teachers were asked to rate the acceptability of one of three reductive intervention methods that were either low (ignoring), moderate (response-cost lottery), or high (seclusion time-out) in complexity. Similarly, results suggested that the least complex reductive intervention was the most acceptable treatment for the least severe behavior problem.

Frentz and Kelly (1986) provide further support for the conclusion that treatment acceptability is effected by the difficulty of the intervention procedure. Eighty-two mothers were asked to rate five reductive treatment procedures (i.e., differential attention, response-cost, time-out, spanking alone, and time-out with spanking) applied to one of two case descriptions of children with behavioral difficulties. Results indicated that response cost was rated significantly more acceptable than the other four methods. Moreover, time-out was found to be significantly more acceptable to mothers than differential attention, spanking with time-out, and spanking alone. Interestingly, mothers also rated all treatments as being more acceptable when applied to severe behavior problems.

Type of Treatment

In general, researchers have found that acceptability ratings for teachers, parents, and children have been consistently higher for positive interventions than for reductive interventions (Elliott et al., 1984; Kazdin, 1980a, b; Kazdin, French & Sherick, 1981; Witt, Elliott, & Martens, 1984; Witt & Robins, 1985). Witt, Elliott, and Martens (1984) assessed 180 student teachers' acceptance of three positive (i.e., praise, home-based reinforcement, token economy) and three negative (i.e., ignoring, response cost, seclusion time-out) interventions. The problem behaviors varied in severity (mild to severe) and the interventions varied by type (positive vs. reductive) and teacher involvement time (low to high). Results suggest that positive interventions were evaluated consistently more acceptable than reductive interventions for the same behavioral problems.

Kazdin and his colleagues (Kazdin, 1980a, b; Kazdin et al., 1981) have also carried out several studies exploring the influence of intervention type on treatment acceptability ratings. These studies used analogue methodology where evaluations by undergraduate students were used to rate one of several interventions in case descriptions. Overall, the results of these studies indicated that positive interventions were rated as more acceptable than reductive strategies.

Similarly, Miltenberger, Parrish, Rickert, and Kohr (1989) investigated the acceptability of alternative behavioral treatments of 100 parents and grandparents at an outpatient clinic for children with behavioral disorders. Raters assessed the acceptability of behavioral interventions (differential reinforcement of other behaviors, response cost, time-out, and spanking) and medication (for hyperactivity only) that were applied to one of four randomly selected behavior problems (non-compliance, aggression, tantrums, and

hyperactivity). Results indicated that differential reinforcement, response cost, and time-out were rated as significantly more acceptable than spanking for all four behavior problems. For hyperactivity, spanking and medication were rated as significantly less acceptable than the other interventions. Interestingly, these findings differ from the results of previous studies. Previous research had generally indicated that aversive procedures were less acceptable than positive procedures, while this study showed that parents' ratings of positive and aversive behavior modification procedures were not significantly different. Furthermore, in this study, treatments were not differentially rated across behavior problems.

Time Required to Implement a Treatment

Researchers have documented that the amount of time required to implement an intervention is an important factor influencing the acceptability of treatment procedures (Duggan, 2000; Elliott, Witt et al., 1984; Kazdin, 1982; Reimers et al., 1992; Witt, Elliott & Martens, 1984; Witt, Martens & Elliott, 1984; Wickstrom, 1995). Time is a valuable commodity and this is particularly true for teachers who are frequently responsible for more than 25 children in the classroom (Elliott, 1988). It is therefore not surprising that studies have shown that when evaluating a behavioral intervention teachers are concerned about time (Elliott, 1988; Kazdin, 1982; Witt, Elliott & Martens, 1984; Witt, Martens & Elliott, 1984).

Witt, Elliott, and Martens (1984) examined the effects of intervention types, teacher time involvement, and behavior problem severity on ratings of acceptability. One hundred and eighty teachers were presented with written case studies describing a child with a behavior problem and an intervention that was applied to that behavior problem.

Results suggested that teachers' ratings of acceptability of interventions varied, as a function of the time needed to implement the procedures. In other words, as time involvement increased, acceptability decreased. Furthermore, it was found that time involvement interacted significantly with problem severity and treatment type. Thus, when a teacher was confronted with a severe behavior problem they seem to adjust their expectations upward about the length of treatment and consequently the time involved to change the problem behavior.

In a similar study, Witt, Elliott, and Martens (1984) examined the acceptability of several alternative interventions by asking 180 pre-service and student teachers to read a written case description of a child evidencing behavior problems and then rate the interventions on a six-point Likert-type scale (IRP-20). The behavior problems ranged in severity (mild to severe) and the interventions varied by type (positive vs. reductive) and time involvement (low to high). Results indicated that teachers rated interventions as more acceptable when they required less time to implement and when the treatment approach was positive.

Treatment Effectiveness, Acceptability, and Integrity

Although investigating the individual contributions of treatment integrity and treatment acceptability to treatment effectiveness is important and has positively contributed to the behavioral consultation literature, researchers have recently tried to establish a hypothetical relationship among treatment effectiveness, treatment integrity, and treatment acceptability (Cross-Calvert & Johnson, 1990; Elliott, 1986, 1988; Reimers et al., 1987; Reimers et al., 1995). The general argument put forth by models describing this hypothetical relationship is that perceptions of acceptability affect a consultee's

willingness to carry out a proposed intervention as outlined by a consultant. The models

suggest that the lower the acceptability of an intervention strategy, the lower the

compliance with the intervention protocol (i.e. lower integrity) will be (Elliott, 1988;

Reimers et al., 1987).

A model advocated by Witt and Elliott (1985) outlined four factors with

reciprocal influences: treatment acceptability, treatment use, treatment integrity, and

intervention effectiveness. Witt and Elliott (1985) stated that interventions that are

perceived as acceptable by the consultee are not only more likely to be used, but will be

used with a high degree of integrity and therefore lead to desired outcomes. From an

analytic standpoint, it makes little sense to discuss the effectiveness of consultation

outcomes without addressing treatment integrity. Treatment integrity is essential for

determining if changes in target behavior are due to treatment effects (Gresham, 1989;

Robbins & Gutkin, 1994). When treatment integrity is not addressed, it is difficult to

determine if lack of change in target behaviors is due to the treatment itself or failure to

implement the treatment appropriately.

Stimulated by the Witt and Elliott (1985) model Reimers, Wacker, and Koeppl

(1987) developed a more complex model of treatment acceptability, integrity and

effectiveness. These authors assumed that an intervention must be well understood before

acceptability, integrity, and effectiveness can be assessed and therefore added a treatment

knowledge component into their model. Similar to the Witt and Elliott (1985) model,

Reimers and colleagues (1995) assumed that when an intervention is perceived to be low

in acceptability, poor compliance is likely to ensue which will decrease the likelihood

that the intervention will be effective in behavioral consultation. The primary concern

after an intervention has been used is its continued use (maintenance). However, the effectiveness of the intervention used can still range from low to high. When the target behavior is properly identified, and the recommended intervention was properly implemented, some modifications of the intervention plan may be warranted. According to the Reimers et al. model, this is where treatment knowledge can impact acceptability and effectiveness of intervention plans. Intimate knowledge of the various components (theoretical and practical) that make up an intervention plan allows for consultees and consultants to adjust interventions to suit individual children without compromising the overall integrity of the particular consultation strategies.

Although many studies reviewed in this chapter have looked at treatment effectiveness, integrity and acceptability individually, or in simple combinations (e.g., effectiveness and integrity, integrity and acceptability) only one study looking at multiple treatment components simultaneously has been published. Peterson and McConnell (1996) recently investigated the relationship between treatment integrity with social skills interventions and teacher ratings of acceptability, consultative support for implementation, and individual child outcomes. Sixteen teachers were divided into 2 groups (training in the implementation of behavioral strategies alone and training with consultative support) and each teacher selected 1 of 4 intervention packages. Intervention acceptability ratings were completed at the pre-intervention phase only. Direct observations were used to assess the integrity with which intervention components were implemented during intervention and following intervention with the social interaction behaviors of participating children.

The results of this study suggest a positive correlation between intervention integrity and child outcomes. In other words, the higher the integrity of implementing interventions as prescribed, the more improvement was seen in children's target behaviors. However, teacher ratings of intervention acceptability were found to be weak predictors of treatment integrity. Furthermore, the degree to which consultees deemed the intervention to be acceptable, was not indicative of whether the consultees would implement the intervention as suggested. Furthermore, consultative support did not systematically affect intervention integrity.

In light of the generally positive research results seen with behavioral consultation investigating single and dual factors influencing treatment effectiveness, integrity and acceptability, the implications of this study regarding the models proposed by Witt and Elliott (1985) and Reimers, Wacker, and Koeppl (1987) raise several questions. The failure to fully support the hypothesized relationship between treatment effectiveness, treatment integrity, and treatment acceptability may have resulted from the limitations of self report data and small sample sizes, failure to look at the multiple contexts in which the targeted behaviors occurred, and variables that have yet to be identified as potential factors influencing treatment integrity and treatment acceptability. Since empirical investigations of this hypothetical relationship represents a relatively new area of research, more research and replication studies are needed to gain a complete understanding of the actual relationship between the factors outlined by Witt and Elliott (1985) and Reimers, Wacker, and Koeppl (1987).

