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Treating Children with Conduct Problems: Examining Changes in Parental Knowledge of Behavioural Principles and Parenting Skills Utilizing Conjoint Behavioural Consultation

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ABSTRACT

This study examined the efficacy of conjoint behavioural consultation (CBC) with children evidencing conduct problems, the impact of CBC in enhancing parental knowledge of behavioural principles, and whether knowledge of behavioural principles is related to improved parenting skills. An A/B design was used and participants included 5 boys (ages 3, 3, 5, 5, and 6) and their parents. Children evidenced improvements in their target behaviours from baseline to treatment (effect sizes = -0.54 to -2.10). Overall, children's social skills increased (Reliable Change Indices [RCI] = -3.66 to 3.05), problem behaviours decreased, and externalizing difficulties decreased (RCI = -0.24 to -3.74). Parents used more praise, less critical statements, and less no-opportunity commands following treatment. Parental knowledge of behavioural principles improved significantly for 2 parents (RCI's = 0.00 to 8.77). Also, increased parental knowledge of behavioural principles was related to increased use of praise ($r = 0.95$, $p < .05$). Results are discussed in light of their practical and theoretical implications.

RESUMÉ

Cette étude a examiné l'efficacité de la consultation conjointe de comportement (CCC) auprès d'enfants ayant des troubles de comportement, l'influence du CCC sur l'amélioration de la connaissance parentale des principes de comportement, et si la connaissance des principes de comportement était reliée à une meilleure habileté parentale. Une méthode de recherche "A/B" a été utilisée et les sujets étaient 5 garçons (âgés de 3, 3, 5, 5, et 6 ans) et leurs parents. Les enfants ont démontré des progrès quant à leur comportement d'intérêt de la phase de pré-traitement jusqu'à la fin du plan de traitement (effect sizes = -0.54 à -2 10). De façon générale, le comportement social des enfants a augmenté (Reliable Change Indices [RCI] = -3.66 to 3.05), et les troubles de comportement ont diminué, (RCI= -0.24 à -3.74). Les parents ont utilisés plus encouragement verbal, ont utilisé moins de paroles critiques, et moins de directives unilatérales à la suite du plan de traitement. La connaissance parentale des principes de comportement a progressé de manière significative pour 2 parents (RCI's=0.00 à 8.77). De plus, la croissance de la connaissance parentale des principes de comportement était reliée à une plus grande utilisation d'encouragement verbal (r=0.95, p<.05). Les résultats sont discutés en fonction de leurs implications pratiques et théoriques.

CHAPTER I

Introduction

In 1985, Kazdin estimated that two thirds of the child population referred to mental health agencies, consisted of children with oppositional difficulties or conduct disorder. Since that time, the number of children diagnosed with conduct disorder has increased. In 1991, the prevalence rate of conduct disorder in children aged 4 to 11 years was estimated at 4% (Offord, Boyle, & Racine, 1991). More recently, Zoccolillo (1993) estimated the incidence of conduct disorder among school-age samples to be as high as 6%. In 1996, Dworet and Rathgeber conducted a nationwide study examining the incidence of behaviour disorders (both internalizing and externalizing) of Canadian children. Within the province of Quebec, Dworet and Rathgeber (1996) found that 12% of children at the kindergarten level, 2% of children in grades one through six, and 2.6% of secondary school children evidenced behavioural difficulties. Unfortunately, Dworet and Rathgeber's investigation also revealed that these children are under served.

In the absence of treatment, the long-term prognosis for children is relatively poor (Loeber, 1982; Parker & Asher, 1987; Robins, 1978; Webster-Stratton, 1991). Some studies demonstrate that up to 40% of those who had been diagnosed with conduct disorder in childhood continued to have serious psychosocial disturbances in adulthood (Loeber, 1982; Robins, 1970, 1993; Rutter & Giller, 1983). Specifically, 24% of children who develop conduct disorder prior to the age of six, are more likely to develop antisocial personality disorder ("a pervasive pattern of disregard for, and violation of, the rights of others"; Diagnostic and Statistical Manual of Mental Disorders; DSM-IV; American Psychiatric Association [APA], 1994) in adulthood (Robins, Tipp & Przybeck, 1991).

There is additional evidence that children with conduct problems are at greater risk for substance abuse (Hesselbrock, 1986), and other psychiatric disorders (e.g., mania and schizophrenia; Robins, 1993). In addition, conduct disorder has also been linked to a higher death rate, unemployment and marital conflict (Robins, 1993). Hence, it has been estimated that conduct disorder is one of the most costly to society due to the repetitive and sometimes life-long interventions required by mental health agencies and the criminal justice system (Robins, 1981).

As a consequence of the high price paid by both society and the individuals afflicted with conduct problems, a wide variety of treatment approaches have been designed and employed. Traditional methods such as behavioral, cognitive, family, individual and group therapies, and pharmacotherapy have evidenced some success (Romig, 1978; Shamsie & Hluchy, 1991), however the high cost (in dollars and man-hours) of many of these prolonged treatments, have incited researchers to develop treatment alternatives. A new and effective method of treating children with conduct problems is conjoint behavioral consultation with parents and teachers (CBC; Sheridan, Kratochwill, & Elliott, 1996).

CBC places an increased emphasis on the role of parents acting as therapists for their own children within the home environment. CBC attempts to increase parenting skills, so that parents themselves are able to deal more effectively with their children's conduct problems (Sheridan, 1993). This is an important attribute since the increase of children evidencing conduct disorder has resulted in a shortage of available personnel and resources to help these children and their families (Spitzer, Webster-Stratton & Hollinsworth, 1991).

However, research has shown that the parents of children with conduct problems

commonly lack certain key parenting skills or adhere to an inconsistent parenting style (Gardner, 1989; Patterson, 1982). Several empirical studies have identified problematic parental behaviour as being comprised of two different styles of parenting (Gardner, 1989; Patterson, 1979; Wahler, Williams, & Cerezo, 1990). One type of problematic parenting style occurs when parents comply with their children's disobedience. Parental compliance appears to work via negative reinforcement (the termination of an aversive event or condition; Skinner, 1938), such as when the parent "gives in" to the child's refusal to follow parental demands and the parent does not enforce what was asked of the child. An example of this type of behaviour is when the parent tells the child to pick up their toys, the child does not comply, and the parent does not follow-through and ensure that the child complies with the parental request (i.e., ensure that the child picks up his/her toys.) In the given scenario, the parent's request of the child to pick up their toys could be viewed as an aversive or unpleasant stimulus. Refusal of picking up the toys enables the child to avoid the "unpleasantness" of the chore, and since no unfavorable circumstances follow the child's disobedience, the child's disobedience becomes negatively reinforcing. The child's disobedience, in effect, enables the child to terminate an aversive condition composed of the parent's instructional demands. This negative reinforcement is theorized to contribute to the child's development of oppositional responses, a characteristic of conduct disorder (Wahler et al., 1990).

A second type of problematic parenting style consists of parents' inconsistent positive and negative reactions to a child's conduct problems (Gardner, 1989; Patterson, 1979; Wahler, et al., 1990). Wahler, Williams and Cerezo (1990) view inconsistent parental attention as aversive for the child, while dependent and consistent parental attention, negative or otherwise, to be negatively reinforcing. To illustrate,

envision a parent who is watching television and a child who wants his/her parent's attention. The child may turn and hit his/her brother to elicit a response from the parent. Although in all likelihood the parent will react angrily, the child will now receive the attention of the parent. In this scenario, the inattention of the parent can be viewed as an unpleasant or aversive situation for the child, and the reaction of the parent (angry or otherwise) to the child's behaviour would end the unpleasant situation for the child. Thus, the child's ability to elicit predictable parental reactions could increase the frequency of the child's antisocial behaviour (Sansbury & Wahler, 1992; Wahler et al., 1990).

Consequently, the goal of CBC is to indirectly reduce child noncompliance by increasing parenting ability and decreasing inconsistent parenting. CBC is designed as a collaborative problem-solving process consisting of a series of three structured behavioural interviews which occur between a consultant and consultees (parents and teachers; Sheridan et al., 1996). During the first interview, the conjoint problem identification interview, (CPII) the consultant and the consultees identify the problem behaviours and agree on the baseline data gathering procedures to be used. During the second interview, the conjoint problem analysis interview (CPAI), both the consultant and the consultees explore the problem behaviour by examining the baseline data, identifying variables that may be contributing to the problem behaviour, and developing an intervention plan. After the CPAI, treatment implementation occurs. During the third interview, the conjoint treatment evaluation interview, (CTEI) the consultees and consultant examine the outcome of the intervention program and plan for modifications and/or generalization of acquired skills. It is at this point in the process that decisions regarding termination and further treatment needs are assessed.

The underlying objective of CBC is to reduce conduct disorder symptomatology

in children by educating parents about the behavioural contingencies, which shape and direct behaviour. However, much of the literature in this area focuses primarily on child outcome measures (i.e., decrements in noncompliant behaviour), or parental ability to perform certain skills following intervention (Moreland, Schwebel, Beck, & Wells, 1982). What has yet to be assessed directly, is the knowledge gained by parents. Generally, it is assumed that reductions in child conduct problems are a result of increased parental knowledge of behavioural principles, which in turn increases parental ability to implement behavioural strategies. Before accurate conclusions can be made about treatment utility, it is necessary to determine whether the parents who acquire and demonstrate the behavioural skills presented during behavioural interventions, are also evidencing an increased knowledge of underlying behavioural principles. By establishing increased parental knowledge of behavioural principles as a key component in parental skill acquisition and treatment success, future interventions can then more directly target and emphasize this domain.

Although the major purpose of this study is to examine the efficacy of CBC in treating children with conduct problems, an additional focus is to determine whether parental knowledge of behavioural principles increases after involvement in CBC. Similarly, an additional question being investigated is whether parenting skills improve after involvement in CBC. Further, are improved parenting skills related to increased knowledge of behavioural principles and decreases in child conduct problem behaviour? It is hypothesized that CBC will be effective in reducing conduct problem behaviours. Specifically, it is hypothesized that improvements in children's target behaviours will be detected from baseline to treatment. In addition, children's social skills, problem behaviours and externalizing behaviours (as measured by standardized instruments) are

expected to improve from pretreatment to posttreatment. Further, it is hypothesized that parental knowledge of behavioural principles and parenting skills will improve from pretest to posttest. In addition, it is predicted that increased parental knowledge of behavioural principles will be related to improved parenting skills and decreased conduct difficulties.

CHAPTER II

Literature Review

In the introduction it was hypothesized that the parents who possess the greatest knowledge of behavioural principles, will be more able to apply these principles and consequently have children who obtain the greatest reduction in noncompliant and conduct problem behaviour. As a means of organizing the literature, which shaped the rationale underlying the present study, the following chapter has been divided into four parts. The main purpose of the first section is to illustrate the severity and prevalence of conduct problems. Next, variables and characteristics associated with children evidencing conduct problems are discussed followed by a review of the literature associated with the behavioural intervention being implemented in the current study. Finally, the proposed hypotheses will be delineated.

Diagnosis and Prevalence

Throughout the course of normal development, children periodically display behaviours which can be classified as antisocial, such as lying, fighting, stealing, and other social norm violations (Kazdin, 1997). Many terms such as; (a) acting out, (b) externalizing behaviours, (c) conduct disorder, (d) conduct problems, and (e) delinquency are commonly used to signify such antisocial behaviours (Kazdin, 1987). However, extremes of such antisocial behaviours, which occur beyond the realm of "normal" functioning, are clinically referred to as conduct disorder. Table 1 lists specific criteria and behaviour that the child with conduct disorder typically exhibits.

Table 1

DSM-IV Criteria for the Diagnosis of Conduct Disorder [a]

Aggression to People and Animals

1. often bullies, threatens, or intimidates others
2. often initiates physical fights
3. has used a weapon that can cause serious physical harm to others (e.g., a bat, brick, broken bottle, knife, gun)
4. has been physically cruel to people
5. has been physically cruel to animals
6. has stolen while confronting a victim (e.g., mugging, purse snatching, extortion, armed robbery)
7. has forced someone into sexual activity

Destruction of Property

8. has deliberately engaged in fire setting with the intention of causing serious damage
9. has deliberately destroyed others' property (other than by fire setting)

Deceitfulness or Theft

10. has broken into someone else's house, building, or car

Table 1 (continued)

DSM-IV Criteria for the Diagnosis of Conduct Disorder

11. often lies to obtain goods or favors or to avoid obligations (i.e., cons others)
12. has stolen items of nontrivial value without confronting a victim (e.g., shoplifting, but without breaking and entering; forgery)

Serious Violations of Rules

13. often stays out at night despite parental prohibitions, beginning before age 13 years
14. has run away from home overnight at least twice while living in parental or parental surrogate home (or once without returning for a lengthy period)
15. is often truant from school, beginning before age 13 years

[a] The criteria list is from the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, APA, 1994). The number of symptoms required to meet criteria for the diagnosis of Conduct Disorder is at least 3 symptoms that have occurred within the past 12 months, at least one of which has been in the last 6 months.

The DSM-IV (APA, 1994) defines the essential feature of conduct disorder as a persistent pattern of behaviour in which the child violates the basic rights of others or major age-appropriate societal norms..

The DSM-IV (APA, 1994) defines two subtypes of conduct disorder, Childhood-Onset Type and Adolescent-Onset Type. The childhood-onset type consists of at least one criterion characteristic of conduct disorder prior to the age of 10 years, and is usually preceded by stubbornness, noncompliance (e.g., Oppositional Defiant Disorder) or hyperactivity (e.g., Attention-Deficit/Hyperactivity Disorder). The symptoms of these disorders may progress to those of conduct disorder, or exist comorbidly. Children diagnosed with child-onset are more likely to engage in aggressive criminal behaviour into adolescence and adulthood (Kazdin, 1997). In fact, up to 40% of children who have been diagnosed with conduct disorder in childhood continue to have serious psychosocial disturbances in adulthood (Robins, 1970; Rutter & Giller, 1983). Additionally, longitudinal investigations have revealed that "aggressive" children are more likely to develop problems later on in life such as, school drop out, drug abuse, alcoholism, juvenile delinquency, adult crime, antisocial personality, marital disruption, interpersonal problems and poor physical health (Farrington, 1991; Kazdin, 1985; Robins et al., 1991, Robins, 1993).

The early onset of symptoms is particularly troubling due to the high continuity between disruptive problems at the preschool age and antisocial behaviours in adolescence (Loeber, 1990; Rutter, 1985). Although considered to be less serious than child-onset conduct disorder, adolescent-onset type is more common (Kazdin, 1997). Adolescent-onset occurs when there is an absence of any criterion characteristics of conduct disorder prior to the age of 10 years (see Table 1) and its emergence is

considered to be highly influenced by ones peer group (Moffitt, 1993).

Regardless of when onset occurs, or whether the child meets DSM-IV (APA, 1994) criteria for conduct disorder (which is reserved for behaviour clearly beyond the realm of "normal" functioning; Kazdin, 1987), conduct problems, externalizing behaviours or acting out (whichever term one uses) place the child at risk for other psychopathologies. Numerous studies have not used the DSM-IV (APA, 1994) criteria for diagnosing conduct problem behaviour, but rather defined their conduct problem groups on the basis of cut-off scores on checklist measures (e.g., Child Behavior Checklist; CBCL; Achenbach, 1991b). When conduct problems are identified by this method, the children's behaviours tend to load highly on the externalizing factor of the CBCL and include aggression, destructiveness, attention problems, impulsivity, hyperactivity and "delinquent" types of behaviour (Achenbach, 1991a, McMahon, 1994).

There are several advantages to using behaviour checklists over the DSM-IV categories in the diagnosis and categorization of conduct problems (i.e., externalizing behaviour) in children. First, the DSM-IV (APA, 1994) categories are not based on an empirical assessment of representative samples of children (Achenbach, 1991a). Second, the DSM-IV (APA, 1994) categories are not operationally defined in terms of specific assessment methods (Achenbach, 1991a). Further, the DSM-IV (APA, 1994) categories are decided upon via a committee and highly subject to change (as evidenced by the marked revisions in category defining criteria across the editions of the manual; Achenbach, 1991a). Moreover, by considering the child's entire pattern of competencies and problems, a practitioner can tailor goals and interventions to the child's specific needs, rather than aiming interventions at diagnostic categories (Achenbach, 1991a).

Child Characteristics

Certain child characteristics have been associated with conduct problems such as particular temperaments, neurological difficulties, social and cognitive skill deficiencies, and academic deficits (Webster-Stratton & Herbert, 1994). Researchers have revealed that highly aggressive children often have poor interpersonal relations with peers as well as with adults (Carlson, Lahey, & Neeper, 1984). Additionally, children with conduct problems are often deficient in attributional processes (they are more likely to interpret interactions and the gestures of others in hostile ways) and cognitive problem-solving skills. Moreover, children with conduct problems have been found to be less able than their peers to find solutions to interpersonal problems or take the perspective of others (Crick & Dodge, 1994). Academically, children with conduct problems often lag behind their peers; being left back in grades (Kazdin, 1987) and show reading deficits (Rutter, Tizard, Yule, Graham, & Whitmore, 1976).

Although the difficulties associated with conduct problems leave these children at a disadvantage (Parker & Asher, 1987), it is important to try and identify the point of onset of such characteristics if preventative measures are to be taken. Researchers conducting longitudinal investigations have found that maternal reports of infant difficulties at six months of age and infant resistance to control (at one year) predicted externalizing problems at the ages of six and eight years (Bates, Bayles, Bennett, Ridge, & Brown, 1991). Additional research in this area has shown that it is not solely a child's temperament, which predicts subsequent externalizing problems. A study conducted by Goldberg, Corter, Lojkasek and Minde (1990) found that low birth weight, prematurity, and maternal ratings of child temperament at age one were significant predictors of maternal and teacher ratings of behaviour problems at the age of 4. Similarly, variables

such as marital perception of difficulty of the infant, male gender, prematurity, and low socioeconomic status (in combination with difficult temperament) were found to be the best predictors of conduct problems during the preschool period (Sanson, Oberklaid, Pedlow, & Prior, 1991). Difficult temperament has also been theorized to predispose the child to both the development of an insecure attachment to the parent (Greenberg, Speltz, & DeKlyen, 1993) and a coercive style of parent-child interaction (Patterson, Reid, & Dishion, 1992). Both of these interaction patterns have been associated with the development of conduct problems (McMahon, 1994).

Other researchers have detected deficits in behaviours localized in the left frontal lobe and limbic system, such as verbal functioning, language comprehension, emotional regulation and impulsivity, indicating neurological differences in children experiencing conduct difficulties (Gorensten & Newman, 1980). There are additional findings to suggest that genetic factors also contribute to conduct problems. For example, twin studies show that there is a greater concordance rate of conduct disorder in monozygotic twins than in dizygotic twins (Kazdin, 1987). Likewise, adoption studies indicate that a child of an antisocial parent, has a greater risk of developing antisocial behaviour, even when he/she is raised separated from their biological parents (Kazdin, 1987). For the most part though, nearly all prospective studies from infancy through preschool age suggest that difficult early behaviour and perinatal problems are related to the development of behaviour problems in young children (Campbell, 1995). However, it is important to note that the stability of externalizing behaviour problems occurs only when other environmental risk factors (e.g., familial distress) are present (Campbell, 1991).

Parent and Family Characteristics

Genetic factors alone cannot account for the development of conduct problems in children. Various environmental factors have also been linked to conduct difficulties, such as certain parental and familial characteristics of these children. The most salient familial and parental characteristics include parent psychopathology and maladjustment, criminal behaviour and alcoholism (Kazdin, 1997). Additionally, parent disciplinary techniques and attitudes have also been associated with conduct problems (Kazdin, 1997).

Moreover, the literature also indicates that the parents of children with conduct problems, commonly lack certain key parenting skills. These parents have been found to exhibit fewer positive behaviours towards their children and are more violent and critical in their discipline than their counterparts (Patterson & Stouthamer-Loeber, 1984). Moreover, the parents of children with conduct problems tend to be more permissive and often fail to monitor their children's behaviours (Patterson & Stouthamer-Loeber, 1984). Oftentimes parents inadvertently engage in patterns of parent-child interactions that sustain or accelerate children's conduct problem behaviours. For example, Dumas and Wahler (1985) found that mothers of children with conduct problems are more likely to ignore or punish prosocial behaviour and attend to (inadvertently rewarding) aversive behaviour. Further, Gardner (1989) reported that mothers of children who were difficult to manage were less likely than mothers of controls to follow through until they obtained compliance from their children.

Without question, researchers have repeatedly shown that the externalizing behaviours defining child conduct problems, is partially maintained by maladaptive parenting. Parents' misuse and lack of discipline when faced with child noncompliance and demands, may encourage, rather than suppress such behaviours (Fendrich, Warner, &

Weissman, 1990; Reid & Patterson, 1989; Sansbury & Wahler, 1992; Spitzer et al., 1991). It is however, important to note that a maladaptive parenting style may represent a bi-directional process wherein the child influences the parent, in addition to the parent influencing the child. Researchers observed that children with conduct difficulties can invoke a maladaptive parenting style in parents that did not previously elicit this type of parenting (Anderson, Lytton, & Romney; 1986). In this investigation the mothers of boys without conduct problems and of boys with conduct problems were observed interacting with their own child, with someone else's child without conduct problems, and with someone else's child with conduct problems. Mothers were found to modify their style of interacting with a child, depending on the "type" of child they were interacting with.

Although it is yet to be determined how and why parents enter into a maladaptive parenting style, the literature indicates that additional stressors in the parents' environment are directly related to ineffective parenting. Quality-of-life measures, such as parental depression, are related to both a maladaptive parenting style and conduct difficulties in children (Webster-Stratton & Hammond, 1988). Parental depression (particularly mothers') is an important variable found to impinge on parenting skills (Dumas, Gibson, & Albin, 1989; Forehand, Lautenschlager, Faust, & Graziano, 1986). Additionally, Dumas and associates (1989) have found that children whose mothers exhibit depressive symptomatology are less well adjusted than their peers, whose mothers are not depressed. Moreover, parental depression has also been linked to the parental perception of child maladjustment and indirectly to child noncompliance. Specifically, parental depression was found to be associated with the increased use of vague and interrupted commands, which in turn was related to an increase in child noncompliance

(Forehand et al., 1986).

Marital conflict has also been evidenced as a significant risk factor for conduct problems (e.g., Belsky, 1984; Dadds & Powell, 1991; Rutter, 1994). Researchers believe that marital and parent-child relations can be considered as interdependent, and consequently discord existing in the marriage can affect how parents treat their children (Belsky, 1984). Dadds and Powell (1991) found that mothers of children with conduct problems were more likely to report conflicted family relationships, including frequent disagreements over childrearing. Investigators have proposed that conflict in the marital relationship negatively affects the consistency and quality of parenting practices, leading to poorer adjustment in children (e.g., Rutter, 1994). Specifically, Belsky (1984) described the marital relationship as a primary support for parenting, and theorized that greater conflict in a marriage will therefore diminish the effectiveness of parenting.

Current Interventions

A recent national study indicates that Canadian children with behaviour disorders (including children with conduct problems) are under served (Dworet and Rathgeber, 1996). The ubiquity of conduct problems in children is increasing the demand for mental health professionals and resulting in a shortage of available personnel and resources to help these children and their families (Spitzer et al., 1991). Consequently, the most recently developed treatments place an increased emphasis on the role of parents acting as therapists for their own children. A successful treatment method which targets parents, and indirectly brings about behavioural changes in children, is CBC (Sheridan, et al., 1996).

Conjoint behavioural consultation. CBC is an intervention paradigm used to treat children with behavioural problems. It can be defined as an indirect form of service

delivery that involves the problem-solving efforts of a consultant and parent and teacher consultees (Sheridan et al., 1996). The consultant and the consultees work collaboratively to resolve presenting problems and increase consultee skill and knowledge so that parents/teachers are able to prevent or address future difficulties (Sheridan, 1993).

Based on the seminal work by Bergan, Kratochwill and associates (Bergan & Kratochwill, 1990; Kratochwill & Bergan, 1990), CBC consists of a series of three structured behavioural interviews (Sheridan et al., 1996). The first interview, the Conjoint Problem Identification Interview (CPII), involves the identification of problem behaviours and the implementation of baseline data gathering procedures. It has been described as the most critical level of consultation (Kratochwill, Elliott, & Carrington-Rotto, 1995), in that a firm understanding of the problem behaviours is essential for the successful planning and execution of the treatment strategy.

During the CPII, the consultant's primary objective is to establish a working relationship between himself or herself and the consultees. This goal can be met during the course of the interview while information is being gathered regarding the familial composition, consultee receptivity and involvement, home problems and special needs of the consultees. Additionally, during the CPII, the consultant attempts to define the problem in behavioural terms and provide a tentative identification of the child's behaviour in terms of antecedent, situation and consequent conditions across settings. The consultant also tentatively identifies the severity and frequency of the problem behaviour and a goal for behaviour change is discussed. Lastly a method of baseline data collection are discussed and agreed upon with the parent(s) and teachers (Sheridan et al., 1996).

The second phase of CBC starts with the Conjoint Problem Analysis Interview

(CPAI). During the CPAI, the consultant and the consultees explore the strength of the problem behaviour using the baseline data, and identify the variables which might be contributing to the problem behaviour (Sheridan, et al., 1996). More specifically, the consultant and consultees attempt to establish a functional relationship between the identified problem behaviour and the events occurring immediately prior, during and/or following that behaviour. At times it may be necessary to gather additional data about the target behaviour when questions about who, what, when, and where are not sufficiently clarified from previously collected data (Bergan & Kratochwill, 1990). Generally though, it is at this point in the process that recommendations about interventions are made.

Treatment implementation follows the CPAI. This involves two processes: (a) choosing a suitable intervention and (b) implementing that intervention (Sheridan et al., 1996). During this phase, the consultant and consultees work together to generate an agreed upon intervention strategy. If necessary, the consultant may model for the consultees the skills they need to learn for treatment to be successful. This is then followed by the consultees practicing these same techniques with the consultant, until a certain level of proficiency is reached (Carrington-Rotto & Kratochwill, 1994). Although there is no formal interview during the treatment implementation phase, the consultant monitors the implementation of the intervention and revises procedures if necessary.

The fourth and final phase of CBC is the Conjoint Treatment Evaluation Interview (CTEI) during which the outcome of the intervention program is assessed. The discrepancy between the child's present behaviour and the desired level of functioning are discussed. If the child's problem behaviour has reached the desired or acceptable level (i.e., frequency, duration and/or intensity) for the consultees and the child, consultation is

usually terminated. However, if an acceptable level of behaviour has not been reached, it may be necessary for the consultation process to return to a previous stage and to modify the formerly imposed treatment (Bergan & Kratochwill, 1990).

Due to the relative newness of the use of CBC with parents of children with conduct problems, research in the area is somewhat limited. However, a recent investigation by Carrington-Rotto and Kratochwill (1994) indicated that BC combined with competency-based parent training was effective in decreasing children's noncompliance and increasing parental skill acquisition. Specifically, parents participated in a competency-based instructional format in which they learned differential attention, instruction giving and time-out skills to mastery, after which they implemented the treatment for their children ($\underline{N} = 4$). BC combined with parent training not only significantly decreased child noncompliance and promoted parental skill acquisition, but the gains in parental skills were maintained above baseline measures at a 4-week follow-up. Parents also perceived BC as highly acceptable with procedures being deemed appropriate, fair, and reasonable for their child.

Another investigation studied the effectiveness of BC in changing children's and teachers' behaviours (Dunson, Hughes, & Jackson, 1994). The study involved 20 students whose teachers identified them as manifesting symptoms characteristic of attention deficit-hyperactivity disorder (e.g., highly disruptive). Intervention effects were investigated and it was found that the children who received BC improved significantly over students in the control condition on teachers' ratings of hyperactivity and target behaviour severity. Additionally, direct observation of students' behaviour revealed decreases in disruptive behaviour.

Several case studies have also illustrated the efficacy of CBC in treating children

with conduct problems. In this particular case, a 4-year-old preschool student named Suzanne was referred by her mother for aggressive behaviours including hitting, kicking, and material destruction (Robertson, 1996). Suzanne's teacher also reported that Suzanne had difficulties with inattentive behaviour at school. For this case, both the teacher's and the mother's behavioural observations were substantiated by scores on two behaviour rating scales; the Social Skills Rating System (SSRS; Gresham & Elliott, 1990) and the Child Behavior Checklist (CBCL; Achenbach, 1991b). Both scales suggested significant deficits in social skills and excesses in problem behaviours. However, following the implementation of CBC, both Suzanne's mother and teacher reported the goal of increasing Suzanne's overall appropriate behaviour was clearly met. Additionally, post-treatment scores on the SSRS and the CBCL revealed substantial improvements in Suzanne's social skills at both school and home. Further, the mother's ratings on the CBCL indicated noted improvements in Suzanne's externalizing behaviours.

Another case study demonstrating the effectiveness of CBC with conduct problem behaviour is the case of "Ken" (Sladeczek, 1996). Ken, a 3-year, 11-month-old boy, was referred by his mother for conduct problems (i.e., tantrumming, social skills deficits and difficulties with cooperation, assertion, and self-control). His teacher also reported Ken was experiencing social skills deficits (i.e., territorial behaviour with peers, screeching and solitary play) at school. As a result, CBC along with a manual based treatment program developed for children exhibiting externalizing behaviour problems were used to treat Ken's conduct problems at the beginning of the school year. The intervention was monitored on a continual basis via: (a) parent and teacher observations of Ken's aggressive/territorial behaviours, (b) independent and comparison observations of Ken's aggressive and territorial behaviours at school, (c) goal attainment ratings by mother and

teacher on a weekly basis, and (d) measurement of treatment integrity. Immediately following treatment implementation, both Ken's mother and teacher observed significant decrements in Ken's aggressive behaviours and tantrumming both at home and at school. In addition, both Ken's mother and teacher found the strategies presented during CBC useful and posttest measures suggested improvements in Ken's social skills and his problem behaviours.

Further, a recent study utilizing CBC as a method of treating child noncompliance appears promising (Sladeczek, Kratochwill, & Elliott, 1996). In this study, CBC was combined with a self-help manual-based treatment as a means of treating children experiencing conduct problems and social withdrawal. The results of this investigation indicated that children's social skills increased and problem behaviours decreased, although these gains did not reach "statistical significance" on standardized measures. However, parental 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.

Predictions

CBC is a promising method of treating children with conduct problems. However, certain aspects of treatment effectiveness using CBC with children experiencing behaviour problems remain unknown. To try and better understand the factors associated with treatment success, the present study examines the efficacy of CBC as a means of decreasing conduct problem behaviours in children. One factor which is seldom examined within the literature, is the actual knowledge gained by parents. Much of the literature focuses primarily on child outcome measures, but does not directly assess the other key components assumed to influence treatment success. Moreland and his

colleagues (1982) stress the importance of including pretest and posttest measures of child behaviours as well as the parents' behaviours, rather than solely relying on post intervention group differences and drawing causal inferences. Within the CBC paradigm, it is usually assumed that decrements in child conduct problem behaviour are a consequence of skill acquisition on the part of the parent(s) (or teachers). Consequently, assessing whether parental knowledge of general behavioural principles increases as a result of CBC is an important aspect of treatment evaluation.