Purpose and Hypotheses of the Present Study

The purpose of the present study was to evaluate the treatment integrity of interventions during conjoint behavioral consultation as a means of decreasing externalizing problem behaviors (e.g., aggression, non-compliance, and inattention) of children with behavior problems. Additionally, this study investigated whether treatment integrity was related to treatment outcome and treatment acceptability.

Prediction #1: *It is predicted that treatment integrity for parents and teachers will be positively related to intervention outcomes.*

Previous investigations have demonstrated the impact of treatment integrity on the effectiveness of behavioral consultation (Gresham, & Noell, 1993; Jones et al., 1997; Noell & Witt, 1996; Noell et al., 1997; Witt et al., 1997). Based on this research, it is expected that greater behavioral improvements in targeted behavior will be associated with higher treatment integrity.

Prediction #2: *It is also predicted that parent and teacher perceptions of treatment acceptability will be positively related to treatment integrity.*

Models of treatment acceptability (Reimers, Wacker, & Koeppl, 1987; Witt & Elliott, 1985) hypothesize a reciprocal link between treatment integrity, effectiveness, and acceptability. However, due to the almost exclusive reliance on parent or teacher reports of integrity and acceptability separately, there have been few empirical studies linking integrity and acceptability variables. However, preliminary evidence relating treatment integrity and acceptability has suggested that both variables are positively related (Gresham, 1989; Noell & Witt, 1996; Reimers, Wacker, & Koeppl, 1987;

Reimers et al., 1995). Based on these models and studies, it is expected that the greater the perceived acceptability of the intervention, the higher the treatment integrity.

Predictions # 3 and #4: *It is hypothesized that the treatment acceptability criterion of time to effectiveness will be inversely related to treatment integrity. It is also hypothesized that the level of difficulty of the intervention will be inversely correlated to treatment integrity.* Previous research (Gresham, 1989; Noell & Witt, 1996; Witt, Elliott, & Martens, 1984; Witt, Martens, & Elliott, 1984) has postulated that specific relationships exist between two factors of treatment acceptability and treatment integrity. Specifically, the amount of time required for an intervention to reach effectiveness and the level of difficulty of the intervention are inversely related to integrity. Hence, the longer the time required to implement an intervention effectively, the lower the treatment integrity. Furthermore, as the perceived difficulty of the intervention (e.g., praise, time out) increases the lower the treatment integrity will be.

CHAPTER 3

Method

The data examined in the present study are part of a larger study, the Parent-

Teacher Intervention Project (P-TIP), being conducted by Dr. Ingrid Sladeczek and her

graduate students at the Behavior Consultation Laboratory at McGill University. The P-

TIP is investigating the effectiveness conjoint behavioral consultation (CBC) and group

videotape therapy (GVT) as service delivery models for children with behavior

difficulties. The unique contribution of the present study is to investigate parent and

teacher treatment integrity and how treatment integrity is related to parents' and teachers'

acceptability of CBC as an effective intervention for children displaying behavior

problems.

<u>Participants</u>

<u>Children</u>

Participants in this study included 38 children recruited from daycares and schools in

Montreal and surrounding areas. Children were identified by their teachers or parents as

exhibiting internalizing or externalizing behavior at school or at home. Children were

eligible for participation in the P-TIP if they met one of the following criteria: (a) a score

of one standard deviation or more (15 points) below the mean (i.e., a score of less than

85) in the social skills domain of the parent or teacher version of the Social Skills Rating

System (SSRS; Gresham & Elliott, 1990 b), (b) a score of one standard deviation (15

points) above the mean (i.e., a score of more than 115) in the problem behavior domain

of the parent or teacher version of the SSRS (Gresham & Elliott, 1990b), (c) a score

within the "clinical range" on the externalizing band of the Child Behavior Checklist

(CBCL; Achenbach, 1991b) or (d) a score within the "clinical range" of the externalizing band of the Teacher Report Form-Revised (TRF; Achenbach, 1991c). Of the 38 children and their families who were eligible for the study, 19 children participated in the behavioral consultation condition. Furthermore, in two of the cases both the parents and the teachers withdrew from the program and services were discontinued and in another two cases parents declined to participate and treatment services were conducted with teachers only. In another two cases treatment integrity or treatment acceptability data were incomplete. Additionally, one case used the initial treatment integrity measure and could not be included in the analysis. Thus, the final sample of participants in this study consisted of 12 children, their parents, and their teachers. A summary of the characteristics of the children participating in the study is presented in Table 1.

The behaviors targeted for change included: non-compliance, social skills deficits, defiance, aggression, socially inappropriate behavior, and inattention. Non-compliance was targeted when children do not comply with parent or teacher requests. Deficits in social skills were targeted when children are unaware of how to initiate or maintain interactions with others (e.g., shyness, talking loudly, bullying, sulking, pushing, and reprimanding peers). Defiance was targeted when children do not listen to others, challenge rules, or are disobedient. Aggressive behaviors targeted for change include: hitting, screaming, throwing objects, pulling hair, scratching, and biting. Socially inappropriate behaviors consisted of disrupting other, loud talking, and immaturity. Inattention was targeted when children appeared to not pay attention to external cues, daydreamed, or became distracted easily.

Table 1

Child Participants, Demographic Characteristics, and Behaviors Targeted for Treatment

Participants	Gender	Age	Target Behavior-Home	Target Behavior - School
Child 1	Male	3-9	Non-compliance	Non-compliance
Child 2	Male	5-9	Social Skills	Social Skills
Child 3	Male	3-8	Non-compliance	Non-compliance
Child 4	Male	3-2	Non-compliance	Non-compliance
Child 5	Male	5-9	Defiance	Defiance
Child 6	Male	3-1	Aggression	Aggression
Child 7	Male	6-2	Aggression	Aggression
Child 8	Male	5-8	Aggression	Aggression
Child 9	Male	3-9	Non-compliance	Non-compliance
Child 10	Male	6-1	Socially inappropriate	Socially inappropriate
Child 11	Male	10-8	Inattention	Inattention
Child 12	Male	8-4	Aggression	Attention-seeking

Note. Age is presented in years and months

Consultees - Parents and Teachers

The parents and teachers of the child participants were recruited from schools and daycares in Montreal and the surrounding areas through information brochures and letters distributed to the schools outlining the project. Parents interested in participating in the project were asked to complete the SSRS- Parent Form (Gresham & Elliott, 1990b) and the CBCL/4-18 (Achenbach, 1991b). Interested teachers were asked to complete the SSRS- Teacher Form (Gresham & Elliott, 1990b) and the TRF (Achenbach, 1991c)

Consultants

The behavioral consultants in the present study were six graduate students in the Faculty of Education at McGill University. The consultants' training included: (a) reviewing relevant consultation and parent training literatures; (b) attendance of in-depth workshops which reviewed theory and processes of behavioral intervention; (c) conducting mock Conjoint Problem Identification Interviews (CPIIs) until a minimum of 85% proficiency was reached using the Consultation Objective Checklist (COC; Kratochwill & Bergan, 1990); and (d) actual case experience conducting conjoint behavioral consultation with parents and teachers. The mock interviews were audiotaped and reviewed by Dr. Sladeczek (Director of the McGill Behavioral Consultation Laboratory) in order to ensure the integrity of the consultation procedure.

Consultants were responsible for the following: (a) conducting three behavioral interviews (CPII, Conjoint Problem Analysis Interview - CPAI, and Conjoint Treatment Evaluation Interview - CTEI); (b) developing intervention plans; and (c) overseeing the implementation of the intervention. The project director provided supervision and direction throughout each phase of the consultation process. Each behavioral interview was audiotaped and reviewed by Dr. Sladeczek using the COC. Moreover, regular individual and group meetings were held in order to discuss relevant consultation issues and to review the progress made in each case.

Measures

This study used a variety of assessment instruments and procedures. Multiple forms of assessment (e.g., behavior rating scales, self-report questionnaires, and

interviews) were carried out across multiple raters (e.g., parents and teachers) at different

phases of the study (e.g., screening, pre-intervention, intervention, and post intervention).

Direct Observation

After the initial referral was made and parental consent was obtained, a behavioral

consultant contacted the teacher and parent to arrange the initial interview (CPII). During

the CPII interview, the consultant assisted the parent and teacher consultees in identifying

and defining the problem of concern in behavioral terms and in developing a procedure to

measure the frequency of the client's target behavior during a baseline data collection

phase. Furthermore, consultees were asked to complete the BIRS, along with other

instruments used in the larger investigation.

Following the first interview, baseline information was obtained as parents and

teacher collected the frequency data by directly observing the child participant and by

noting the observed behavior immediately as it was occurring. During the second

interview (CPAI), the consultant and consultees worked together to develop a plan to

remediate the targeted behavior. Another goal of this second interview was to validate the

problem based on the data that the parents and teachers collected during baseline.

Possible environmental conditions that influenced (precipitated, co-occurred with or

followed) the targeted behavior were discussed as a means of obtaining an understanding

of what was occurring around the time that the target behavior was observed. The

frequency of the target behavior continued to be documented during the period of

intervention for each child.

Child Behavior Checklist

Parents completed the Child Behavior Checklist (CBCL/4-18; Achenbach, 1991b) at pre-intervention and post-intervention. The CBCL/4-18 is a rating scale consisting of two scales (Competence and Problem Behavior) designed to assess the competencies as well as the behavioral/emotional problems of children between the ages of 4 and 18. Competence Scale items consist of a series of questions relating to a child's participation in leisure activities (e.g., "Please list your child's favorite hobbies, activities, and games"), peer interactions (e.g., "How many close friends does your child have?"), and academic performance (e.g., "Has your child had any academic or other problems in school?").

The Problem Behavior Scale of the CBCL/4-18 consists of 113 items divided into eight syndrome scales: Withdrawn, Somatic Complaints, Anxious/Depressed, Social Problems, Thought Problems, Attention Problems, Delinquent, and Aggressive Behavior. For behavior occurring over the past six months, parent rate each item on a 3-point Likert scale (0 = Not True, 1 = Somewhat True or Sometimes True, 2 = Very True or Often True). Sample items of the CBCL/4-18 include: "Physically attacks people", "Can't concentrate, can't pay attention for long", "Shy or timid", and "Too fearful or anxious." Using factor analysis, the eight syndrome scales have been grouped together to form two broad band categories: Externalizing (e.g., Aggressive and Delinquent) and Internalizing (i.e., Withdrawn, Somatic Complaints, and Anxious/Depressed).

The psychometric properties yield good reliability and validity (Achenbach, 1991a). The CBCL/4-18 was standardized on a national sample that included over 2,300 referred and non-referred children and adolescents. Test-retest reliability after one week

was .89. Construct validity was demonstrated by comparing the CBCL/4-18 to other

behavior rating scales. The correlation of the CBCL/4-18 total problem score and the

Parent Questionnaire (Conners, 1990) total problem score equaled .82 (Achenbach,

1991). Similarly, correlations between the CBCL/4-18 and the Revised Behavior

Checklist (Quay & Peterson, 1983) was .81. With respect to content validity, the

CBCL/4-18 has been used to successfully discriminate clinical from non-clinical child

samples.

The normative sample yielded percentile ranks and T-scores based on a mean of

50 and a standard deviation of 10 (Achenbach, 1991b). Total Problem scores in addition

to Externalizing and Internalizing T-scores between 60 and 63 are in the Borderline

range; T-scores above 63 are considered in the Clinical range. Scores on the eight

syndrome scores between 67-70 are in the Borderline range; scores above 70 are in the

clinical range.

Teacher Report Form

The teachers in this study were asked to complete the Teacher Report Form (TRF;

Achenbach, 1991c) at both pre-intervention and post-intervention. The TRF is an

adaptation of the CBCL/4-18 that is designed specifically for teachers and is a

comprehensive questionnaire that requires teachers to rate a students' adaptive

functioning and problems within a school setting. As with the CBCL/4-18, behavioral

items are grouped into the same eight syndrome scales: (Withdrawn, Somatic

Complaints, Anxious/Depressed, Social Problems, Thought Problems, Attention

Problems, Delinquent, and Aggressive Behavior). For behavior occurring over the past

six months, teachers rate each item on a 3-point Likert scale (0 = Not True,

1 = Somewhat True or Sometimes True, 2 = Very True or Often True). Sample items include: "Not liked by other pupils," "Disrupts class discipline," and "Sleeps in class". Broad band categories, cut-off scores and interpretation of the TRF are identical to those of the CBCL.

Psychometric properties of the TRF indicate good reliability and validity (Achenbach, 1991c). The TRF was normed on a national sample that included over 1,300 children between the ages of 5 and 18 years. It yielded intraclass correlations of .60 for interteacher agreement on the Problem Scales. Test-retest reliability at 15 days and 2 months was .95 and .78 respectively (Achenbach, 1991c). With respect to content validity, the TRF has been successfully used to discriminate clinical from non-clinical samples. Construct validity is also adequate with correlations between the TRF Problem Scales and a similar rating scale, the Conners' Revised Teacher Rating Scale (Conners, 1990) equaling .83 (Achenbach, 1991c). Furthermore, the TRF has been found to be concordant with parents' ratings on the CBCL and the ratings of other professionals (Achenbach, 1991a).

Social Skills Rating System

Parents and teachers completed the Social Skills Rating System (SSRS; Gresham & Elliott, 1990) at pre-intervention and post-intervention in order to assess children's social competence and adaptive functioning both in the home and at school. Three levels of the Parent (SSRS-P) and teacher (SSRS-T) forms are available: preschool (ages 3-5), elementary (grades K to 6), and secondary (grades 7-12).

The SSRS-P consists of 49 items at the preschool level and 55 items at the elementary level, which comprise two main scales: Social Skills and Problem Behaviors.

The Social Skills scale is comprised of four subscales: Cooperation, Assertion, Self-Control, and Responsibility. Parents are asked to rate their child's behavior across each of these domains on a 3-point Likert scale with respect to frequency (1 = Never, 2 Sometimes, 3 = Very Often) and perceived importance (1 = Not Important, 2 = Important, 3 = Critical). Sample items on the Social Skills scale include: "Waits turn in games or other activities" and "Attempts household tasks before asking for help." The Problem Behaviors Scale consists of two subscales: Internalizing and Externalizing problems. At the preschool level, an additional Hyperactivity subscale is included.

Ratings on the SSRS are reported in percentile ranks and standard scores with a mean of 100 and a standard deviation of 15. On both scales, scores related to the frequencies of behavior are further categorized relative to the normed sample; Fewer, Average, and More. For example, a child whose score on the Social Skills scale fall one standard deviation below that of the normed sample is categorized as having social skills deficits greater than that of the "average" child. Similarly, ratings on the Academic Competence scale can be described as Below Average, Average, and Above Average by comparing a child's score to that of the normed group.

The SSRS was standardized on over 4,000 children and adolescents using self-ratings as well as ratings by 1,027 parents and 259 teachers. Due to its strong psychometric properties, the SSRS is considered one of the most comprehensive social skills assessment instruments (DeMaray et al., 1995). Gresham and Elliott (1990) reported internal consistency reliability coefficients between .73 (Problem Behaviors) and .95 (Academic Competence). Test-retest correlations at four weeks ranged between .65 and .93. Additionally, test-retest correlations for teachers were .85 for Social Skills, .84

for Problem Behaviors and .93 for Academic Competence. Parent correlations were .87

for Social Skills and .65 for Problem Behaviors. Test-retest reliability for student self-

ratings revealed a coefficient of .68. Additionally, the correlations between the SSRS and

measures such as the CBCL (Achenbach & Edelbrock, 1989) range between .59 and .77,

indicating adequate criterion-related validity (Gresham & Elliott, 1990).

The Behavior Intervention Rating Scale

The Behavior Intervention Rating Scale (BIRS; Von Brock & Elliott, 1987) was

completed by teachers and parents at pre-intervention and post-intervention to assess

treatment acceptability, effectiveness, and time to effectiveness of the intervention

procedures. The BIRS consists of a revision and extension of the IRP-15 (Martens, Witt,

Elliott, & Darveaux, 1985), a treatment acceptability measure originally developed for

teachers. The BIRS consists of 24 statements which are rated on a 6-point Likert scale

(1=strongly disagree to 6=strongly disagree) and all of the items are summed to yield an

overall treatment acceptability score. The range of the overall treatment acceptability

score is between 24 and 144 where higher scores indicate greater treatment acceptability.

The BIRS is comprised of three factors: Acceptability (15 items), Effectiveness

(7 items) and Time to Effectiveness (2 items) (Elliott & Van Brock Treuting, 1991). The

Acceptability factor consists of the items of the Intervention Rating Profile (IRP-15;

Martens et al., 1985) and addresses the extent to which treatment procedures are

considered fair and appropriate. The effectiveness factor pertains to expected level of

change in behavior as well as the maintenance and generalization of change. The time to

effectiveness factor relates to the rate at which the intervention results in change. Some

sample items include: (a) "This would be an acceptable intervention for the child's

problem behavior," (b) "The intervention should prove effective in changing the child's problem behavior," and (c) "I like the procedures in the intervention."

The psychometric properties of the BIRS yield good reliability and validity. The internal consistency has been demonstrated with alpha coefficients of .87 for the Time to Effectiveness factor and .97 for the entire scale (Elliott & Von Brock-Treuting, 1991). Additionally, construct validity is adequate, with correlations between the BIRS Acceptability factor and the personality measure the Semantic Differential (SD) Evaluation factor (Kazdin, 1980a, 1980b; Martens et al., 1985) equaling .78 for the Acceptability factor, .76 for the Effectiveness factor, and .52 for the Time to Effectiveness factor (Elliott & Von Brock-Treuting, 1991).

Parent Teacher Consultation Services Questionnaire

The Parent Teacher Consultation Services Questionnaire (PTCSQ) is a measure consisting of four sections that assesses parent and teacher perceptions of the consultation process, was administered following the intervention implementation. The first section requires respondents to evaluate the overall treatment program by rating 11 statements on a 7-point Likert scale. The second part requires the respondent to complete five questions pertaining to the difficulty and usefulness of the instructional strategies and material used in the intervention. Difficulty items are rated on a 7-point Likert Scale (1 = Extremely Difficult to 7 = Extremely Easy) as are the usefulness items (1 = Extremely Not Useful to 7 = Extremely Useful). The third section of the PTCSQ consists of six questions that assess the benefits of the intervention on an 8-point Likert scale ranging form 0 (Don't know/Not Applicable) to 7 (Strongly Agree). The fourth part assesses the qualities of the consultant believed to be important to the consultation

process (e.g., knowledge about behavior principles and children, supportiveness,

flexibility, and helpfulness). Respondents are asked to rate 14 items about the consultant

on an 8-point Likert scale from 0 (Don't know/Not Applicable) to 7 (Strongly Agree).