Implicit to CBC is the idea that consultees (e.g., parents) are acquiring skills to better deal with their children. Previous researchers who have examined the effects of parental knowledge of behavioural principles following some type of behavioural intervention (McLoughlin, 1985; Pevsner, 1982) found that parental knowledge of behavioural principles increased following instruction in behaviour management strategies. Pevsner (1982) found that parents' posttest knowledge of behavioural principles as applied to children was greater when they received parent training plus group behaviour therapy verses individual family therapy. Analogously, a greater number of participants in the parent training plus group behaviour therapy condition reported significant decreases in their children's target behaviours (e.g., fighting, noncompliance, and tantrums). Similarly, McLoughlin (1985) also found that parents showed gains in knowledge of behavioural principles as they applied to children after training in behaviour management techniques, however this study did not examine treatment outcome. Most importantly though, neither investigation explored whether the parental increases in knowledge translated into more skilled parenting behaviour.

In summary, past research utilizing behavioural techniques such as CBC in treating children with conduct difficulties appears promising. Consequently, one purpose

of this investigation is to further support earlier findings that CBC is an effective means of treating children's problem behaviours. However, there are areas still unexplored within the literature. No one has examined whether parental knowledge of behavioural principles as they apply to children improves when CBC is used. Similarly, researchers have yet to directly observe whether parenting skill increases with involvement in CBC, or whether increased knowledge of behavioural principles actually translates into increased parenting skills. Furthermore, researchers have yet to determine whether decreases in child conduct problems are associated with an increase in parental skill, when CBC is utilized. Consequently, the present investigation proposes to test the following hypotheses:

Hypothesis 1. It is hypothesized that CBC will be effective in producing improvements in children's conduct problem target behaviours from baseline to treatment.

Hypothesis 2. It is hypothesized that CBC will be effective in producing improvements in children's social skills, problem behaviours and externalizing behaviours from pretest to posttest.

Hypothesis 3. It is predicted that there will be a significant increase in parents' knowledge of behavioural principles as applied to children from pretest to posttest.

Hypothesis 4. It is hypothesized that there will be a significant improvement in parenting skills (i.e., increased use of praise, decreased use of no-opportunity or vague commands, and decreased use of critical statements) from pretest to posttest.

Hypothesis 5. It is anticipated that increased parental knowledge of behavioural principles as applied to children will be related to improvements in parenting skills (i.e., increased use of praise, decreased use of no-opportunity or vague commands, and decreased use of critical statements).

Hypothesis 6. It is anticipated that improvements in parenting skills (i.e., increased use of praise, decreased use of no-opportunity or vague commands, and decreased use of critical statements) will be negatively correlated to child deviance (i.e., the frequency of whining, crying, yelling, aggression, smart-talk, destructive behaviour and noncompliance).

CHAPTER III

Method

The data used in the present study is a portion of a larger study being conducted by Dr. Ingrid Sladeczek and her students at the BC Laboratory at McGill University. The larger study examines the treatment efficacy of CBC and videotape therapy (Webster-Stratton, 1989) and how parent and teacher variables influence treatment outcome. Although all participants included in the study partook in CBC, only findings in reference to parents and children will be presented here.

The unique contribution of the present study includes an investigation of whether CBC will be effective in producing: (a) improvements in children's conduct problem target behaviours, (b) improvements in children's social skills, problem behaviours and externalizing behaviours, (c) an increase in parents' knowledge of behavioural principles, and (d) improvements in parenting skills. Moreover, the present study proposes to investigate whether increased parental knowledge of behavioural principles is related to improvements in parenting skills and decreases in child deviance.

Participants

Children. The child sample in this study is comprised of 5 boys (ages 3, 3, 5, 5, and 6) recruited from daycares and schools in the Montreal area. Child participants were identified by their parents and/or teachers as exhibiting externalizing behaviour problems either at home and/or at school. In addition, all children selected to participate in the study met eligibility criteria by receiving: (a) a score of one standard deviation or more (15 points) below the mean (i.e., a score less than 85) for social skills on the SSRS (parent or teacher version), (b) a score of one standard deviation or more (15 points) above the mean (i.e., a score greater than 115) for problem behaviours on the SSRS (parent or

teacher version), (c) a score within the "clinical range" on the externalizing band of the CBCL or (d) a score within the "clinical range" on the externalizing band of the TRF. Scores within the borderline clinical range on the CBCL and the TRF are indicated by a T score between 67 and 70, whereas a T score higher than 70 indicates functioning within the clinical range (i.e., the child exhibits problem behaviours with a frequency and intensity that "average" children do not show) . Thus, one of the indicators for the parent or teacher had to be significant in order to be eligible for participation in the investigation.

Child 1. Child 1 was a 5-year old boy who lives at home with his mother and father and was enrolled in kindergarten at the time of consultation. He was described by his mother and teachers as exhibiting aggressive and tantrumming behaviours (i.e., hitting, screaming, throwing objects, crying, pulling hair). The behaviour targeted for consultation was Child 1's aggressive outbursts (i.e., hitting, screaming, throwing objects, crying, pulling hair).

Child 2. Child 2 was a 3-year old boy enrolled in a half-day preschool program. He lived at home with his parents, and an older and younger sister. Both Child 2's teachers and parents expressed concerns about his "inattentive" behaviour as he frequently ignored directives and well-established rules (i.e., remaining seated during meals, not hitting others). Consequently, the specific target behaviour decided upon for Child 2 was noncompliance (i.e., ignoring directives, breaking well-established household rules).

Child 3. Child 3 was a 5-year old boy who lived at home with his mother, father, older sister, older brother and younger brother. Child 3 was enrolled in kindergarten during the course of consultation and exhibited aggressive behaviours (i.e., hitting, scratching, kicking, throwing objects) at both home and at school. Hence, the

target behaviour selected for treatment during consultation was aggression (i.e., hitting, scratching, kicking, throwing objects with the intent to injure others).

Child 4. Child 4 was a 6-year old boy enrolled in kindergarten who lived at home with his mother, father and younger sister. Both his mother and teacher expressed concerns regarding Child 4's ability to partake in appropriate social interactions and described him as a likable child, but often overbearing and aggressive with other children. Consequently, he was rarely included in his peers games and play. For Child 4, the behaviour targeted for consultation was socially inappropriate behaviour (i.e., disruptive behaviour, talking loudly, hitting, pushing).

Child 5. Child 5 was a 3-year old boy who lived at home with his mother, father and twin sister. He was enrolled in preschool during the course of consultation and exhibited aggressive behaviours (i.e., hitting, scratching, kicking, biting) at both home and at school. Hence, the target behaviour selected for treatment during consultation was aggression (i.e., hitting, scratching, kicking, biting, spitting, pinching, pushing).

Parents/Consultees. The primary caregivers of the child participants were recruited from the Montreal area via teacher referrals, initial screening, or via other staff in the daycares and schools. Additionally, a brochure and information package was used to inform parents and teachers about the project. Both the mother and the father of Child 2, Child 3, and Child 5 (i.e., Mother 2 and Father 2, Mother 3 and Father 3, and Mother 5 and Father 5) participated in consultation while the mothers of Child 1 and Child 4 (i.e., Mother 1 and Mother 4) partook in consultation without their spouses.

Measures

Social Skills Rating System (SSRS). All parents were asked to complete the SSRS (parent version; Gresham & Elliott, 1990a) at pretest and posttest. The SSRS is an instrument that rates social skills and problem behaviours. The SSRS provides norm-referenced scales which can be used to evaluate the frequency (i.e., never, sometimes, very often) and perceived importance (i.e., not important, important, critical) of behaviours that impact a child's social competence and adaptive functioning at home. At the elementary school level, three areas are rated, while two are rated at the preschool level including: (a) externalizing-behaviours involving verbal and/or physical aggression towards others, poor control of temper, and argumentative behaviour, (b) internalizing behaviours that include anxiety, sadness, and loneliness, and (c) hyperactivity-behaviours that include excessive movement, squirming, and unpredictable reactions (preschool form only). Standard scores for each SSRS scale ($M = 100$; $SD = 15$) are derived from item responses. Additionally, raw scores are also expressed in percentile ranks and as a confidence band (Gresham & Elliott, 1990b).

The SSRS was standardized on a representative national sample of 4,170 children using self ratings, along with ratings by 1,027 parents and 259 teachers. The SSRS has been shown to have acceptable content, construct and social validity (Gresham & Elliott, 1990b). Additionally, criterion-related validity is also adequate with correlations between the SSRS subscales and the subscales of another similar rating scale, the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1989) ranging between .59 to .77. Test-retest reliability's of the SSRS for teachers were .85 for Social Skills, and .84 for Problem Behaviors, while test-retest correlations for parents were .87 for Social Skills and .65 for Problem Behaviors. Student self-ratings revealed a test-retest reliability

coefficient of .68 (Gresham & Elliott, 1990b).

Child Behavior Checklist (CBCL). Parents completed the CBCL (Achenbach, 1991b) at pretest and posttest. The Problem Behavior scale of the CBCL consists of 118 items, each rated on a 0- to 2-point scale. Some sample items include: (a) "Disobedient at home", (b) "Too fearful or anxious", (c) "Destroys things that belong to his/her family", and (d) "Steals at home." The items constitute multiple behaviour-problem scales derived separately for girls and boys in different age groups. The scales form two general groupings across all gender/age groups that assess externalizing behaviour (i.e., aggressive, antisocial, and undercontrolled) and internalizing behaviour (i.e., fearful, inhibited and overcontrolled). The CBCL was normed on a national sample that included 2,367 referred and non-referred children between the ages 4 and 18 years. The CBCL yielded intraclass correlations of .76 for interparent agreement on the Problem Scales and test-retest reliability at 1-week and one year at .89 and .74 respectively (Achenbach, 1991a). Additionally, construct validity is also adequate, with correlations between the CBCL Problem Scales and a similar rating scale, the Conners' Rating Scales, (Conners, 1990) equaling .82 (Achenbach, 1991a). The normative sample yielded T-scores with a mean of 50 and a standard deviation of 10 (Achenbach, 1991a). T-scores above 70 are considered to lie in the clinical range and are found in only 5% of the population (Achenbach, 1991a). This distinction enables the identification of referred versus non-referred children.

Teacher Report Form (TRF). The teachers of the child participants were asked to complete the TRF (Achenbach, 1991c). The TRF is modeled after the CBCL and is a comprehensive questionnaire which asks teachers to rate a student's adaptive functioning and problems within the school setting. The similarity between the items on the TRF and

the CBCL enable direct comparisons between the two scales. Some sample items include: (a) "Disobedient at school," (b) "Too fearful or anxious," (c) "Destroys property that belongs to others," and (d) "Steals."

The TRF was normed on a national sample that included 1,391 children between the ages 5 and 18 years. It yields intraclass correlations of .60 for interteacher agreement on the Problem Scales and test-retest reliability at 15-days and 2-months at .95 and .78 respectively (Achenbach, 1991a). Additionally, 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, 1991a). Additionally, the TRF has been found to be concordant with parents' ratings on the CBCL and the ratings of other professionals (Achenbach, 1991a).

Knowledge of Behavior Principles As Applied to Children (KBPAC).

Parents were asked to complete a revised parallel version of the KBPAC (Furtkamp, Giffort, & Schiers, 1982) at pretest and posttest to assess their knowledge of behaviour principles at they apply to children. Parents completing Form A (see Appendix A) at pretest completed Form B (see Appendix B) at posttest and vice versa. The short version of the KBPAC consists of 25-items with a multiple choice format and was designed to assess the understanding of the application of basic behavioural principles with children. The items avoid behavioural vocabulary and present practical problem situations in which respondents are asked to select the response which has the greatest probability of producing a desired effect. For example:

> Which of the following is most effective in getting a child to do homework? (a) "When you finish your homework you can watch TV," (b) "You can watch this

show on TV if you promise to do your homework when the show is over," (c) "If you don't do your homework tonight, you can't watch TV at all tomorrow," or (d) Explain the importance of school work and the dangers of putting things off. (KBPAC, Item 14; O'Dell, Tarler-Benlolo, & Flynn, 1979)

The original 50-item instrument, designed by O'Dell et al., (1979), was later split into two 25-item tests (using an odd-even split) to reduce administration time (Furtkamp et al., 1982). The KBPAC short forms were initially standardized on a total sample of 175 adults. For the 25 odd items (Form A): the mean number correct was 12.14 (SD = 4.61), with the Kuder-Richardson reliability estimated as .77, with a standard error of measurement estimated as 2.20. For the 25 even items (Form B): the mean number correct was 13.17 (SD = 4.17), with the Kuder-Richardson reliability estimated as .74, with a standard error of measurement estimated as 2.15. The correlations between the sets of odd and even items was calculated to be .63, with an adjusted correlation (for attenuation due to the unreliability of the tests) estimated as .83 (Furtkamp et al., 1982).

More recently, Sturmey, Newton, Milne and Burdett (1987) have found Forms A and B to have similar means, standard deviations and standard errors to those estimated by Furtkamp and associates. Further, Forms A and B were calculated to be correlated with the original KBPAC at .86 and .83 respectively. As a result, Sturmey et al. (1987) concluded that the 25-item Forms A and B of the KBPAC are robust and sensitive measures of individuals' knowledge of behaviour modification principles.

Dyadic Parent-Child Interaction Coding System (DPICS). Parents and children were assessed using the DPICS (Eyberg & Robinson, 1992). This measure was used as an aid to evaluate family functioning and to monitor treatment outcome. DPICS is a

multiple item paper-pencil coding system (consisting of 29 behaviour categories) comprising a direct observation procedure for monitoring interactions between parent and children ages 2 to 10 years. For this investigation, three separate summary variables from the parent behaviour categories were used: total praise, total critical statements and total no-opportunity commands (see Table 2).

Table 2

Parent DPICS Summary Variables

Summary variables	Description
Total praise	The total number of times a parent expresses a favorable judgment on an activity, product or attitude of the child. These judgments can be nonspecific verbalizations, unlabeled praise (e.g., Great; Nice; Good work,) or specific verbalizations, labeled praise (That's a terrific house you made; You have a beautiful smile.)
Total critical statements	The total number of verbalizations that find fault with the activities, products, or attitudes of the child (e.g., You're being naughty; That's a sloppy picture.)
Total no-opportunity commands	The total number of commands that the child is given no opportunity to comply with a command (e.g., command is vague; behaviour requested is not within the child's competence; parent quickly repeats the command; parent issues the command while child is already doing requested action; parent does the requested behaviour for the child

Note. Adapted from Eyberg, S. M. & Robinson, E. A. (1992, September). Dyadic Parent-Child Interaction Coding System: A manual. (Available from the Parenting Clinic, Department of Parent and Child Nursing, School of Nursing, University of Washington.)

For the target child, one variable was examined: total child deviance (see Table 3) (Webster-Stratton, 1990).

DPICS was initially standardized and validated on 42 families, with and without children referred for conduct problem behaviour (Robinson & Eyberg, 1981). DPICS was found to be a reliable, clinically practical research instrument which correctly classified 94% of conduct problem families and predicted 61% of the variance in parental report of behaviour problems within the home. Additionally, the mean interrater reliability was assessed as .91 for estimating the frequency of parental behaviours and .92 for estimating the frequency of child behaviours (Robinson & Eyberg, 1981).

Table 3

Child DPICS Variable

Variable	Description
Total child deviance	The sum of the frequency of whine, cry, physical negative, smart talk, yell, destructive and non-compliance ratings.
Whine	Words uttered in a slurring, nasal, high-pitched, falsetto voice.
Cry	Any inarticulate utterance.
Yell	A loud screech, scream, shout, or loud crying.
Physical negative	A bodily attack or attempt to attack the parent, such as hitting; slapping; biting; pinching; throwing something at the parent; kicking; pulling hair; twisting finger; standing on toe.
Smart Talk	Imprudent or disrespectful speech (e.g., You're stupid; No!; I hate you; Why should I?; Oh, that's just great.)
Destructive	Destroy, damages,, or attempt to damage any object, such as throwing blocks at a wall; banging toys on the table; kicking toy box.
Noncompliance	Child does not begin obeying a direct of indirect parental command (e.g., ignoring parent; refusing to obey; making an excuse; countermanding; arguing) within three seconds.