(Total scores on the PTCSQ may range form 21 to 287, with higher scores reflecting

greater satisfaction.

The psychometric properties of the PTCSQ have yet to be established. However,

this instrument has been used to evaluate parental satisfaction with behavioral

consultation in at least two separate studies (Carrington-Rotto & Kratochwill, 1994;

Kratochwill, Elliott, Loitz et al., 1999). Additionally, the Parent Consultation Services

Questionnaire (PCSQ) which preceded this measure is considered to have adequate face

validity (McMahon & Foreland, 1983). Therefore, an argument can also be made with

reference to the validity of the PTCSQ.

<div align="center">Procedure</div>

Pre-intervention and Post-intervention Assessment

The SSRS parent and teacher forms (Gresham & Elliott, 1990b), the CBCL/4-18

(Achenbach, 1991b) were administered at two points during the consultation process.

These measures were initially administered prior to the intervention as part of the

screening process and as a measure of functioning at baseline. The SSRS, CBCL/4-18

and the BIRS were also administered following the termination of the intervention to

evaluate intervention outcomes and to assess acceptability of the intervention. All

measures were administered in order to analyze intervention effectiveness after CBC.

Experimental Treatment

The experimental intervention in this investigation is CBC (Sheridan,

Kratochwill, & Bergan, 1996) combined with a self-help manual based approach

(Kratochwill & Elliott, 1992 a, b). CBC with the consultees occurred via the three

interviews (i.e., CPII, CPAI, CTEI). During the first interview (CPII) the consultant and

consultees identified and operationalized the problematic behavior and collaboratively

developed a procedure to record the baseline frequency of the children's target behavior

(e.g., non-compliance, temper tantrums, aggression). Approximately one week after the

CPII, the second interview was held (CPAI). The consultant and consultees reviewed the

baseline data collected, discussed and identified the antecedents precipitating the targeted

behavior as well as the consequent conditions that maintained the targeted behavior.

Sequential conditions (e.g., situational events) contributing to the targeted behavior were

also discussed.

Once the conditions surrounding the problem behavior were discussed and

understood, the consultant and consultees collaboratively developed an intervention plan.

Throughout the intervention, consultees continued to document the frequency of the

behavior targeted for change. Further, the consultant and consultees maintained weekly

telephone contact to discuss how the treatment plan was progressing, whether the child's

behavior was improving, and if needed, to discuss and implement modifications to the

intervention plan. Following implementation of the entire intervention plan, the third

interview (CTEI) was held. The purpose of the CTEI was to determine the effects of the

intervention and to decide whether intervention should be terminated, modified, or

continued.

All interviews were conducted either at the participants' home or at the child's school or daycare. Two self help treatment manuals (Kratochwill & Elliott, 1992 a, b) were introduced during the CPAI and used to help parents work collaboratively with teachers to reduce children's behavior problems at home and at school. The teachers in the school or daycare used parallel versions of the manuals. Three to six weeks were allotted for parents and teachers to implement the intervention plan established collaboratively during the CPAI. During the intervention phase (between CPAI and CTEI), consultants made weekly phone calls to consultees to determine how the child was responding to the intervention and whether the treatment plan needed revisions.

The skills selected and taught from the manuals as part of the intervention plan were based on problems identified during the CPII, the results of the screening measures (i.e., CBCL, TRF, and SSRS) and the observational data gathered by the consultees prior to the CPAI. The teaching of the skills and review of the relevant information occurred during the CPAI. The skills outlined and presented in the manuals consist of skill selection, goal setting, peer activity, child management strategies, and use of positive reinforcement.

Skill selection. This section of the treatment manual (along with parent and teacher responses on the SSRS) was used to help consultees identify the area the child was experiencing the most significant difficulties and select an appropriate skill of behavior for the child to work on. One behavior or area of concern was addressed at a time.

Goal setting and practice. The next section of the manual was used to help the child learn selected skill. The program steps include: tell (i.e., tell your child about the

skill and why it is important; *show* (i.e., model and practice the skill for your child); *do* (i.e., have your child practice the skill with you at home); and *set* a goal and practice (i.e., set a specific goal of having the child practice the skill on a daily basis, in different situations, with different children). The purpose of goal setting procedures is to enable children to develop appropriate personal goals for improving social competence by allowing the child to have control over the goal selected and ensuring they are capable of attaining the goal that has been set.

Peer activity. This section of the manual provided the child with the opportunity to practice appropriate social interactions with peers. Parents were encouraged to provide children with a time to play with peers at least once a week. Eight steps for initiating a peer activity were presented in the manual including; (a) deciding with the consultant on the type of activity, (b) selecting materials needed for the activity (e.g., a board game), (c) bringing child and peer together in an appropriate environment, (d) explaining the activity and giving directions, (e) telling the child what behaviors are expected from him or her (e.g., sharing, taking turns), (f) praising the child and peer for positive behavior, (g) ending the activity after 10-15 minutes, and (h) providing the child with feedback.

Child management. The child management section of the manual consisted of the three main skills: differentiated attention, instruction giving, and time away. The differential attention skill involved attending (i.e., providing the child with an ongoing description of his/her activity) and rewarding (i.e., providing the child with praise and physical affection) the child when he or she was behaving appropriately and ignoring (i.e., making no eye contact or providing the child with verbal or physical cues) when he/she was behaving inappropriately. In addition, the instruction giving skills were

presented. These included: (a) being specific and direct, (b) giving one command at a time, (c) following the command with an eight-ten second wait for compliance, (d) praising the child when he/she follows directions, (e) following the command with a warning if the child does not comply (e.g., "if...then..."), (f) praising the child for following directions or following through with the consequence of non-compliance. Finally, time away was introduced as an interruption of a child's unacceptable behavior by removing him/her form a situation for a brief period of time (i.e., three to five minutes). Parents were instructed to make the following decisions prior to using time away; (a) the behaviors which would result in its use, (b) the number of minutes the child would be placed in time away, (c) the time away location, and (d) the procedure that would be used if the child refused to go to or remain in time away.

Positive reinforcement. Another skill presented in the manuals was the use of positive reinforcement. Parents were taught how positive reinforcement or a "special reward" could be used to increase the frequency of appropriate behaviors. The selecting and planning of appropriate reinforcement techniques occurred in connection with goal setting procedures. Often, the child was involved in selecting the particular reward (e.g., sticker, extra playtime, video game playing) that he or she worked toward. The use of prompts and praise were also introduced in the manual as a means of increasing the frequency of desirable behavior and to aid the child in reaching his or her goal.

Treatment Integrity

Treatment integrity was assessed on a weekly basis during the telephone follow-ups with both parents and teachers. The treatment integrity scales used in this study were based on the model suggested in the self-help manuals (Kratochwill & Elliott, 1992 a, b).

Treatment integrity scores were recorded for each intervention type suggested in the intervention plan for the week of interest. For example, if differential attention was the intervention prescribed, treatment integrity scores may be recorded for one or all of the following techniques: attending, rewarding, and ignoring.

Two versions of the Treatment Integrity Scale were administered depending on time of entry into the study: original and adapted. In the original version, parents and teachers were asked, if they implemented the strategies established during the CPAI (e.g., goal setting and practice, peer activity, and child management). Two possible answers were recorded: yes or no. Examples of treatment integrity questions include: "For the ignoring technique, were you successful at making no physical contact once ignoring procedures were started?" and "For the attending and rewarding techniques, did you use labeled verbal rewards to describe good behavior?"

In the adapted version of the Treatment Integrity Scale, parents and teachers were asked to rate, on a scale of 1 (never) to 10 (always), the degree to which they implemented the behavioral techniques and interventions prescribed. Sample items for the technique of ignoring include: "Made no eye contact or used nonverbal cues" and "Made no physical contact once ignoring procedure started." Sample items for the attending and rewarding technique include: "Used attending and rewards immediately following desirable behaviors", "Used labeled verbal rewards to describe good behavior", and "Used physical rewards to describe good behavior".

The original scale was adapted in response to the vagueness of yes or no answers. For example, if the parent or teacher properly used "ignoring" as an intervention some of the time, then answering "yes" to the ignoring integrity question could be misleading.

Consequently, using a Likert-type scale ranging from never to always to determine the

frequency of the proper use of an intervention strategy corrected the sometimes

misleading nature of yes or no answers.

Experimental Design

When the P-TIP was first conceived, a multiple baseline design (Barlow, Hayes &

Nelson, 1984) consisting of a coordinated series of simple phase changes in a different

series in which the phase changes occur at different points in real time and after different

first phase lengths (CPII to CPAI) was planned. Due to the uneven time entry of the child

participants to this study, the scheduled phase changes could not be implemented.

Consequently, an A/B repeated measures design was used. Although an A/B design does

not allow for the cause and effect conclusions to be made, it does permit for the

examination of the magnitude and direction of change in behavior (Barlow et al., 1984).

Therefore, the design of this study was comprised of a baseline (A) duration followed by

a period of intervention (B). Baseline information was gathered for each participant until

there was a satisfactory estimate of the frequency of the natural occurrence of the targeted

behavior. Baseline data collected for each child participant served as a criterion to

evaluate whether participation in CBC led to change in the child's behavior. As such,

each child acted as his own control. In other words, if CBC was effective, the occurrence

of the child's target behavior during intervention would differ from the estimated

occurrence at baseline.

CHAPTER 4

Results

The results are organized in the following manner: (a) statement of the prediction; (b) description of the analysis used to test the prediction; and (c) results of the analysis. This format is repeated for the four predictions being tested. To clarify the relationship between integrity and (a) treatment acceptability: and (b) treatment acceptability factors of time to effectiveness and intervention difficulty multiple Pearson correlations were calculated.

Correlational data can be reported in two ways: Tests of significance and measurement of relationship strength (Keppel, Saufley, & Tokunaga, 1992). Tests of significance in correlational research are frequently used to explain some part of the variability of predicted values. However, the purpose of this study was to investigate the nature or strength of the relationship between treatment integrity and treatment acceptability and not to predict one from the other. Cohen (1988, pp. 79-81) suggests the following classification when interpreting measures of strength in correlational research: (a) a "small or minimal" relationship is on in which r^2 is .01 ($r = +.10$ or $-.10$); (b) a "medium or moderate" relationship is one in which r^2 is .09 ($r = +.30$ or $-.30$); and (c) a "large or strong" relationship is one in which r^2 is .25 ($r = +.50$ or $-.50$). Although the maximum value of a correlation is $+1.00$ or -1.00, Cohen's definition of a large or strong relationship as $r = +.50$ or $-.50$ reflects the fact that the relationship between two variables studied in the behavioral sciences is rarely greater than value (Cohen, 1988).

Prediction #1: *It is predicted that treatment integrity for both parents and teachers will be positively related to intervention outcomes.*

In order to address this question, it was first necessary to assess the effectiveness of the intervention for each participating child. The effect size (ES) statistic was used to determine intervention effectiveness and to examine whether CBC is an effective means of producing positive changes in children's target behaviors. Separate effect sizes were computed for each child for the home and school environments. The effect size measure takes into account the lack of independence in the data typical of repeated observations of the same individual. The effect size is computed by dividing the difference between the baseline and treatment phase means by the standard deviation of the baseline phase (Busk & Serlin, 1992) and is expressed by the following formula:

$$ES = \frac{x\ treatment - x\ baseline}{SD\ baseline} \qquad (1)$$

where

$$SD = \frac{N \Sigma X^2 - (\Sigma X)^2}{N (N-1)} \qquad (2)$$

Effect sizes are interpreted as standard deviation units expressed in terms of z scores. Effect sizes are positive when the mean frequency of the target behavior is greater during the treatment phase than during the baseline phase, and negative when the incidences of the target behavior during the treatment phase are lower than the incidences of the target behavior during the baseline phase (Gresham & Noell, 1993). Therefore and ES of +1.00 would indicate an increase in the incidence of the target behavior from baseline to treatment of one standard deviation (Gresham & Noell, 1993). The effect size measures for each child for home and school settings are presented in Table 2.

Table 2

Effect Size Measures for Home and School Settings

Child	ES Home	ES School
Child 1	-.30*	.04
Child 2	-.45*	-.06*
Child 3	-.73*	-1.75*
Child 4	-.56*	-1.98*
Child 5	-.51*	-1.24*
Child 6	-.68*	-.66*
Child 7	-.10*	-.80*
Child 8	-.56*	-.19*
Child 9	-2.10*	-.18*
Child 10	-0.12*	-.40*
Child 11	-.24*	-.53*
Child 12	-.39*	-.52*

Note. * Denotes that the changes in behaviors are in the expected directions.

To test the prediction that parent and teacher treatment integrity is positively related to intervention effectiveness, correlations between mean treatment integrity scores and the absolute value of the effect sizes were conducted for both parents and teachers to examine the strength and direction of their relationship. Mean treatment integrity scores were obtained by adding weekly treatment integrity scores for each case and dividing that sum by the number of weeks that the intervention plan was implemented. The treatment integrity means for parents and teachers are presented in Table 3.

Table 3

Treatment Integrity Means for Parents and Teachers

Child	Parent	Teacher
Child 1	72	85
Child 2	91	98
Child 3	92	85
Child 4	96	83
Child 5	96	92
Child 6	93	96
Child 7	97	95
Child 8	86	76
Child 9	63	100
Child 10	72	88
Child 11	70	68
Child 12	72	66

Note. Treatment integrity means are presented in percentages.

The correlation between parent treatment integrity and treatment outcome suggested a moderate relationship (r = .444) in the direction predicted. Specifically, the higher the degree to which parents implemented intervention strategies as prescribed, the higher the effectiveness of the intervention plan. Similarly, the correlation between teacher treatment integrity and treatment outcome suggested a moderate relationship (r = .342) in the direction predicted. In other words, the higher the treatment integrity, the greater the change in behavior from pre-intervention to post-intervention.

Prediction #2: *It is also predicted that parent and teacher perceptions of treatment acceptability will be positively related to treatment integrity.*

In order to address this prediction, correlations were computed between mean post-intervention scores on the acceptability subscale of the BIRS and mean treatment integrity scores. The rationale for using the post-intervention acceptability means is that perceptions of acceptability for both parents and teachers were relatively stable from pre-intervention to post-intervention. BIRS descriptive statistics for parents and teachers are presented in Table 4. Furthermore, examining post-intervention acceptability ratings is thought to provide greater insight regarding treatment acceptability since the participants have actually implemented the intervention and have had the opportunity to observe changes in the child's target behavior.

Table 4

BIRS Descriptive Statistics for Parents and Teachers

BIRS Subscale	Parent		Teacher	
	Pre	Post	Pre	Post
Acceptability				
Mean	5.22	5.05	4.91	4.42
SD	.26	.45	.46	1.12
Time to Effectiveness				
Mean	4.75	4.42	3.93	3.79
SD	.76	.76	1.21	1.80

Note. Possible mean scores on the Acceptability and Time to Effectiveness Subscale range from 1 to 6.

The correlation between parent treatment integrity and parent post treatment acceptability of the intervention plan suggests a minimal relationship (r = .212). Although the relationship is minimal, the relationship was in the direction hypothesized: the higher the treatment integrity, the higher the perceived treatment acceptability. Similarly, the correlation between teacher treatment integrity and teacher post treatment acceptability of the intervention plan suggests a minimal relationship (r = -.107). However, the direction of the relationship is such that the higher the treatment integrity the lower the treatment acceptability.

Prediction # 3: *It is hypothesized that the treatment acceptability criterion of time to effectiveness will be inversely related to treatment integrity.*

In order to address this hypothesis, correlations were computed between the mean post-intervention scores on time to effectiveness subscale of the BIRS and mean treatment integrity scores. The correlation between parent treatment integrity and parent perceptions of time to effectiveness suggests a positive and strong relationship (r = .498). Similarly, the correlation between teacher treatment integrity and teacher perceptions of time to effectiveness also suggests a strong relationship (r = .590). High scores on the time to effectiveness subscale of the BIRS indicate that parents and teachers perceived the intervention to be effective over a relatively short period of time (i.e., weeks versus months). Specifically, the positive relationship between treatment integrity and time to effectiveness for both parent and teachers supports the hypothesis that treatment integrity and time to effectiveness are inversely related. In other words, as the

time lag between the implementation of the intervention decreases, the higher treatment

integrity.

Prediction # 4: *It is also hypothesized that the level of difficulty of the intervention*

will be inversely correlated to treatment integrity.

In order to address this hypothesis, correlations were computed between the mean

post-intervention scores on the treatment difficulty subscale of the PTCSQ and mean

treatment integrity scores. The correlation between parent treatment integrity and parent

perceptions of treatment difficulty suggest a moderate relationship ($r = -.390$). High

scores on the treatment difficulty subscale indicate interventions that are rated as being

more difficult. Specifically, the negative relationship between treatment integrity and

parents' perceptions of intervention difficulty suggest that the more difficult an

intervention is perceived to be, the lower the treatment integrity. The relationship

between treatment integrity and teachers' perceptions of intervention program difficulty

could not be analyzed because there were only two cases in which teachers completed the

PTCSQ.

CHAPTER 5

Discussion

The primary purpose of the present study was to examine whether effectiveness of intervention strategies implemented with conjoint behavioral consultation coupled with a self-help manual was related to the integrity with which the interventions were implemented by both parents and teachers. Additionally, this study was interested in the relationship between treatment integrity and parent and teacher perceptions of treatment acceptability and more specifically, the relationship between treatment integrity and the acceptability factors of time to effectiveness and intervention difficulty. The four main findings obtained were: (a) a positive and moderate relationship between the degree to which interventions were implemented with integrity by both parents and teachers and treatment outcome, (b) a positive and minimal relationship between parent treatment integrity and parent perceptions of treatment acceptability and a negative and minimal relationship between teacher treatment integrity and teacher perceptions of treatment acceptability, (c) a moderate and inverse relationship between parent treatment integrity and parent perceptions of time to effectiveness and a strong and inverse relationship between teacher treatment integrity and teacher perceptions of time to effectiveness, and (d) a moderate and inverse relationship between parent treatment integrity and parent perceptions of intervention difficulty.