Note. Adapted from Eyberg, S. M. & Robinson, E. A. (1992, September). Dyadic Parent-Child Interaction Coding System: A manual. (Available from the Parenting Clinic, Department of Parent and Child Nursing, University of Washington.)

Procedure

After the initial referral was made, a behavioural consultant contacted the teacher and parent (after parental consent to do so had been acquired) and a meeting time to conduct the PII was arranged. During the PII, parents were asked to complete the KBPAC, along with other instruments utilized in the larger investigation. Prior to the PAI, parent-child dyads were videotaped interacting with their child utilizing the DPICS paradigm. When a child had both parents participating in the investigation, both parents completed the questionnaires and were videotaped separately. The questionnaires and play observations constituted a pretreatment level of functioning for both child and parent. Consent for treatment participation, and for the release of information (between the school and parents) was later obtained during the PAI.

Observations. The observational data for the DPICS was gathered by videotaping a parent-child dyad in a clinic playroom through a hidden camera or in the home or classroom of the child. In all cases, the room where videotaping took place was equipped with a small table and chairs, a toy box and five constructional toys (i.e., Tinkertoys, building blocks, puzzles, a toy house, colouring book and crayons; as suggested by Hembree-Kigin & Bodiford McNeil, 1995). Parent-child dyads were observed in three five-minute semistructured situations which differ in the amount of parental control elicited. The three situations included: child-directed interaction, parent-directed interaction, and clean up. In the child-directed situation, the child was allowed to play with whatever he or she chose and had the parent's undivided attention. This play situation usually brings out the child's most positive behaviour and enables the observer to see how parent and child interact under optimal conditions (Hembree-Kigin & Bodiford McNeil, 1995). During the parent-directed interaction, the parent chose the

activity and asked the child to play along. This situation is usually more challenging for the parent and child, but provides the observer the opportunity to view parental strategies to engage the child's cooperation and to examine how the child responds to directions. Often the child's disruptive and noncompliant behaviours can be observed (Hembree-Kigin & Bodiford McNeil, 1995). The clean up situation is thought to be the most challenging of all and if the child has significant behaviour problems, they are frequently observed here (Hembree-Kigin & Bodiford McNeil, 1995). In order to evoke these play situations, parents were given verbal instructions prior to each situation. The observer knocked on the playroom door indicating that the five minute observation period was complete, whereupon the observer opened the playroom door and gave the parent the next set of instructions. The exact instructions given to parents can be found in Appendix C. The three parent-child interaction situations were coded by recording the number of parent and child behaviours and verbalizations using tally marks on a coding sheet (see Appendix D). Specifically, the frequency of the use of parental unlabeled praise, labeled praise, no-opportunity commands and critical statements were tallied. For the children, the frequency of whining, crying, yelling, aggressive behaviour, destructive behaviour, smart-talk, and noncompliance was tallied. In addition, whether or not the parent responded to or ignored the aforementioned child behaviours was also recorded.

Observers (an undergraduate student and the author) were trained to administer DPICS and code the videotapes of the parent-child interactions. Initial observer training included reading the DPICS manual (Eyberg & Robinson, 1992), and coding videotaped interactions of parent-child dyads not associated with the research project. Both observers were trained to a minimum of 80% interrater reliability on practice videotapes prior to beginning the study (Webster-Stratton, Kolpacoff, & Hollinsworth., 1988).

Training consultants. Six advanced graduate students were hired and trained as consultants. Prior to commencing work with consultees, the students participated in a year-long training period. The training included: (a) reading the pertinent literature in the area (e.g., Bergan & Kratochwill, 1990, Kratochwill & Bergan, 1990); (b) a thorough examination of the CBC therapy manuals (Sheridan et al., 1996); (c) attending workshops which reviewed the theory of BC, the four phases of the consultation process; (d) conducting role-played CPII's and CPAI's until a level of at least 85% proficiency was reached using BC; and (e) experience in providing consultation services to parents or teachers. These consultation interviews were audio-taped and Dr. Sladeczek (Director of the McGill Behavioural Consultation Laboratory), listened to the taped consultation interviews and used the Consultation Objectives Checklist (COC; Kratochwill & Bergan, 1990) to ensure that the interviews' objectives were being met by the consultant. A minimum of 85% of an interview's objectives had to be met or the interview was repeated. The latter was performed to ensure the integrity of the consultation procedures, as implemented by the consultant. Additionally, consultants were familiarized with therapy issues such as providing support for consultees, dealing with resistance, and empowering parents.

Pretreatment and posttreatment assessment. The SSRS, and the CBCL were administered at two time points during the investigation. These measures were initially administered prior to treatment as part of the screening process, and as a measure of baseline functioning. The SSRS and CBCL were also administered posttreatment and to assess treatment outcome. The KBPAC was administered at pretreatment and posttreatment. All measures were administered in order to analyze treatment effectiveness after CBC. Similarly, parents and children were videotaped interacting

within the framework specified by the DPICS, prior to treatment implementation and after its completion.

At pretest and posttest the parent variables "knowledge of behavioural principles" (as measured by the KBPAC), and the frequency of "total praise", "critical statements" and "no opportunity commands" (as measured by the DPICS) were examined. Additionally, the frequency with which parents "ignore" their child's deviance (rather than "respond to") was also investigated. In a like manner, child target behaviours (identified during the PII), problem behaviours (as measures by the SSRS, and the CBCL), social skills (as measured by the SSRS) and the variable "total child deviance" (i.e., the frequency of "whine", "cry", "yell", "physical negative" and "smart talk"; as measured by the DPICS) were examined.

Target behaviours. Specific target behaviours for each child were identified and defined during the CPII. The frequency of each child's target behaviour was determined at baseline and monitored across all aspects of the consultation process.

Experimental treatment. The experimental treatment in this investigation is CBC combined with a self-help manual-based approach. CBC with parents occurred via the three interviews (i.e., CPII, CPAI, CTEI) described previously. All interviews were conducted either in the participants' home, or at the child's daycare/school. Two self-help treatment manual(s), (Kratochwill & Elliott; 1992a; Kratochwill & Elliott; 1992b) were introduced during the CPAI and used to help parents work collaboratively with teachers to reduce children's conduct problems at home and at school (parallel teacher versions of the manuals were used at school). Between the CPAI and the CTEI the consultant and consultees maintained weekly contact to determine how the child was responding to treatment, and whether or not revisions to the treatment plan needed to be

made. Three to six weeks were allotted for consultees to implement the treatment plan, with a mean treatment duration of 4.75 weeks across five cases.

The skills selected and taught from the manual, to the parents, as part of the treatment intervention were based on problems identified during the CPII, the results of the pretreatment assessment (i.e., SSRS and CBCL) and observational data gathered by the parents prior to the CPAI. The teaching of skills and review of relevant components of the manual occurred during the CPAI. The skills presented in the manuals are comprised of the following components: skill selection, goal setting, peer activity, and child management or positive reinforcement.

Skill selection. This section of the treatment manual (along with parental responses on the SSRS) was used to help parents identify the area their child was experiencing the most significant difficulties and select an appropriate skill or behaviour for their child to work on. One behaviour 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 the 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 peer(s) 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 behaviours are expected from him or her (e.g., sharing, taking turns), (f) praising the child and peer for positive behaviour, (g) ending the activity after 10 to 15 minutes, and (h) providing the child with feedback.

Child management. The child management section of the manual consisted of three main skills: differential 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, 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 8 to 10 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 noncompliance. Finally, time away was introduced as an interruption of a child's unacceptable behaviour by removing him/her from a situation for a brief period of time (i.e., 3 to 5 minutes). Parents were instructed to make the following decisions prior to using time away; (a) the behaviours which would result in its use, (b) the number of minutes the child would 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 via 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 behaviours. 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., stickers, extra play time) 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 behaviour and to aid the child in reaching his or her goal.

Experimental Design.

This investigation utilized a single-subject A/B repeated measures research design. A single-subject design is an empirical investigation which examines the effects of a series of experimental manipulations on a single participant and the reasons for these effects (e.g., Kazdin, 1982; Kratochwill, 1978; Wilson, 1996). The underlying rationale of single-subject experimental design is similar to that of traditional between group research, in that the researcher compares the effects of different conditions on performance (Kazdin, 1982).

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 target behaviour. Due to attaining an estimate of the natural occurrence of the target behaviour, each participant acted as his own control, in that baseline data collected for each participant served as a criterion to evaluate whether participation in CBC led to change.

Presumably, if CBC was effective, the occurrence of the participant's target behaviour during treatment would differ from the estimated occurrence at baseline.

CHAPTER IV

Results

This section is organized in the following format: (a) statement of the hypothesis, (b) description of the analyses used to test the hypothesis, and (c) the result of the analyses. The aforementioned format will be repeated for each of the six hypotheses being tested.

Hypothesis 1. It was hypothesized that CBC will be effective in producing positive changes in children's conduct problem target behaviours (as measured by direct observation) from baseline to treatment.

To assess the effectiveness of treatment and test the hypothesis that CBC is an effective means of producing positive changes in children's conduct problem target behaviours, the effect size (ES) statistic was used. The ES takes into account the lack of independence in the data, typical of repeated observations of the same individual. Effect sizes are interpreted as standard deviation units expressed in terms of *z* scores. Thus, effect sizes are positive when the incidences of the target behaviour during the treatment phase are higher than the incidences of the target behaviour during the baseline phase and negative when the incidences of the target behaviour during the treatment phase are lower than the incidences of the target behaviour during the baseline phase (Gresham & Noell, 1993). For example, an effect size of +1.00 would indicate that the incidences of the target behaviour during treatment were 1 standard deviation greater than the incidences of the target behaviour during baseline. The ES is computed by dividing the difference between the baseline and treatment phase means by the standard deviation of the baseline phase (Busk & Serlin, 1992). This is expressed in the following formula:

$$ES = \frac{\bar{X}_{treatment} - \bar{X}_{baseline}}{SD_{baseline}} \quad (1)$$

where

$$SD = \sqrt{\frac{N\sum X^2 - (\sum X)^2}{N(N-1)}} \quad (2)$$

Separate ES's evaluating the changes in target behaviour were computed for each child. All five children's target behaviours improved from baseline to treatment. The ES's ranged from -0.54 to a -2.10. Thus, Child 2 and Child 4 evidenced significant treatment gains (see Figures 1 and 2 respectively), while Child 1, Child 3, and 5 evidenced moderate improvements in their target behaviours (see Figures 3, 4, and 5 respectively).

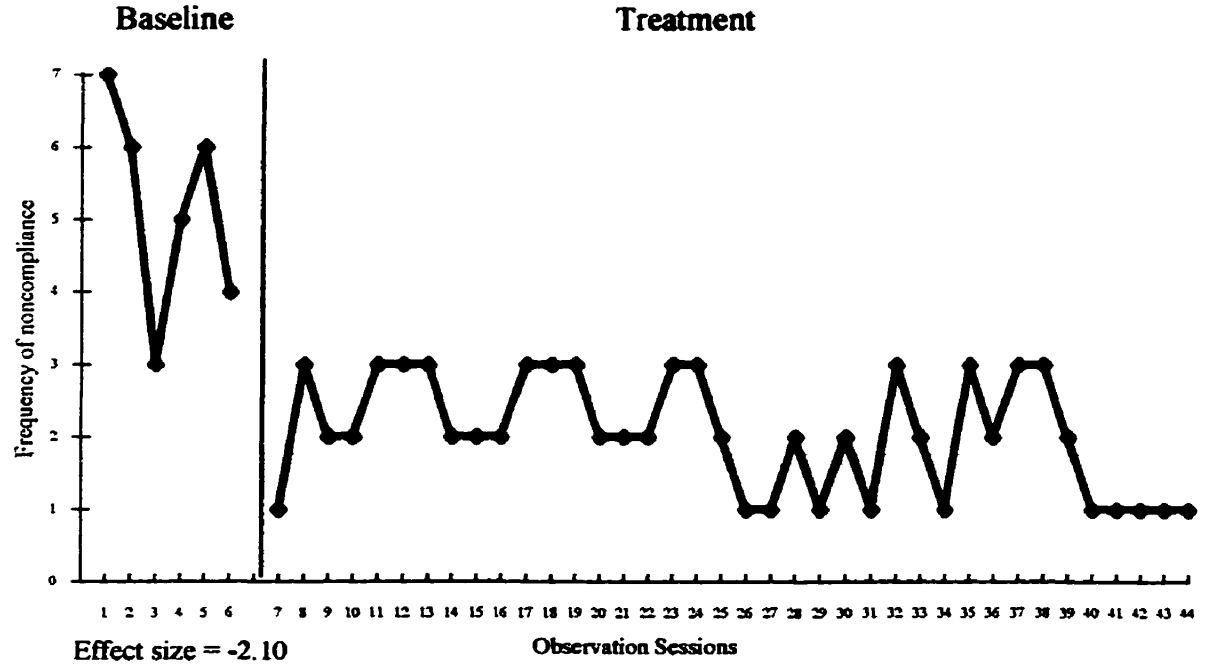

Figure 1. The frequency of Child 2's noncompliant behaviours as observed by mother across conditions.

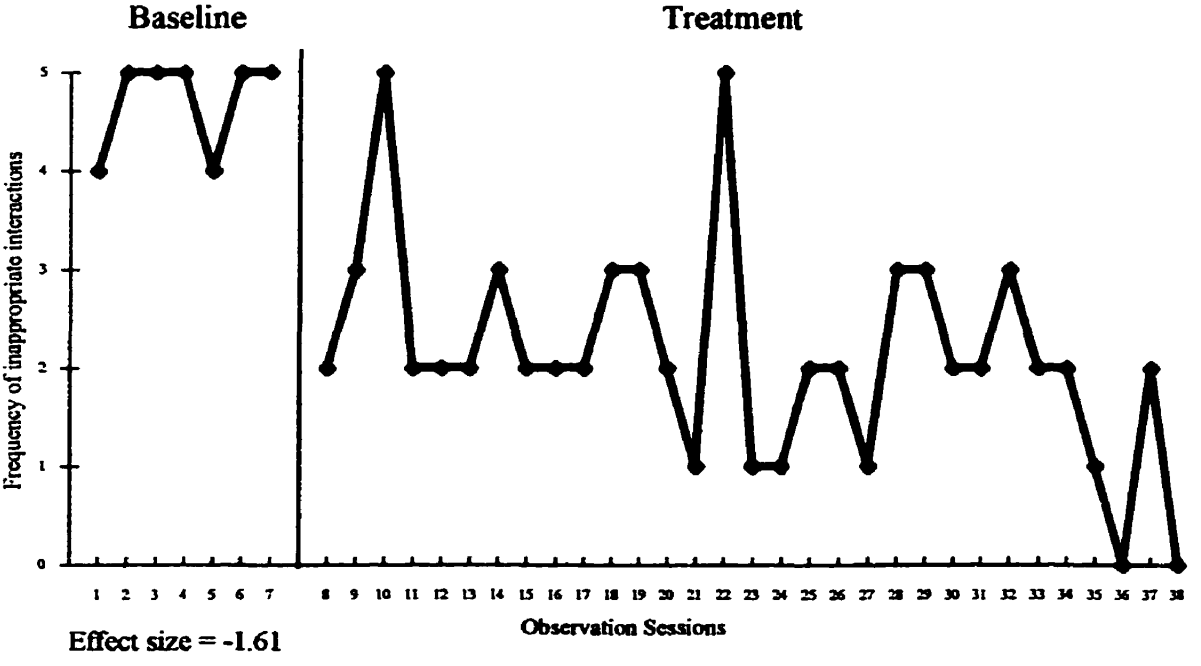

Figure 2. The frequency of Child 4's inappropriate interactions as observed by mother across conditions.

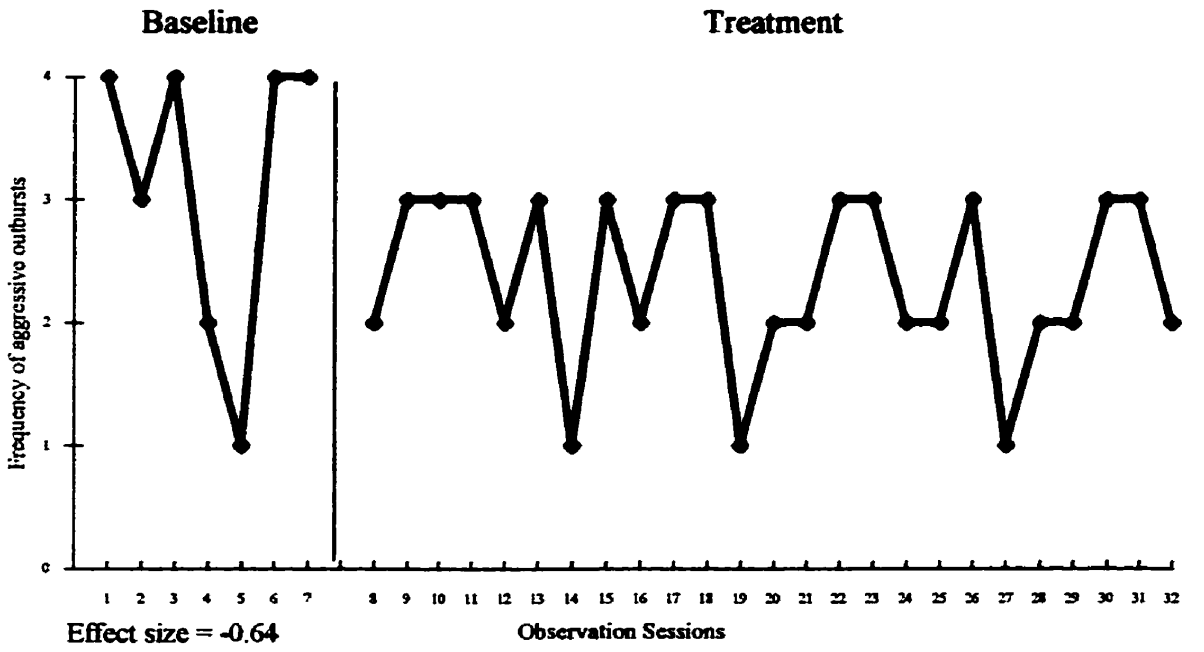

Figure 3. The frequency of Child 1's aggressive outbursts as observed by mother across conditions.

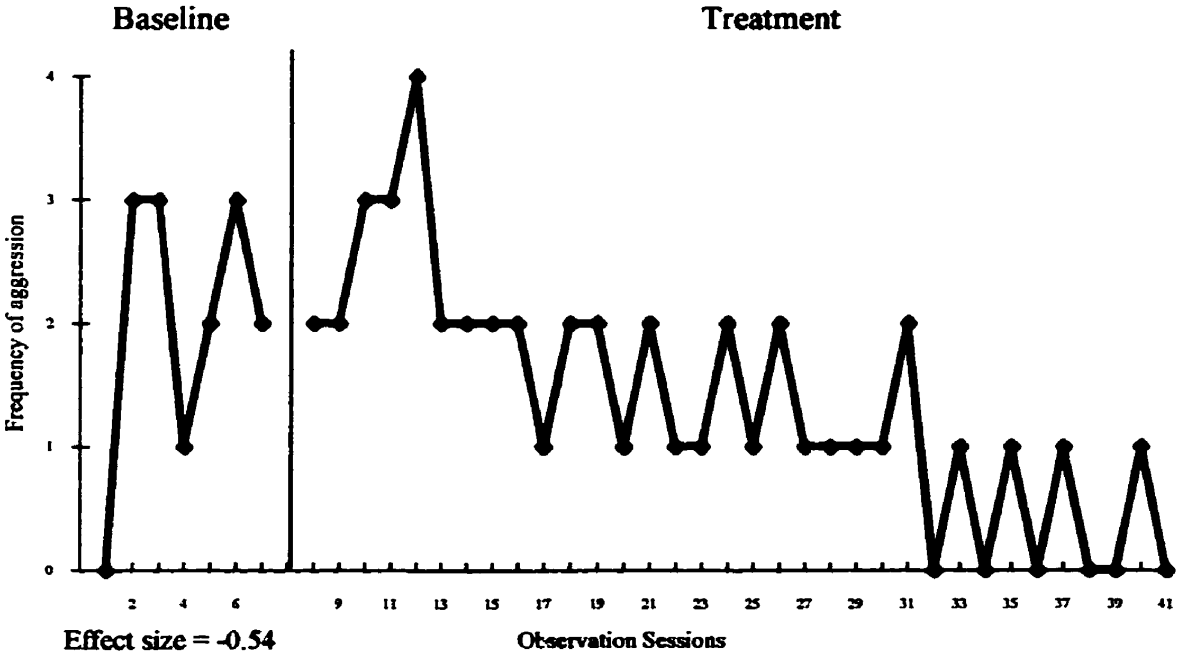

Figure 4. The frequency of Child 3's aggressive behaviours as observed by mother across conditions.

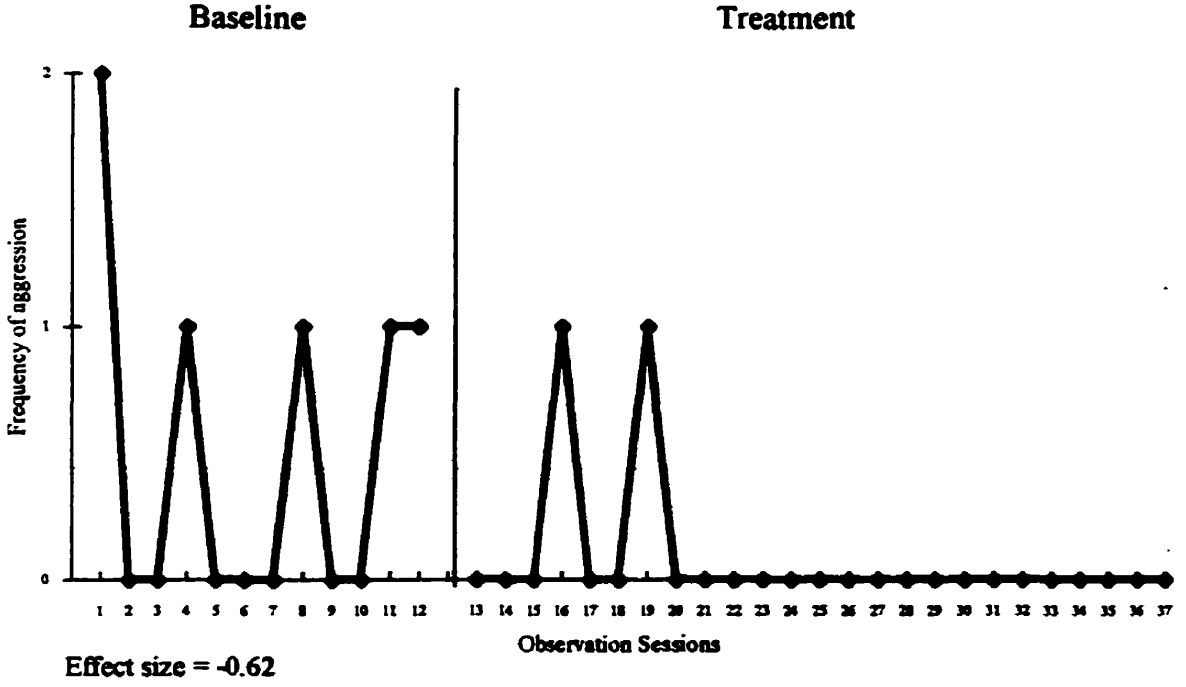

Figure 5. The frequency of Child 5's aggressive behaviours as observed by mother across conditions.

Hypothesis 2. It was hypothesized that CBC is effective in producing improvements in children's social skills, problem behaviours, and externalizing behaviours from pretest to posttest.

To test the hypothesis whether CBC is an effective means of producing improvements in children's social skills, problem behaviours, and externalizing behaviours from pretest to posttest, the Reliable Change Index (RC; Cristensen & Mendoza, 1986) was computed for each participant, on each of the following variables: (a) social skills (as measured by the Social Skills subscale on the SSRS-parent version), (b) problem behaviours (as measured by the Problem Behaviour subscale on the SSRS-parent version), and (c) externalizing behaviours (as measured by the Externalizing subscale of the CBCL).

The RC was used to assess the magnitude of change per participant on the variables being investigated at pretreatment and posttreatment. By this method, the RC was utilized to determine whether improvement and treatment effectiveness was statistically and clinically reliable (Jacobson & Truax, 1991). To calculate the RC, participants' baseline score (on each applicable variable) was subtracted from his/her posttreatment score on that variable and divided by the standard error of difference (S_{diff}) between the two scores (Jacobson & Truax, 1991). The computational formula is as follows:

$$RCI = \frac{x_{treatment} - x_{baseline}}{S_{diff}} \tag{3}$$

where

$$S_{diff} = \sqrt{2(S_E)^2} \tag{4}$$

The standard error of measurement (S_E) is calculated using the standard deviation and the test-retest reliability of the measure. This formula is written as follows:

$$S_E = s_1\sqrt{1 - r_{xx}} \tag{5}$$

where s_1 is the standard deviation of the data during the baseline phase and r is the reliability of the measure. An RC of $\pm$ 1.96 is considered statistically significant ($p < .05$), and thus any RC equal to or greater than this critical value indicates a reliable degree of change occurred as a result of the intervention (Jacobson, Follette, & Revenstorf, 1984).

Table 4 shows the pretest standard scores, posttest standard scores, the overall

mean scores, with standard deviations for child participants on the Social Skills and Problem Behaviour subscales of the SSRS and the Externalizing scale of the CBCL. Overall, posttest group means for social skills were higher than at pretest. Moreover, children's problem behaviours and externalizing problems were rated as being greater at pretreatment than at posttreatment.

Table 4

Pretest and Posttest Standard Scores, Overall Mean Scores and Standard Deviations of the Social Skills and Problem Behaviour Subscales of the SSRS and of the Externalizing Scale of the CBCL.

	SSRS[a]		CBCL[b]
	Social Skills	Problem Behaviours	Externalizing
Child 1[a]			
Mother (pretest)	66	130	62
Child 2			
Mother (pretest)	87	112	66
Mother (posttest)	88	91	60
Child 3			
Mother (pretest)	89	108	68
Mother (posttest)	87	105	54
Father (pretest)	89	108	68
Father (posttest)	90	105	54

[a] Posttest data are not available on this participant.

Table 4 (continued)

Pretest and Posttest Standard Scores, Overall Mean Scores and Standard Deviations of the Social Skills and Problem Behaviour Subscales of the SSRS and of the Externalizing Scale of the CBCL.

	SSRS[a]		CBCL[b]
	Social Skills	Problem Behaviours	Externalizing
Child 4			
Mother (pretest)	120	97	56
Mother (posttest)	92	89	50
Child 5			
Mother (pretest)	81	107	65
Mother (posttest)	106	91	51
Means			
pretest (n=6)	88.67	110.33	64.17
posttest (n=5)	92.60	96.20	53.80
SD			
pretest (n=6)	17.65	10.86	4.58
posttest (n=5)	7.73	8.07	3.90

[a] Scores are Standard Scores. [b] Scores are T scores.

To assess the degree to which the changes in social skills, problem behaviours, and externalizing behaviours were clinically and statistically significant, the RC was calculated for each child on each measure. RC Indices for Child 2, Child 3, Child 4, and Child 5 are presented in Table 5. An RC Index on Child 1 could not be computed as posttest measures were unavailable. The results of the analyses suggest that CBC was effective in significantly reducing Child 3's externalizing behaviours. In addition, Child 5's social skills increased significantly, while his externalizing problems significantly decreased. Conversely, Child 4's social skills were rated as significantly decreasing.

Table 5

Reliable Change Indices on the Social Skills and Problem Behaviour Subscale Scores of the SSRS and of the Externalizing Scale Scores of the CBCL .

		SSRS		CBCL
Participant	Rater	Social Skills[a]	Problem Behaviours[b]	Externalizing[c]
Child 2				
	mother	0.13	-1.67	-1.60
Child 3				
	mother	-0.26[d]	-0.24	-3.74*
	father	0.13	-0.24	-3.74*
Child 4				
	mother	-3.66*[d]	-0.64	-1.60
Child 5				
	mother	3.05*	-0.78	-3.74*

[a] r = .87. [b] r = .65. [c] r = .93. [d] indicates RC is not in the expected direction

*p < .05.

Hypothesis 3. It was predicted that there would be a significant increase in parent's knowledge of behavioural principles as applied to children from pretest to posttest.

The mean pretest and posttest scores on the KBPAC, across Parents 2, 3, 4, and 5 were calculated. Mother 1's data were not included in the analyses as posttest measures were not available. Collectively, parental posttest knowledge of behavioural principles (M = 10.42, SD = 5.86) was greater than parental pretest knowledge of behavioural principles (M = 7.42, SD = 1.99). However, to test the aforementioned hypothesis, the RC was computed utilizing parents' pretest and posttest scores on the KBPAC. The Kuder-Richardson reliability measure coefficient (0.94) from the original 50-item instrument (O'Dell et al., 1979) was used as the reliability measure in the RC formula as participants completed all 50-items across pretest and posttest assessments (i.e., Form A at pretest and Form B at posttest or vice versa). In addition, the SD used in computing the RC depended on the version of the KBPAC (i.e., Form A or Form B) that parents completed at pretest (i.e., Form A SD = 4.61, Form B SD = 4.17).

RC Indices for Mother 2 and Father 2, Mother 3 and Father 3, Mother 4, and Mother 5 and Father 5 were computed. The RC results indicated that 2 of the parents (i.e., Mother 2 and Mother 4) evidenced significant gains in their knowledge of behavioural principles as they apply to children, whereas Father 5 evidenced a significant decrease in his posttest knowledge of behavioural principles as measured by the KBPAC. See Table 6 for the RC results.

Table 6

Reliability Change Indices for Parents Knowledge of Behavioural Principles.

	Mother	Father
Child 2	8.77*	1.25
Child 3	-0.63 [a]	0.00
Child 4	2.77*	--
Child 5	1.39	-2.77* [a]

Note. Dashes indicate that data were not available.

[a] indicates RC is not in the expected direction

*$p < .05$

Hypothesis 4. It was hypothesized that there would be a significant improvement in parenting skills (i.e., increased use of praise, decreased use of no-opportunity or vague commands, and decreased use of critical statements) from pretest to posttest.

Videotaped data of parent-child interactions were gathered on Mother 2 with Child 2, Father 2 with Child 2, Mother 3 with Child 3, Father 3 with Child 3, and Mother 4 with Child 4. All pretreatment and posttreatment DPICS videotapes were coded independently, first by the undergraduate research assistant who acted as primary coder and was not informed of the hypotheses of the study and then by the author (who acted as secondary coder). Interrater reliability between the two coders was: .90 for total child deviance, .98 for total critical statements, .99 for total praise, and .99 for no-opportunity commands. The primary coder's observations were used in the computations.