Treatment Integrity and Treatment Outcome

Parent and teacher treatment integrity of intervention procedures used during conjoint behavioral consultation for children with behavior problems was moderately and positively related to treatment outcome. This finding suggests that the higher degree to

which the interventions were implemented as suggested the greater the amount of change of problematic behavior as measured by direct observations by parents and teachers.

Previous research investigating treatment outcome of behavioral interventions has consistently demonstrated the need to assess the extent to which strategies recommended in an intervention plan are being implemented as outlined (Gresham, 1989; Gresham & Kendall, 1987; Noell & Witt, 1996; Robbins & Gutkin, 1994; Shapiro, 1987; Wickstrom, 1995; Yeaton & Sechrest, 1981). In other words, without examining corresponding treatment integrity data, it is impossible to conclude that the prescribed strategies in the intervention plan were responsible for producing significant client outcomes (Watson et al., 1997; Wickstrom, 1995; Wickstrom et al., 1998; Wilkinson, 1997). Recent studies examining the relationship between treatment integrity and treatment outcome have demonstrated that higher levels of treatment integrity are generally associated with larger treatment effects (Gresham & Noell, 1993; Jones et al., 1997; Noell & Witt, 1996; Noell et al., 1997; Witt et al., 1997).

Consistent with the previous findings. this study found that the extent to which parents and teachers implemented the intervention strategies as suggested was positively related to significant improvements observed in targeted behavior problems. In summary. this study has confidence, via high treatment integrity data for parents and teachers, that intervention plans were implemented as prescribed and that the effectiveness can be attributed to the intervention plan.

Treatment Integrity and Treatment Acceptability

Parent and teacher treatment integrity was minimally related to perceptions of treatment acceptability. Interestingly, the direction of the relationships differed for parents and teachers. Parent perceptions of acceptability were positively related to treatment integrity and teacher perceptions were negatively related to treatment integrity.

Previous researchers investigating the acceptability of strategies used during behavioral consultation using behavioral intervention plans to remediate problem behaviors have indicated that interventions that are perceived as acceptable by consultees are more likely to be implemented with a high degree of integrity (Cross-Calvert & Johnson, 1990, Elliott, 1986, 1988; Reimers et al., 1995; Reimers et al., 1987; Witt & Elliott, 1985). In contrast, a more recent study by Peterson and McConnell (1996) found that intervention acceptability, as rated by teachers, was a minimal predictor of whether consultees implement strategies as prescribed. The findings of the current study resemble the magnitude of the minimal relationship found by Peterson and McConnell and hence, do not support previous research findings of a strong relationship between treatment acceptability and treatment integrity.

While parent and teacher perceptions of treatment acceptability were weak predictors of treatment integrity, the inverse relationship between teacher acceptability and treatment integrity is interesting. Although the strength of the relationship between treatment integrity and treatment acceptability has yet to be consistently demonstrated, generally, the results of these studies have indicated a positive relationship between treatment integrity and treatment acceptability. In other words, strategies that are rated as acceptable are more likely to be implemented with a high degree of integrity (Cross-

Calvert & Johnson, 1990, Peterson & McConnell, 1996; Reimers et al., 1987; Reimers et al., 1995; Witt & Elliott, 1985). The finding that teachers implemented strategies with integrity yet did not perceive the strategies as highly acceptable is interesting, especially in light of the improvements in their students problematic behaviors. Teachers may already have had previous experience using some of the recommended strategies and experienced mixed results with them in terms of long term benefits for the children. Therefore, they were able to implement the strategies as prescribed while perceiving them as less acceptable than did the parents.

In light small sample size (i.e., only six teachers completed post intervention acceptability measures) and the minimal relationship found, the negative direction of relationship may have been influenced by factors not directly measured in this subscale. Consequently, few conclusions should be attributed to the directionality of this relationship.

<div align="center">Treatment Integrity and Time to Effectiveness</div>

The findings of the present study indicate a moderate and inverse relationship between parent treatment integrity and the treatment acceptability factor of time to effectiveness. Furthermore, a strong and inverse relationship was found between teacher treatment integrity and time to effectiveness. Previous research has documented that the amount of time required to implement an intervention is an important factor when investigating both treatment integrity (Gresham, 1989; Noell & Witt, 1996; Witt et al., 1996) and treatment acceptability (Duggan, 2000; Kazdin, 1982; Reimers et al.,1992; Witt et al., 1984). The results of these studies have demonstrated that consultees' perceptions of treatment acceptability and the degree to which treatments are

implemented as suggested vary as a function of the time needed to implement the strategies. Consequently as time involvement increased, treatment acceptability and treatment integrity decreased (Witt & Elliott, 1985; Reimers et al., 1987; Witt et al, 1984; Witt et al, 1996). Teacher often have great demands on their time, especially in large classrooms, and parents who work or have several children may perceive interventions that produce prompt improvements in children's problem behaviors as highly acceptable. Furthermore, treatment integrity may decrease or parents and teachers may cease to use certain strategies as the time lag between implementing those strategies and improvements in targeted behavior increases.

Thus, the findings from the present study suggest that for parents and teachers a strong relationship exists between time to effectiveness and treatment integrity. Although the reciprocal nature of the relationship was not assessed, the results of this study supported the inverse nature of the relationship between time to effectiveness and treatment integrity as posited in the models of treatment effectiveness, integrity, and acceptability (Witt & Elliott, 1985; Reimers et al., 1987). As the time involvement to implement strategies increased treatment integrity decreased. The strong inverse relationship between time to effectiveness and treatment integrity for teachers underscores the importance of providing teachers with strategies that are not only effective but also strategies that provide prompt improvements in children's targeted behaviors.

<u>Treatment Integrity and Treatment Difficulty</u>

The findings of the present study suggest that a moderate and inverse relationship exists between parent treatment integrity and perceived intervention difficulty. Parents

who perceived the intervention prescribed as being very difficult implemented behavioral strategies with lower integrity. Noell and Witt (1996) hypothesized that an interaction exists between the complexity of an intervention and treatment acceptability as well as the degree that consultees implement interventions as recommended. Children with severe behavioral problems frequently require lengthy intervention plans involving many behavioral strategies (Gresham, 1989; Noell & Witt, 1996). Complex interventions can sometimes overwhelm parents, as they need to keep all of the specifics of each intervention straight and apply each of them correctly. Furthermore, complex intervention plans sometimes call for the implementation of more than one strategy at a time, which can also affect the degree to which each strategy is implemented. Consequently, the more difficult the intervention plan the lower the treatment integrity. This finding lends support to Noell and Witt (1996) hypothesis that complexity of the treatment intervention plan affects treatment integrity.

Implications

The findings in the present study contribute to the conjoint behavioral conjoint literature in several respects. First, the present study suggests that improvements in targeted problematic behavior were the result of the prescribed intervention strategies being implemented as outlined. Without examining treatment integrity data, it is impossible to conclude that the prescribed strategies in the intervention plan were responsible for producing significant child outcomes (Watson et al., 1997; Wickstrom, 1995; Wickstrom et al., 1998; Wilkinson, 1997). Furthermore, by focusing on effectiveness, acceptability, and integrity of interventions in a naturalistic setting, the

present study also adds to the external validity of observational findings (Kazdin, 1981;

Reimers et al., 1992; Van Brock & Elliott, 1987).

Second, focusing on the assessment of treatment integrity and treatment

acceptability in both home and school settings addresses the importance of remedial

programs that target interventions across multiple settings (Crnic & Reid, 1989; Sheridan,

Kratochwill, & Bergan, 1996; Webster-Stratton & Herbert, 1994; Wielkiewincz, 1992).

Although research has advocated the importance of examining children's behaviors in

several contexts, the majority of studies to date have examined treatment effectiveness

and treatment integrity or treatment acceptability with teachers or with parents, but rarely

with both.

Third, examining the relationship between treatment integrity and post-

intervention perceptions of treatment acceptability was helpful in elucidating more

precisely the impact of the experience of actually learning about and implementing

strategies on both treatment integrity and acceptability. The literature proposes that a

positive relationship exists between treatment integrity and treatment acceptability

(Cross-Calvert & Johnson, 1990, Elliott, 1986, 1988; Reimers et al., 1987; Reimers et al.,

1995; Witt & Elliott, 1985), however, the present investigation did not lend support to

this proposal.

Finally, although weak relationships between parent and teacher perceptions of

treatment acceptability and treatment integrity were found in the present study, further

investigations of two specific treatment acceptability factors yielded moderate to strong

relationships between treatment integrity and (a) time to effectiveness, and (b) difficulty

of interventions. Even though the behavioral consultation literature linking treatment

integrity and treatment acceptability has provided generally positive results, recent studies have suggested investigating individual factors that comprise the treatment acceptability construct (Cross-Calvert & Johnson, 1990; Gresham,1989; Reimers et al., 1987; Reimers et al, 1995). In light of the many factors that have yet to be identified as influencing treatment integrity and treatment acceptability, the results of the present study underscore the need to investigate specific factors contributing to overall constructs, like treatment acceptability, and how these specific factors fit into the hypothetical reciprocal relationship between treatment effectiveness, acceptability and integrity as outlined in the Elliott and Witt (1985) and Reimers et al. (1987) models.