The frequency of each of the target parenting behaviours (i.e., total praise, critical

statements, and no-opportunity commands) were added together across parent-child play situations (i.e., Child-directed Interaction, Parent-directed Interaction, and Clean-up) to form three composite scores (i.e., Total Praise, Total Critical Statements, and Total No-opportunity Commands) for each parent. As the DPICS data does not yield the necessary statistics to calculate a RC, the three composite scores will be discussed descriptively.

Individually, (as Figure 6 indicates) Mother 2's use of praise increased (9 vs. 89) from pretest to posttest. Moreover, her use of critical statements decreased (6 vs. 0). However, her use of no-opportunity commands increased (66 vs. 73) at posttest when compared to pretest observations.

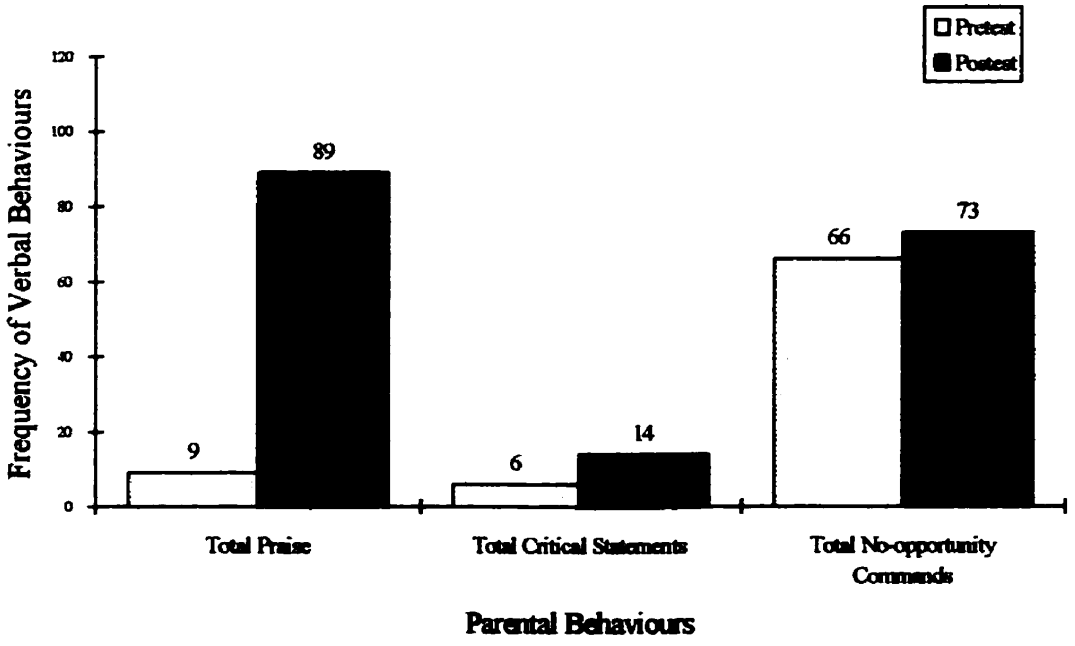

Figure 6. Frequency of Mother 2's verbal behaviours during pretest and posttest observation sessions

Father 2 (as indicated by Figure 7) also increased his use of praise (15 vs. 16) from pretest to posttest. In addition, his use of critical statements decreased (17 vs. 2).

Likewise, his use of no-opportunity commands decreased (105 vs. 56) at posttest when compared to pretest observations.

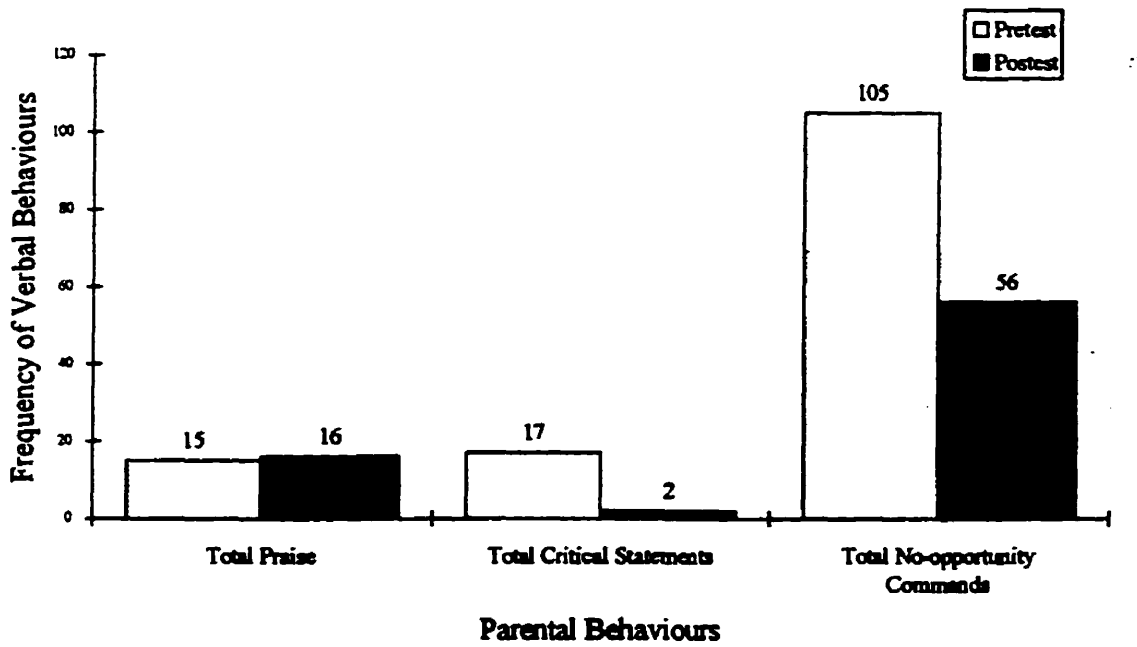

Figure 7. Frequency of Father 2's verbal behaviours during pretest and posttest observation sessions

Mother 3's use of praise remained unchanged (5 vs. 5) from pretest to posttest. However, her use of critical statements and no-opportunity commands increased (13 vs. 14 and 14 vs. 22 respectively) at posttest when compared to pretest observations (see Figure 8).

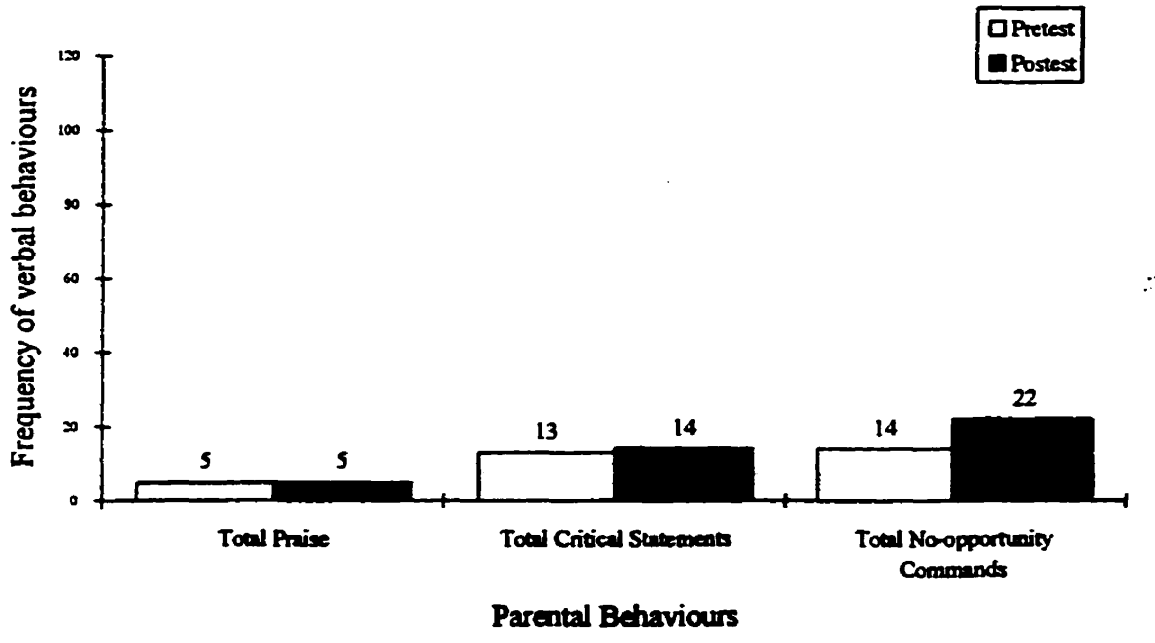

Figure 8. Frequency of Mother 3's verbal behaviours during pretest and posttest observation sessions

Father 3's use of praise increased (0 vs. 5) from pretest to posttest. However his use of critical statements and no-opportunity commands increased (8 vs. 22 and 26 vs. 50 respectively) at posttest when compared to pretest observations (see Figure 9).

An examination of Mother 4's interactions (see Figure 10) indicated that her use of praise increased (0 vs. 5) from pretest to posttest. In addition, her use of critical statements decreased (6 vs. 4). Likewise, her use of no-opportunity commands also decreased (23 vs. 15) at posttest when compared to pretest observations.

Figure 9. Frequency of Father 3's verbal behaviours during pretest and posttest observation sessions

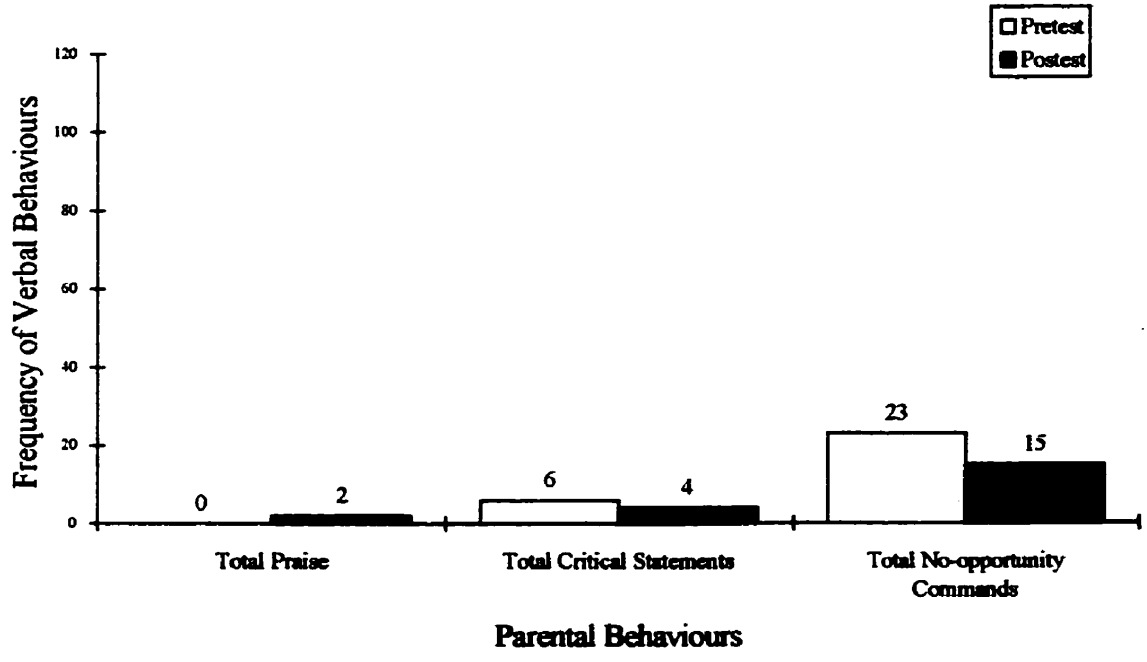

Figure 10. Frequency of Mother 4's verbal behaviours during pretest and posttest observation sessions

Overall, parents used more praise at posttest (M = 23.40, SD = 37.06) than at pretest (M = 5.80, SD = 6.37) and used less critical statements at posttest (M = 8.40, SD = 9.31) than at pretest (M = 10.00, SD = 4.85). Moreover, parental use of no-opportunity commands decreased from pretest (M = 46.80, SD = 38.18) to posttest (M = 43.20, SD = 24.20), although there was high disparity across participants in their use of praise, critical statements, and no-opportunity commands when interacting with their children.

Hypothesis 5. It was predicted that increased parental knowledge of behavioural principles as applied to children would be related to improvements in parenting skills (i.e., increased use of praise, decreased use of no-opportunity, and decreased use of critical statements).

To test this hypothesis, a difference score was calculated for; (a) parental knowledge of behavioural principles, (b) parental use of praise, (c) parental use of no-opportunity commands, and (d) parental use of critical statements for Mother 2, Father 2, Mother 3, Father 3, and Mother 4. The difference scores were computed by subtracting the pretest score on each variable from the posttest score. These difference scores represent a measure of change from pretest to posttest. Correlations between the difference scores for parental knowledge of behavioural principles and the difference scores for parenting skills were then examined for the strength and direction of their relationship.

The results indicated that increased parental knowledge of behavioural principles as they apply to children was significantly correlated to parental use of praise during behavioural observations (r = 0.95, p < .05). In addition, increased parental knowledge of behavioural principles as they apply to children was correlated in the expected direction to parental use of critical statements (r = -0.36, p >.05), although this

relationship did not reach significance. Further, parental use of no-opportunity commands was not related to gains in parental knowledge of behavioural principles (r = -0.04, p >.05).

Hypothesis 6. It was anticipated that improvements in parenting skills (i.e., increased use of praise, decreased use of no-opportunity, and decreased use of critical statements) would be negatively correlated to child deviance (i.e., the frequency of whining, crying, yelling, aggression, smart-talk, destructive behaviour and noncompliance).

To test this hypothesis, a difference score was calculated for; (a) total child deviance of Child 2, 3, and 4, (b) parental use of praise, (c) parental use of no-opportunity commands, and (d) parental use of critical statements for Mother 2, Father 2, Mother 3, Father 3, and Mother 4. The difference scores were computed by subtracting the pretest score on each variable from the posttest score. These difference scores represent a measure of change from pretest to posttest. Correlations between the difference scores for total child deviance and the difference scores for parenting skills were then examined for the strength and direction of their relationship.

Although the correlations between improved parenting skills (i.e., increased use of praise, decreased use of no-opportunity, and decreased use of critical statements) and child deviance were in the expected direction, their relationships did not reach statistical significance. Specifically, as parental use of praise increased, child deviance decreased (r = -0.22, p >.05). Conversely, as parental use of critical statements decreased, so did child deviance (r = 0.61, p >.05). Likewise, as parental use of no-opportunity commands decreased, so did child deviance (r = 0.37, p >.05).

CHAPTER V

Discussion

The purpose of this investigation was to examine the effects of CBC in treating conduct problems in children. Specifically, this investigation sought to determine whether CBC was effective in producing improvements in children's conduct problem target behaviours (e.g., aggression, noncompliance) and examine changes in parental knowledge of behavioural principles and parenting skills. From this investigation five findings were obtained: (a) CBC was found to be effective in producing positive changes in children's conduct problem target behaviours at home; (b) each child evidenced improvements in social skills, problem behaviours and/or externalizing behaviours; (c) overall parents knowledge of behavioural principles as applied to children increased; (d) in general parenting skills improved as a result of participation in CBC; and (e) increases in parental knowledge of behavioural principles was significantly related to increased use of parental praise during parent-child interactions.

Changes in Target Behaviours

The finding that the children's target behaviours improved from baseline to treatment provides additional evidence for the efficacy of CBC with children experiencing conduct problems (Carrington-Rotto & Kratochwill, 1994, Dunson et al., 1994; Robinson, 1996; Sladeczek, 1996; Sladeczek et al., 1996). In addition, these data corroborate the work of earlier researchers also utilizing CBC combined with a self-help manual-based approach (Sladeczek et al., 1996) where data by parents suggested positive treatment outcomes for children with behavioural difficulties.

Positive gains were documented for Child 1 from baseline to treatment. Specifically, he evidenced a reduction in aggressive outbursts at home, indicating that he

was screaming, throwing objects, hitting, pulling hair, and crying with a lesser frequency (i.e., from four to five times per day at baseline to two or three times) than prior to intervention. This finding is impressive as duration of treatment for Child 1 was only two weeks. Child 1's mother attributed the positive changes in her son's behaviour to the treatment program.

Child 2 also evidenced a reduction in his target behaviour. Parental reports and observations indicated that Child 2's attentive behaviour, adherence to directives, and compliance to established household rules improved greatly over the course of treatment. Both Child 2's mother and father credit CBC for the improvements in their son's behaviour.

Child 3 evidenced a decrease in the frequency of his aggressive behaviours from baseline to treatment. Further, parental reports indicated that the intensity of Child 3's aggressive acts decreased as well. Mother 3 reported that her son had begun to self-monitor his behaviour (i.e., he would reach out his hand to strike, then quickly retract his arm and sit on his hand without prompting). In addition, she stated that she felt treatment had generalized to other behaviours not targeted for intervention (e.g., smart talk). When asked, both Child 3's mother and father credit CBC for the improvements in their son's behaviour.

Child 4 evidenced a decrease in his target behaviour of inappropriate social interactions. Moreover, Child 4's mother reported that he was increasingly playing appropriately with other children in the neighborhood, speaking in a normal tone of voice while indoors and complying to household rules. Child 4's mother attributed her son's improvements to the treatment program.

Child 5 also demonstrated improvements in his target behaviour from baseline to

treatment. In fact, his aggressive behaviours including; hitting, biting, spitting, pinching, kicking, and pushing had ceased completely during the latter two weeks of treatment. Both Child 5's mother and father credit CBC for the improvements in their son's behaviour. Hence, the improvement in each child's target behaviour from baseline to treatment provides further corroboration that CBC is an effective means of treating children with conduct problems.

Changes in Social Skills, Problem Behaviours, and Externalizing Difficulties

Support for the hypothesis that CBC would be effective in producing improvements in children's social skills, problem behaviours, and externalizing behaviours was also found. Each child evidenced improvements in their social skills, their problem behaviours and/or their externalizing difficulties with the majority of children (three of four) evidencing statistically significant improvements in one or more domains. This finding corroborates the results of a previous investigation examining the efficacy of CBC combined with the same self-help manual-based approach to treat children with behavioural difficulties (Sladeczek et al., 1996). The results of the research by Sladeczek and her colleagues (1996) indicated that children's social skills increased and problem behaviours decreased, although these gains did not reach "statistical significance" on standardized measures (i.e., the SSRS and CBCL). However, in the present study, children evidenced gains reaching statistical significance on the same standardized measures used in the aforementioned investigation. It is believed that by using single case analyses in the present study, it was possible to detect individual improvements in children's behaviour problems. Whereas Sladeczek and her colleagues (1996) used group analyses and thus, may not have had enough power to detect true differences.

Improvements in social skills, problem behaviours, and externalizing behaviours from pretest to posttest were evident for Child 2. Similarly, mother's and father's ratings of Child 3's behaviour indicated that his social skills increased and his problem behaviours deceased. Moreover, he experienced a statistically reliable degree of improvement in his externalizing behaviours as rated by both mother and father.

Child 4 experienced a decrease in his problem behaviours and externalizing difficulties. However, according to his mother's ratings, Child 4 did not obtain statistically reliable treatment gains. In fact, she rated Child 4 as having significantly fewer social skills at posttest than at pretest. A reported increase in awareness of her son's difficulties as a result of her involvement in the consultation process is thought to account for the decreased social skills rating. She explained to the consultant that she had not previously recognized that her son was different from typical children, until she began to systematically observe his social interactions. Upon reflection, she reported that her initial rating of her son's social skills was an overestimate of his capabilities.

Child 5 however, evidenced a statistically reliable degree of change across all three domains. Specifically, his social skills improved, his problem behaviours decreased, and his externalizing difficulties decreased from pretest to posttest. Overall, improvements in social skills, problem behaviours, or externalizing difficulties were detected for each child providing support for a preceding study examining the efficacy of CBC combined with the same self-help manual-based approach to treat children with behavioural difficulties (Sladeczek et al., 1996).

Changes in Parental Knowledge of Behavioural Principles as Applied to Children

Preliminary results indicated that *overall* parental knowledge of behavioural principles improved after involvement in CBC. While the knowledge gained by parents

during CBC had formerly not been examined, these data mirror previous findings within the parent training literature (i.e., McLoughlin, 1985; Pevsner, 1982). Specifically, Pevsner (1982) found that parents' posttest knowledge of behavioural principles as applied to children improved when they received parent training plus group behaviour therapy verses individual family therapy. Correspondingly, McLoughlin (1985) also found that parents showed gains in knowledge of behavioural principles as they applied to children after training in behaviour management techniques.

The finding that parental knowledge of behavioural principles increases as a result of participation in CBC also advances the research in the area of consultation. By virtue of previous research focusing primarily on child outcome measures (e.g., Colton, Sheridan, Jenson, & Malm, 1995; Sheridan et al., 1990), a key component assumed to influence treatment success, (e.g., parents' knowledge of behaviour management strategies) has been overlooked. Moreland and his colleagues (1982) stress the importance of examining parental competence when parents take a direct role in treating their children. Consequently, the finding that parental knowledge of behavioural principles increases as a result of participation in CBC provides preliminary evidence for one of the fundamental assumptions of consultation (i.e., the imparting of knowledge and skills in consultees; Kratochwill & Bergan, 1990). Further, by identifying the variables which make consultation effective, consultants can more readily target them during intervention. Although further examination of parental knowledge of behavioural principles as a key variable related to treatment efficacy is warranted, the results of this investigation are encouraging.

Change in parental knowledge as a consequence of CBC varied from pretest to posttest. More specifically, Mother 2 evidenced a statistically reliable degree of

improvement in her knowledge of behavioural principle from pretest to posttest. In fact, her posttreatment score on the KBPAC was triple that of pretreatment assessment. Similarly, Father 2 evidenced increased knowledge of behavioural principles, although this improvement did not reach significance. However, Mother 3's knowledge of behavioural principles decreased, while Father 3's knowledge of behavioural principles remained unchanged. Mother 4's knowledge of behavioural principles evidenced a statistically reliable degree of improvement from pretest to posttest. Similarly, Mother 5's knowledge of behavioural principles increased although this improvement did not reach significance. Conversely, Father 5's knowledge of behavioural principles worsened significantly from pretest to posttest. Further investigation is necessary to determine why Father 5's score decreased. However, as the father played a less active role in implementing the strategies being imparted during CBC, it is hypothesized that he may have not wholly understood the underlying behavioural principles and meshed them with prior beliefs he had regarding childrearing. In addition, individual differences in the extent to which parents read and studied the self-help manuals could explain the mixed results.

Changes in Parenting Skills

Collectively, parents used more praise at posttest than at pretest and used less critical statements at posttest than at pretest. Moreover, overall parental use of no-opportunity commands decreased from pretest to posttest. These findings are in accordance with previous literature within the parent training domain (Webster-Stratton et al, 1988; Webster-Stratton, 1994) which revealed that parental use of praise increased, use of critical statements decreased and use of no-opportunity commands decreased at posttest after parental involvement in parent training (Webster-Stratton, 1989). The

findings of the current study suggest that CBC is an effective means of improving and imparting parenting skills. In addition, these data offer empirical support for the underlying theory that CBC is effective by way of consultees gaining knowledge and skills to effectively alter the environment of a child (Kratochwill & Bergan, 1990). Previously, within the behavioural consultation paradigm, it was assumed that improvements in children's behaviour problems were a consequence of skill acquisition by parents. However, heretofore, this assumption has not been empirically scrutinized.

Closer scrutiny of parental skill acquisition indicates that Mother 2 evidenced increased use of praise at posttest compared to pretest. However, she also employed more critical statements and more no-opportunity commands posttreatment. Unfortunately, the latter two findings do not mirror the effective use of strategies this mother employed during posttreatment observations. She distinctly ignored Child 2's inappropriate behaviour, immediately attending to and praising (using both labeled and unlabelled praise) appropriate behaviour upon its commencement. In comparison, during the pretest observation session Mother 2 was unable to engage her son in her choice of activity during the parent-directed interaction. Moreover, the child repeatedly defied her request (and the examiner's) to stay in the observation room during the session. Father 3 evidenced an increase in his use of praise and a decrease in his use of critical statements and no-opportunity commands, whereas Mother 4's use of praise remained the same, however her use of critical statements and no-opportunity commands increased posttreatment. Father 3 did not praise during pretest observations but did at posttest. However, he also employed more critical statements and more no-opportunity commands posttreatment. In fact, Father 3 hardly spoke to his child during pretest and did not direct his son to follow the specifications of the observation situations. In contrast, he actively

engaged in play, set limits on his son's behaviour, and conversed with his son during posttest observation, thus explaining the overall increase in verbal behaviours. Mother 4 also did not make use of praise during the initial play observation. However, at posttest her use of praise had increased and her use of critical statements and more no-opportunity commands had decreased.

Although not formally examined in this investigation, it was noticed that there was noted variability across participants in their use of praise, critical statements, and no-opportunity commands when interacting with their children. Further, the frequency of parental interactions (i.e., use of praise and critical statements and no-opportunity commands) increased following treatment.

Parental Knowledge of Behavioural Principles and Parenting Skills

The prediction that increased parental knowledge of behavioural principles as applied to children would be related to improvements in parenting skills was partially supported. Increased parental knowledge of behavioural principles was significantly related to increased use of praise. A statistically significant relationship between the use of critical statements was not detected, although the results were in the expected direction (i.e., as knowledge of behavioural principles increased, use of critical statements decreased). These findings are important in that no prior investigation within the CBC literature has explored whether parental increases in knowledge translated into more skilled parenting behaviour. However, the results are in accordance with data indicating that parents have increased confidence in their parenting abilities and an enhanced sense of efficacy in dealing with future child related problems after involvement in CBC (Finn, Sladeczek, & Illsley, 1997).

The finding that increased parental use of praise is related to increases in parental

knowledge indicates that targeting what parents understand about behavioural principles may be an important aspect of skill implementation and intervention planning. For example, all parent participants received instruction in the use of praise as a reward when children are behaving appropriately via the self-help manuals. Their increased understanding of the principles underlying the use of praise may have increased the likelihood of parents implementing the strategy. Further, the predicted relationship, but lack of statistical significance between use of critical statements and parental knowledge of behavioural principles could be accounted for by the benefits of the decreased use of critical statements (e.g., "You're being bad") not distinctly being presented to parents as a child management technique (although ignoring was). Further, the items on the KBPAC do not relate specifically to the use of critical statements per se. Nonetheless, what parents know about behavioural principles appears to have a significant bearing on their use of praise.

Parental Skill and Child Deviance

The lack of relationship between improved parenting skills during observed parent-child interactions and decreased child deviance contradicts previous findings utilizing the DPICS as an outcome measure in parent training (Webster-Stratton et al, 1988; Webster-Stratton, 1994). However, it is possible that the child deviance observed during videotaped sessions is not a true reflection of the child's behaviour at home. Webster-Stratton (1985) found little correspondence between structured clinical interviews utilizing the DPICS paradigm and home observations. Specifically, in a clinical setting mothers gave significantly more total commands, no-opportunity commands, and direct commands than observed in the home. Further, children were found to be significantly more noncompliant during clinic observations than in the home

condition. However, as the relationship between parental use of praise, critical statements, no-opportunity commands and child deviance was in the expected direction, it is predicted that future examination of the relationship between these variables will result in similar outcomes to those of previous research (i.e., Webster-Stratton et al., 1988; Webster-Stratton, 1994).

Practical and Theoretical Implications

The present study advances the existing literature in the area of conjoint behavioural consultation and offers several practical and theoretical implications. First, the results of this investigation are consistent with previous research outcomes that found CBC to be an effective means of delivering intervention services to children exhibiting behavioural difficulties (Carrington-Rotto & Kratochwill, 1994, Dunson et al., 1994; Robinson, 1996; Sladeczek, 1996; Sladeczek et al., 1996). Moreover, this study improved upon the methodology of previous outcome studies in the consultation literature in two main ways. First, this investigation made use of pretest and posttest measures of parental behaviour and knowledge in addition to child outcome measures. In doing so, the assessment of change in parental behaviour (in addition to children's) was possible. Second, the inclusion of direct observations of parent and child interactions allowed for the analysis of the degree to which parents are able to implement the behaviour management strategies agreed upon during consultation and provided an estimate of strategies parents are implementing to bring about positive behavioural changes in their children. The present investigation also demonstrated the effectiveness of the self-help manual-based approach in conjunction with CBC, as conventional treatment approaches have relied on the problem-solving abilities of the consultant and the consultee (Kratochwill, Sladeczek, & Plunge, 1995; Sheridan et al., 1996).

In addition, examination of parent and child variables with respect to treatment outcome allowed for preliminary analyses of the underlying theory of consultation (e.g., behavioural changes in the consultee bring about behavioural changes in the child) and the mechanisms (e.g., parental knowledge and skills) which render consultation effective. Further, as this study involved direct observation of parent and child interactions, as well as parental ratings of child behaviour, it was possible to determine whether the behavioural changes evidenced in the child are mirrored by behavioural changes (i.e., increased skill) in the parent.

Limitations and Future Research.

A limitation of the present investigation is that this study is a preliminary investigation, and follow-up data assessing the long-term effects of CBC combined with a self-help manual-based approach is currently unavailable. However, a larger investigation designed to examine long-term treatment effects is currently underway. A second limitation of the present study is that CBC services, in one case, began only two weeks before the end of the school year. Consequently, the length of time to implement a home-school based intervention plan was limited. Future research may need to require a longer duration of treatment. A third limitation of this investigation is that only three types of parental verbal behaviours (i.e., praise, critical statements, and no-opportunity commands) were selected for analysis. As a result, parental skills in other domains may have improved posttreatment, but gone undetected. Future investigations should examine additional parental behaviours more closely linked to the behaviour management strategies presented during consultation via the self-help manuals. Finally, the findings that parental knowledge of behavioural principles and parenting skills increase as a result of consultation were preliminary, therefore it is recommended that these variables be

examined further in additional studies, and that their strength as predictor of treatment outcome be investigated as well.

In conclusion, CBC was found to an effective intervention for bringing about change in children evidencing conduct problems. As these children are under served (Dworet & Rathgeber, 1996) and in the absence of treatment, the long-term prognosis is poor (Loeber, 1982; Parker & Asher, 1987; Robins, 1978; Webster-Stratton, 1991), identifying an efficient and cost effective treatment is imperative. Further, by delineating variables which may facilitate the treatment efficacy of CBC, we gain a better understanding and appreciation for the consultation process.

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APPENDIX A

Knowledge of Behavioural Principles as Applied to Children Questionnaire-Form A

Parenting Questionnaire: Form A

ID Number:_____ Date: _____

Child's Name: _____ Mother _____ or Father _____

Read each of the questions and each of its four possible answers. Sometimes more than one answer could be correct under certain circumstances; however you should select the *best* answer or the answer that is most generally true. Please circle the letter which corresponds to your answer.

Example: Probably the most important influence in a young child's life is his...

a. Toys
b. Television
c. Parents
d. Friends

Please do not consult others while deciding how to answer the question. Be sure to circle only one letter for each question. Be sure to answer every question even if you must guess.

1. Desirable and undesirable behaviour are most alike in that they are:

   a. The results of emotions and feelings.
   b. Habits and therefore difficult to change.
   c. Ways the child expresses himself.
   d. The result of learning.