Limitations and Directions for Future Research

A limitation of the present study is that only two components of the Reimers et al. (1987) model were investigated: specifically the relationship between (a) treatment integrity and treatment effectiveness and (b) treatment integrity and treatment acceptability. The Reimers et al. (1987) emphasizes the interrelationships among four elements: treatment acceptability, treatment integrity, understanding of the intervention, and effectiveness. The relationship among these four variables is complex and is described as being sequential and reciprocal (Reimers et al., 1987) starting with knowledge of the behavioral principles upon which the intervention is devised, perceptions of treatment acceptability, and degree of treatment integrity and resulting in various degrees of effectiveness. One example of the reciprocal nature of the hypothesized relationship is that treatment integrity is linked to intervention knowledge and effectiveness, implying that high treatment integrity is related to a higher probability of significant behavioral changes (effectiveness). Future research will need to address

not only the other two components, but also the entire model, with specific emphasis on the reciprocal nature of all contributing factors. Furthermore, the findings of the present study regarding minimal relationships between treatment integrity and the overall treatment acceptability and moderate to strong relationships between treatment integrity and specific acceptability factors also suggest a need to investigate the individual contributions that each of these components make to the hypothesized reciprocal relationship. For instance, do some factors of treatment acceptability influence the hypothetical relationship more than other factors?

A second limitation of the present study is that the target behaviors identified in the CPIIs for the children participating in the study ranged in kind (e.g., aggression, non-compliance, social skills deficits) and in severity (e.g., physically attacking others to inattention). Future researchers may want to compare groups of children with similar problems (e.g., children with social skills deficits versus children with inattention, versus children with aggression) to investigate the effects of treatment acceptability on treatment integrity and effectiveness. Previous research has demonstrated that the severity of the problem behavior may influence intervention acceptability ratings (Elliott et al., 1984; Witt et al., 1984; Witt et al., 1985) and comparing groups of children with similar problems may elucidate individual factors influencing treatment acceptability and integrity.

A third limitation of the present study is that half of the teachers participating in conjoint behavioral consultation did not complete post-intervention acceptability data limiting the number of dyads contributing to the analysis. Although moderate relationships were found to exist between specific treatment acceptability factors and

teacher treatment integrity, a more salient relationship may have existed but was undetected between overall treatment acceptability and treatment integrity.

In summary, the high levels of treatment integrity found in the current study suggest that significant changes in children's behavior using CBC coupled with self help manuals were a function of the interventions being implemented as prescribed. Furthermore, the treatment acceptability factors of time to effectiveness and intervention difficulty influenced the degree to which both parents and teachers implemented the intervention strategies with integrity. Examining the relationship between treatment integrity, acceptability and effectiveness is an important and necessary step in identifying which variables affect both parent and teacher appropriate use of intervention strategies. Moreover, by disentangling the importance and level of impact that the many intervention variables (e.g., acceptability factors, treatment integrity, available time) have on treatment effectiveness, researcher and clinicians can improve the likelihood that the interventions they recommend will be implemented with integrity and ultimately result in effecting positive behavior changes in children with behavioral difficulties.

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Appendix A

Ethics Approval Certificate

Appendix B

The Behavior Intervention Rating Scale – Parent Form

PARENT-TEACHER INTERVENTION PROJECT

ou have just completed an intervention program identified for the Parent-Teacher Intervention Project (PTIP). Please evaluate the intervention by circling the number which best describes your agreement or disagreement with each statement. Please answer each question.

		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1.	This was an acceptable intervention for my child's problem behavior.	1	2	3	4	5	6
2.	Most parents would find this intervention appropriate for behavior problems in addition to the one described.	1	2	3	4	5	6
3.	The intervention was effective in changing my child's problem behavior.	1	2	3	4	5	6
4.	I would suggest the use of this intervention to other parents.	1	2	3	4	5	6
5.	My child's behavior problem was severe enough to warrant use of this intervention.	1	2	3	4	5	6
	Most parents would find this intervention suitable for the behavior problem described.	1	2	3	4	5	6
..	The intervention did not result in negative side-effects for my child.	1	2	3	4	5	6
8.	The intervention would be appropriate for a variety of children.	1	2	3	4	5	6
9.	The intervention was a fair way to handle my child's problem behavior.	1	2	3	4	5	6
10.	I liked the procedure used in the intervention.	1	2	3	4	5	6
11.	The intervention was a good way to handle my child's behavior problem.	1	2	3	4	5	6
12.	Overall, the intervention was beneficial for my child.	1	2	3	4	5	6
13.	The intervention quickly improved my child's behavior.	1	2	3	4	5	6
14.	The intervention produced a lasting improvement in my child's behavior.	1	2	3	4	5	6

		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
15.	The intervention improved my child's behavior to the point that it would not noticeably deviate from other children's behavior.	1	2	3	4	5	6
16.	Soon after using the intervention, I noticed a positive change in my child's problem behavior.	1	2	3	4	5	6
17.	My child's behavior remained at an improved level even after the intervention was discontinued.	1	2	3	4	5	6
18.	Using the intervention not only improved my child's behavior in the home, but also in other settings (e.g., other homes).	1	2	3	4	5	6
19.	When comparing my child with a well-behaved peer before and after use of the intervention, my child's and peer's behavior was more alike after using the interventions.	1	2	3	4	5	6
20.	The intervention produced enough improvement in my child's behavior so the behavior no longer was a problem.	1	2	3	4	5	6
	Other behaviors related to the problem behavior also were improved by the intervention.	1	2	3	4	5	6

Appendix C

The Behavior Intervention Rating Scale – Teacher Form

PARENT-TEACHER INTERVENTION PROJECT

ou have just completed an intervention program identified for the Parent-Teacher Intervention Project (PTIF. riease evaluate the intervention by circling the number which best describes your agreement or disagreement with each statement. Please answer each question.

		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1.	This was an acceptable intervention for the child's problem behavior.	1	2	3	4	5	6
2.	Most teachers would find this intervention appropriate for behavior problems in addition to the one described.	1	2	3	4	5	6
3.	The intervention was effective in changing the child's problem behavior.	1	2	3	4	5	6
4.	I would suggest the use of this intervention to other teachers.	1	2	3	4	5	6
5.	The child's behavior problem was severe enough to warrant use of this intervention.	1	2	3	4	5	6
6.	Most teachers would find this intervention suitable for the behavior problem described.	1	2	3	4	5	6
7.	I was willing to use this intervention in the classroom setting.	1	2	3	4	5	6
8.	The intervention did not result in negative side-effects for the child.	1	2	3	4	5	6
9.	The intervention would be appropriate for a variety of children.	1	2	3	4	5	6
10.	The intervention is consistent with those I have used in classroom settings.	1	2	3	4	5	6
11.	The intervention was a fair way to handle the child's problem behavior.	1	2	3	4	5	6
12.	The intervention was reasonable for the behavior problem described.	1	2	3	4	5	6
13.	I liked the procedure used in the intervention.	1	2	3	4	5	6
14.	The intervention was a good way to handle this child's behavior problem.	1	2	3	4	5	6
15.	Overall, the intervention was beneficial for the child.	1	2	3	4	5	6

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
16. The intervention quickly improved the child's behavior.	1	2	3	4	5	6
17. The intervention produced a lasting improvement in the child's behavior.	1	2	3	4	5	6
18. The intervention improved the child's behavior to the point that it would not noticeably deviate from other children's behavior.	1	2	3	4	5	6
19. Soon after using the intervention, the teacher noticed a positive change in the problem behavior.	1	2	3	4	5	6
20. The child's behavior will remain at an improved level even after the intervention was discontinued.	1	2	3	4	5	6
21. Using the intervention not only improved the child's behavior in the classroom, but also in other settings (e.g., other classrooms).	1	2	3	4	5	6
22. When comparing this child with a well-behaved peer before and after use of the intervention, the child's and peer's behavior was more alike after using the interventions.	1	2	3	4	5	6
23. The intervention produced enough improvement in the child's behavior so the behavior no longer was a problem.	1	2	3	4	5	6
24. Other behaviors related to the problem behavior also were improved by the intervention.	1	2	3	4	5	6

Appendix D

Parent/Teacher Consultation Services Questionnaire

PARENT-TEACHER INTERVENTION PROJECT

Parent Consultation Services Questionnaire

Thank you for your participation in the Parent-Teacher Intervention Project (PTIP). Your cooperation has been greatly appreciated. The following questionnaire is part of an evaluation of the PTIP. The information obtained will help us evaluate and improve the program; therefore, it is important that you respond as honestly as possible.

Overall Program

Please circle the response that best expresses your feelings.