2. Most problem behaviour in young children is probably:

   a. A reaction to deeper emotional problems.
   b. Due to lack of communication in the home.
   c. Accidentally taught by the child's family.
   d. Due to a stage which the child will outgrow.

3. Which of the following is most important for parents in controlling their child's behaviour?

   a. The rules the parents make about behaviour.
   b. The parents' understanding of the child's feelings.
   c. The behaviours to which the parents attend.
   d. Being strict, but also warm and gentle.

4. Which of the following is the *least* likely way for children to react to the person who punishes them?

   a. The child will try to avoid the punisher.
   b. The child will have admiration and respect for the punisher.
   c. The child will copy the punisher's methods and do similar things to play mates.
   d. The child will associate the punishment with the punisher.

5. If you are trying to teach a child to talk, you should first:

   a. Reward the child for speaking a sentence.
   b. Reward the child for saying a word.
   c. Reward the child for any vocalization.
   d. Punish the child if he did not speak.

6. A child has been rewarded each time he cleans his room. In order to keep the room clean without having to use reward, the next step should probably be to:

   a. Have a talk about how pleased you are and then stop giving the reward.
   b. Give the reward about one out of five times.
   c. Give the reward almost every time.
   d. You must always reward it every time.

7. When should a child who is just learning to dress herself be praised for the first time?

   a. When she gets her foot through the first hole in her underwear.
   b. When she gets her underwear completely on.
   c. When she asks to do it herself.
   d. When she has completely finished dressing herself.

8. Three of the following responses refer to forms of punishment which are mild and effective. Which one is not?

   a. Ignoring the undesirable behaviour.
   b. Sending the child to a dull room for a few minutes.
   c. Taking away something the child likes (such as dessert after supper).
   d. Scolding.

9. Which of the following is the most effective form of punishment in the long run for reducing a child's undesirable behaviour?

   a. Scolding him every time he does it.
   b. Occasionally spanking him when he does it.
   c. Sending him to his room for five minutes every time he does it.
   d. Sending him to his room all afternoon every time he does it.

10. A good rule to remember is:

    a. Do not reward with money if possible.
    b. Catch a child doing something right.
    c. Reward good behaviour and always punish bad behaviour.
    d. Punishment is always unnecessary.

11. Which of the following is true about punishment?

    a. Punishment teaches respect.
    b. Punishment should be delayed until it can be carefully determined that it is really necessary.

c. Punishment can teach a child new behaviours.
d. Some punishments can result in a child becoming aggressive.

12. A boy loves football. What is most likely to happen if, each time he is playing nicely with his sister, his father invites him to play football?

a. He will always be asking his father to play football.
b. He will play nicely with his sister more often.
c. He will be annoyed with his father for interfering with his activities.
d. He will be encouraged to teach his sister how to play football.

13. A father is teaching his son to hit a thrown ball with a bat. Which of the following methods will probably most help his son learn to hit?

a. Let him try to hit the ball without saying anything, so the child can learn on his own.
b. Occasionally tell him what he is doing wrong.
c. Occasionally tell him what he is doing right.
d. Tell him almost every time he does something right.

14. Punishment, as a way to get rid of an undesirable behaviour is best used when:

a. You are upset.
b. You want to teach the child the right way to behave.
c. The behaviour may be dangerous.
d. Scolding doesn't seem to be effective.

15. If you want your child to develop proper study habits, you should:

a. Encourage her to do her homework.
b. Help her to see school as pleasant.
c. Reward her whenever she studies.
d. Give her good reasons why she will need school.

16. A child often cries over any small matter that bothers her. How should her parents react to reduce her crying?

a. Reward when she reacts without crying.
b. Use a mild punishment when she cries.
c. Try to find out what is really troubling the child and deal with that.
d. Provide her with something interesting so she will stop crying.

17. If you want your child to say "please" and "thank you" at the table. it is probably most important to:

a. Reprimand him when he forgets to say them.
b. Explain why good manners are important.
c. Remember to compliment him when he remembers to say them.
d. Praise other members of the family when they use those words.

18. A major problem has been getting Leon into bed in the evening. His mother has decided to change this and wants to measure the relevant behaviours. Which is the best way for her to do this?

    a. Each evening, record whether or not he goes to bed on time.
    b. Chart his behaviour all day long, up to and including bedtime to try to find out what causes his not wanting to go to bed.
    c. Each week, make a note of how easy or difficult it has been to get him to bed.
    d. Ask Leon to keep his own record each week.

19. A father tells a child she cannot go to the store with him because she didn't clean her room like she promised. She reacts by shouting, crying and promising she will clean her room when she gets home. What should the father do?

    a. Ignore her and go to the store.
    b. Take her to the store, but make her clean her room when they return.
    c. Calm her down and go help her clean her room together.
    d. Talk to her and find out why she doesn't take responsibility.

20. In changing a behaviour it is most important to use:

    a. Methods which have been tested by others.
    b. Consequences which are rewarding to the child.
    c. Consequences which are punitive to the child.
    d. Rewards which do not bribe the child.

21. Stan is doing a number of things that greatly disturb his parents. It would be best for them to:

    a. Try to quickly eliminate all of these undesirable behaviours at once.
    b. Select just a few behaviours to deal with at first.
    c. Select the single behaviour they find the most disruptive and concentrate on changing that.
    d. Wait 28 to 30 days before beginning to try to change his behaviours to make certain they are stable and persistent.

22. Listed below are four methods used to change behaviour. Which is usually the best technique to get Frank to stop sucking his thumb?

    a. Punish the undesirable behaviour.
    b. Ignore the behaviour.
    c. Reward him for desirable behaviour in the situation in which he usually misbehaves.
    d. Explain to the child the reason the behaviour is undesirable.

23. If you want to make a behaviour a long-lasting habit, you should:

    a. Reward it every time.
    b. First reward it every time and then reward it occasionally.
    c. Promise something the child wants very much.
    d. Give several reasons why it is important and remind the child of the reasons often.

24. The most likely reason a child misbehaves is because:

    a. She is expressing angry feelings which she often hold inside.
    b. She has learned to misbehave.
    c. She was born with a tendency to misbehave.
    d. She has not been properly told that her behaviour is wrong.

25. A baby often screams for several minutes and gets her parents attention. Which of the following is probably the best way for her parents to reduce her screaming?

    a. If there is nothing physically wrong with the child, ignore her screaming even though the first few times she screams even louder.
    b. Distract the child with something she finds interesting whenever she screams.
    c. Ignore all noises and sounds the child makes.
    d. None of the above. Babies usually have good reasons for screaming.

APPENDIX B

Knowledge of Behavioural Principles as Applied to Children Questionnaire-Form B

Parenting Questionnaire: Form B

ID Number: _____ Date: _____

Child's Name: _____ Mother _____ or Father _____

Read each of the questions and each of its four possible answers. Sometimes more than one answer could be correct under certain circumstances; however you should select the *best* answer or the answer that is most generally true. Please circle the letter which corresponds to your answer.

Example: Probably the most important influence in a young child's life is his...

a. Toys
b. Television
c. Parents
d. Friends

Please do not consult others while deciding how to answer the question. Be sure to circle only one letter for each question. Be sure to answer every question even if you must guess.

1. Probably the most important idea to keep in mind when first changing behaviour is:

   a. To use both reward and punishment.
   b. To reward every time the desired behaviour occurs.
   c. To be flexible about whether or not you reward.
   d. To be sure the child understands why you want the behaviour to change.

2. A child begins to whine and cry when his parent explains why he can't go outside. How should the parent react?

   a. Ask the child why going outside is so important for him.
   b. Explain that it is a parents right to make such decisions.
   c. Explain again why he should not go outside.
   d. Ignore the whining and crying.

3. In changing a child's behaviour a parent should try to use:

   a. About one reward for every punishment.
   b. About one reward for every five punishments.
   c. About five rewards for every punishment.
   d. Practically all rewards.

4. Which of the following statements is most true?

   a. People usually fully understand the reasons for their actions.
   b. People are often unaware of the reasons for their actions.
   c. People's actions are mostly based on logic.
   d. It is necessary to understand the reason for a person's behaviour before trying to change the behaviour.

5. If punishment is used for a behaviour such as playing football in the house, which type is probably the best to use?

   a. Make the child do extra homework.
   b. Clearly express your disapproval.
   c. Remove the child to a boring situation each time.
   d. A reasonable spanking.

6. Parent who use lots of rewards for good behaviour and few punishments will probably tend to have children who:

   a. Do not understand discipline.
   b. Will not cooperate unless they are "paid".
   c. Take advantage of their parents.
   d. Are well-behaved and cooperative.

7. Which of the following is most effective in getting a child to do homework?

   a. "When you finish your homework you can watch TV"
   b. "You can watch this show on TV if you promise to do your homework when the show is over"
   c. "If you don't do your homework tonight, you can't watch TV at all tomorrow"
   d. Explain the importance of school work and the dangers of putting things off.

8. Each time Mother starts to read, Billy begins making a lot of noise which prevents her from enjoying her reading time. The best way for Mother to get Billy to be quiet when she reads is to:

   a. Severely reprimand him when this occurs.
   b. Pay close attention and praise and hug him when he plays quietly while she is reading and ignore his noisy behaviour.
   c. Call him to her and carefully explain how important it is for her to have a quiet time for herself each time this occurs.
   d. Tell him that he won't get any dessert after dinner if he continues.

9. A young child often whines and cries when he is around his mother. In trying to find out why he cries, his mother should probably first consider the possibility that:

   a. He is trying to tell her something.
   b. He needs more of her attention.
   c. She is somehow rewarding his crying.
   d. She is not giving him enough attention.

10. If a child very gradually receives rewards less and less often for a behaviour, what is most likely to happen?

    a. She will soon stop the behaviour.
    b. She will be more likely to behave that way for a long time.
    c. He will not trust the person giving the rewards.
    d. None of the above.

11. In a reading group, the teacher gives each child candy plus praise for each correct answer. Which of the following statements is most true?

    a. The candy is a bribe and doesn't belong in the school setting.
    b. At first, the children work to earn the candy and may later work for the praise alone.
    c. Children shouldn't be "paid" for doing their school work.
    d. It probably doesn't make much difference whether or not candy is used because the children who want to learn to read will do so and the others won't.

12. To record, graph and note the direction of the change of a behaviour is:

    a. A minor, optional step in a behaviour change program.
    b. An important step in a behaviour change program.
    c. A procedure employed only by scientists for research.
    d. Time consuming and complicated. Therefore these procedures should only be used in special cases.

13. Which of the following is most true about physical punishment?

    a. It should immediately follow the undesirable behaviour and at full intensity.
    b. It should be mild and immediately follow the undesirable behaviour.
    c. It should begin in a mild form and, if that doesn't work, intensity should gradually be increased.
    d. It is ineffective and inappropriate.

14. Which of the following is *not* an important step in a behaviour change program?

    a. Make certain the child feels ashamed for his misbehaviour.
    b. Decide on a particular behaviour that you wish to change.
    c. If necessary, break the selected behaviour down into smaller steps.
    d. Select a proper time and situation for measuring the behaviour.

15. Two brothers fight constantly. Their parents decide to praise them when they play together nicely. However, they still continue to fight. Punishment may be necessary. What is probably happening?

    a. They don't want their parents' praise.
    b. The benefits of fighting are stronger to them than their parents' praise.
    c. They have too much anger toward each other to control.
    d. They are at a stage they will out grow of.

16. Mrs. Thomas found out that spanking her seven-year-old son, Bob, did not stop him from using "naughty words. A friend suggested that rather than spanking him, she should send him to be by himself. The room he is sent to should be:

    a. His own room, so he will have something to do.
    b. Small and dark.
    c. As uninteresting as possible.
    d. A large room.

17. Which reward is probably the best to help a 12-year-old child improve her arithmetic skills?

    a. A dollar for each evening she studies.
    b. A dime for each problem she works correctly.
    c. Ten dollars for each A she receives on her report card in arithmetic.
    d. A bicycle for passing arithmetic for the rest of the year.

18. Mr. Jones agreed to pay his son, Mike, 25¢ each day if he carries out the trash. If Mr. Jones forgets to give Mike the money for a few days, what is most likely to happen?

    a. Mike will continue to take out the trash because he realizes how important this is.
    b. Mike will stop taking out the trash.
    c. Mike will begin to do extra chores, as well as take out the trash, so his father will notice how well he's doing and remember to give Mike the money.
    d. Mike will start to misbehave to take out his anger about not being paid.

19. The first step in changing a problem behaviour is to:

    a. Reward the child when she is behaving nicely.
    b. Punish the child for misbehaviour.
    c. Carefully observe the behaviour.
    d. Seek help from someone who is more objective.

20. Johnny has just torn up a new magazine. Of the following choices, which is the best way for his mother to discipline him?

    a. Tell him he will be spanked by his father when he gets home.
    b. Punish him then and there.
    c. Explain to Johnny about the wrongs of his action.
    d. Angrily scold Johnny so that he will learn that such an act is bad and upsetting to his mother.

21. Which would be the best example of an appropriate way to praise Mary?

    a. Good girl, Mary.
    b. I love you, Mary
    c. I liked the way you helped me put the dishes away.
    d. I'll tell your father how nice you were when he comes home.

22. Jimmy sometimes says obscene words, but only in front of his mother. She has been shocked and makes her feelings clear to him. How should she react when he uses obscene words?

    a. Wash his mouth out with soap.
    b. Ignore him when he uses obscene words.
    c. Tell him how bad he is and how she doesn't like him when he uses those words.
    d. Explain to him the reason such words are not used.

23. Punishment will not be effective unless you:

    a. Prevent the child from escaping while you punish him.
    b. Throw all your emotions into the punishment so that the child will realize how serious

you are.
c. Follow it with a careful explanations of your reasons for the punishment.]
d. Have tried everything else.

24. Which of the following is probably the most important in helping a child behave in desirable ways?

a. To teach him the importance of self-discipline.
b. To help him understand right and wrong
c. Providing consistent consequences for his behaviour.
d. Understanding his moods and feelings as a unique person.

25. How often a behaviour occurs is probably mostly controlled by:

a. The person's attitude about his behaviour.
b. What happens to him at the same time the behaviour occurs.
c. What happens to him just before the behaviour occurs.
d. What happens to him just after the behaviour occurs.

APPENDIX C

Dyadic Parent-Child Interaction Coding System Instructions

Situation	Instruction
Child directed interaction 5 minutes)	"In this situation, tell (child's name) that he/she may play whatever she chooses. Let him/her pick any activity he/she wants. You just follow his/her lead and play along with him/her."
Parent directed interaction (5 minutes)	"That was fine. Now we'll switch to another situation. Tell (child's name) that it's your turn to pick the game. You can pick any activity. Keep him/her playing with you according to your rules."
Cleanup (5 minutes)	"That was fine. Now I'd like you to tell (child's name) that it is time to leave and the toys must be put away. Tell him/her that you want him/her to put the toys away. Make sure you have him/her put the toys away without your help. Have him/her put them away in the big toy box.

Note. From "The First Session," by T. L. Hembree-Kigin and C. Bodiford McNeil, 1995, Parent-Child Interaction Therapy, p. 22. New York: Plenum

APPENDIX D

Data Recording Sheet

ID Number:_____ Child's Name:_____

Observer:_____ Date:_____

☐ MOTHER
☐ FATHER
☐ OTHER:_____

☐ CDI
☐ PDI
☐ CLEAN UP

PARENT BEHAVIOURS	TOTAL	CHILD BEHAVIOURS			TOTAL
			responded to	ignored	
Unlabeled Praise		Whine			
Labeled Praise		Cry			
TOTAL PRAISE		Yell			
Critical Statements		Physical Negative			
No Opportunity Commands		Smart Talk			
COMMENTS:		Destructive			
		Noncompliance			
		TOTAL CHILD DEVIANCE			