1. The major problem that originally prompted me to seek treatment for my child is presently

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

2. My child's problems that have been treated during my participation in the program are now

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

3. My child's problems that have not been treated during my participation are

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

4. My feelings now about my child's progress are that I am

very dissatisfied	dissatisfied	slightly dissatisfied	neutral	slightly satisfied	satisfied	very satisfied

5. To what degree has the treatment program helped with other general personal or family concerns not directly related to your child?

hindered much more than helped	hindered	hindered slightly	neither helped nor hindered	helped slightly	helped	helped very much

6. At this time, I believe that the treatment will continue to have a positive outcome.

strongly disagree	somewhat disagree	disagree	neutral	agree	somewhat agree	strongly agree

7. I feel the approach to treating my child's behavior problems in the home by using this type of manual-based parent program is

very inappropriate	inappropriate	slightly inappropriate	neutral	slightly appropriate	appropriate	very appropriate

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

| strongly recommended | recommended | slightly recommended | neutral | slightly not recommended | not recommended | strongly not recommended |

9.   How confident are you in managing your child's current behavior problems in the home on your own?

| very confident | confident | somewhat confident | neutral | somewhat unconfident | unconfident | very unconfident |

10.   How confident are you in your ability to manage future behavior problems of your child in the home using what you learned from this program?

| very confident | confident | somewhat confident | neutral | somewhat unconfident | unconfident | very unconfident |

11.   My overall feeling about the treatment program for my child and family is

| very negative | negative | somewhat negative | neutral | slightly positive | positive | very positive |

Teaching Format

We would like to know how difficult each of the following types of teaching has been for you to follow. In addition, we would like to get your ideas of how useful each of the instructional strategies were for you. Please circle the response that most closely describes your opinion.

1.   Instructions from the Consultant

Difficulty:

| extremely easy | easy | somewhat easy | neutral | somewhat difficult | difficult | extremely difficult |

Usefulness:

| extremely not useful | not useful | somewhat not useful | neutral | somewhat useful | useful | extremely useful |

2.   Treatment methods or skills demonstrated by the consultant

Difficulty:

| extremely easy | easy | somewhat easy | neutral | somewhat difficult | difficult | extremely difficult |

Usefulness:

| extremely not useful | not useful | somewhat not useful | neutral | somewhat useful | useful | extremely useful |

3.   Use of skills in the home with your child

<u>Difficulty</u>:

extremely easy	easy	somewhat easy	neutral	somewhat difficult	difficult	extremely difficult

<u>Usefulness</u>:

extremely not useful	not useful	somewhat not useful	neutral	somewhat useful	useful	extremely useful

4.   The home assignments you were asked to complete

<u>Difficulty</u>:

extremely easy	easy	somewhat easy	neutral	somewhat difficult	difficult	extremely difficult

<u>Usefulness</u>:

extremely not useful	not useful	somewhat not useful	neutral	somewhat useful	useful	extremely useful

5.   The manual you were asked to read

<u>Difficulty</u>:

extremely easy	easy	somewhat easy	neutral	somewhat difficult	difficult	extremely difficult

<u>Usefulness</u>:

extremely not useful	not useful	somewhat not useful	neutral	somewhat useful	useful	extremely useful

<u>Parent Opinion</u>

How could the program be <u>improved</u> to help <u>you</u> more?

Parent Benefits

For each of the following statements, circle the number which most accurately reflects the <u>benefits</u> you have received as a result of working with the consultant.

---

0 = Don't Know or Not Applicable	4 = Neutral
1 = Strongly Disagree	5 = Agree
2 = Somewhat Disagree	6 = Somewhat Agree
3 = Disagree	7 = Strongly Agree

---

1. I am able to see the problem situation in greath depth.

    0   1   2   3   4   5   6   7

2. I am able to see other ways of dealing with a problem that I hadn't thought of before.

    0   1   2   3   4   5   6   7

3. I find myself trying out some of my own ideas.

    0   1   2   3   4   5   6   7

4. I feel encouraged to make my own decisions regarding the management of my child's problems.

    0   1   2   3   4   5   6   7

5. I am able to interact more effectively with my child.

    0   1   2   3   4   5   6   7

6. Did you implement any of the strategies you learned during consultation and training sessions?

    ____ No   ____ Yes   (Specify which ones: _____

    _____)

    (a)   If yes, how successful were they:

    Unsuccessful   1   2   3   4   5   6   7   Successful

    (b)   If no, why not? _____

---

0 = Don't Know or Not Applicable   4 = Neutral
1 = Strongly Disagree   5 = Agree
2 = Somewhat Disagree   6 = Somewhat Agree
3 = Disagree   7 = Strongly Agree

---

7.   How confident are you in your ability to solve similar problems of your child's in the future?

Not at all   1   2   3   4   5   6   7   Very Confident

The Consultant

For each of the following statements, please circle the number which most accurately reflects your perception of the consultant you worked with during the consultation and training sessions. Use the same 0-7 scale listed above.

1.   Easy to work with

     0   1   2   3   4   5   6   7

2.   Knowledgeable about the behavior of individual children

     0   1   2   3   4   5   6   7

3.   Established a good relationship with parents

     0   1   2   3   4   5   6   7

4.   A good listener

     0   1   2   3   4   5   6   7

5.   Offered useful information

     0   1   2   3   4   5   6   7

6.   Seemed flexible in his/her ideas

     0   1   2   3   4   5   6   7

7.   Helped identify useful resources

     0   1   2   3   4   5   6   7

---

0 = Don't Know or Not Applicable   4 = Neutral
1 = Strongly Disagree   5 = Agree
2 = Somewhat Disagree   6 = Somewhat Agree
3 = Disagree   7 = Strongly Agree

---

8.   Viewed role as a facilitator rather than an expert

      0   1   2   3   4   5   6   7

9.   Respected values which were different

      0   1   2   3   4   5   6   7

10.   Understood important aspects of problems brought up

      0   1   2   3   4   5   6   7

11.   Worked well with teachers

      0   1   2   3   4   5   6   7

12.   Provided moral support

      0   1   2   3   4   5   6   7

13.   Appeared interested in my concerns

      0   1   2   3   4   5   6   7

14.   Offered a valuable service

      0   1   2   3   4   5   6   7

Thank you!

Appendix E

Treatment Integrity Measure

CASE #: _____   RATER: _____ .

DATE: _____ .

TREATMENT INTEGRITY FOR
POSITIVE REINFORCEMENT

Circle the number that corresponds with the degree that each step was displayed. The number 1 = never (indicating that the consultee never displayed that behavior) and 10 = always (indicating that the consultee displayed that behavior all the time).

1. Praised child right away when saw him/her playing with other peers

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

2. Praised child every time I saw him/her playing with other kids

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

3. When praising child, told him/her exactly why he or she was being praised

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

4. Identified events that are rewarding to child

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

5. Provided cues when necessary. Taught child what to do by showing him/her, or pointing out what other kids do when playing with their peers

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

CASE #: _____   RATER: _____ .

DATE: _____.

TREATMENT INTEGRITY FOR

Attending & Rewarding

Circle the number that corresponds with the degree that each step was displayed. The number 1 = never (indicating that the consultee never displayed that behavior) and 11 = always (indicating that the consultee displayed that behavior all the time).

1. Used attending and rewarding together whenever possible

1..........2..........3..........4..........5..........6..........7..........8..........9..........10

2. Used attending and rewards *immediately* following desirable behaviors

1..........2..........3..........4..........5..........6..........7..........8..........9..........10

3. Used labeled verbal rewards to describe good behavior

1..........2..........3..........4..........5..........6..........7..........8..........9..........10

4. Used labeled verbal rewards to describe good behavior

1..........2..........3..........4..........5..........6..........7..........8..........9..........10

5. Used physical rewards to describe good behavior

1..........2..........3..........4..........5..........6..........7..........8..........9..........10

6. Used rewards often but only for desired behavior

1..........2..........3..........4..........5..........6..........7..........8..........9..........10

CASE #: _____   RATER: _____

DATE: _____ .

TREATMENT INTEGRITY FOR
Ignoring

Circle the number that corresponds with the degree that each step was displayed. The number 1 = never (indicating that the consultee never displayed that behavior) and 12 = always (indicating that the consultee displayed that behavior all the time).

1. Made no eye contact or used nonverbal cues

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

2. Made no verbal comments once ignoring procedures started

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

3. Made no physical contact once ignoring procedures started

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

CASE #: _____   RATER: _____ .

DATE: _____ .

TREATMENT INTEGRITY FOR

Time Away

Circle the number that corresponds with the degree that each step was displayed. The number 1 = never (indicating that the consultee never displayed that behavior) and 13 = always (indicating that the consultee displayed that behavior all the time).

1. Stated child's noncompliance

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

2. Gave directions for child to go to time away chair/area

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

3. Used no other verbal cues

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

4. Used no other non-verbal cues other than pointing to the time away chair/area

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

5. Waited 10 seconds

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

6. Guided child to time away chair when necessary

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

7. Set timer to _____ minutes

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

8. Returned child to chair/area if necessary

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

9. Restated rule during return

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

10. Used no other verbal or threatening nonverbal cues returning child to chair/area

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

11. Gave no attention while child was in time away

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

12. Announced the end of time away

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

13. Made no comments regarding noncompliance

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

14. Restated original request

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

CASE #: _____   RATER: _____ .

DATE: _____.

TREATMENT INTEGRITY FOR

Peer Activity at home

Circle the number that corresponds with the degree that each step was displayed. The number 1 = never (indicating that the consultee never displayed that behavior) and 14 = always (indicating that the consultee displayed that behavior all the time).

1. Picked our the materials needed for the activity

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

2. Had child and a peer join me in a place where we can do the activity

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

3. Explained the activity and gave directions

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

4. Told children what I expect to see

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

5. Praised child and peer when I saw them taking turns, or talking appropriately

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

6. Ended the activity after about 10-15 minutes

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

7. Provided child with feedback about behaviors that were positive or needed improving

1.........2.........3.........4.........5.........6.........7.........8.........9.........10

Appendix F

Behavior Program for Children: Treatment Manual

Appendix G

Interview Manuals