An evaluation of conjoint behavioral consultation as a model for supporting students with emotional and behavioral difficulties in mainstream classrooms

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ABSTRACT Conjoint behavioral consultation (CBC) is an indirect form of service delivery in which parents and teachers collaborate to meet the academic, social, and behavioral needs of children. The purpose of this study was to evaluate CBC as a method of providing behavioral support for two students with emotional and behavioral difficulties (EBD) in mainstream classrooms. A nonconcurrent multiple baseline across participants’ design and a follow-up phase were employed to assess an evidence-based intervention (self-management) delivered in the context of the CBC model. Results indicated a significant increase in teacher ratings of behavioral control from baseline to treatment. Positive treatment effects were maintained at a 4 week follow-up. Norm referenced measures produced statistically significant and clinically meaningful changes in teachers’ perceptions of disruptive behavior following treatment. Parents and teachers indicated satisfaction with consultation services and viewed CBC as acceptable and effective. The findings are discussed in relation to the limitations of the study, and to future research directions and implications for practice.

The integration of students with emotional and behavioral difficulties (EBD) into mainstream environments presents a significant challenge to the educators and schools that serve them (Evans and Lunt, 2002; Shapiro et al., 1999). Despite national initiatives in the US and UK advocating for greater inclusion of children with disabilities, most students with EBD remain an underserved population in our schools and continue to be placed in segregated educational settings (Cole et al., 2003; Nickerson and Brosof, 2003; US Department of Education, 2001; Visser and Stokes, 2003). More research is needed to identify effective methods of facilitating the inclusion
and maintenance of students with EBD into mainstream classrooms (Mooney et al., 2003; Shapiro et al., 1999).

Conjoint behavioral consultation

How can school personnel work with parents and teachers to support students with EBD? School-based consultation is recognized as an effective vehicle for accomplishing this goal (Gutkin, 1996; Larney, 2003; Sheridan et al., 1996b; Wagner, 2000). Conjoint behavioral consultation (CBC) is a relatively new model of consultation that provides a solution-oriented focus in which parents and educators are linked in a collaborative problem-solving process to address the academic, social, or behavioral needs of a student for whom all parties assume some responsibility (Sheridan, 1997; Sheridan et al., 1996a). CBC incorporates the problem-solving stages and objectives of the traditional behavioral consultation approach (problem identification, problem analysis, treatment implementation, and treatment evaluation). Parents and teachers work cooperatively to target a specific problem, collect data, develop a treatment plan, and conjointly evaluate the success of the treatment plan. A detailed description of CBC theory, procedures, and objectives are found in Sheridan et al. (1996a).

The early research on CBC is promising and suggests that the model can be an effective strategy for delivering evidenced-based treatments to students with diverse learning and behavioral problems (Colton and Sheridan, 1998; Galloway and Sheridan, 1994; Sheridan et al., 1990; 2001; Weiner et al., 1998). Although support has been accumulating, further investigation is required to expand CBC’s empirical base and document its acceptability and effectiveness as a service delivery model for students with EBD (Colton and Sheridan, 1998; Freer and Watson, 1999; Sheridan, 1997).

The purpose of this study was to evaluate the utility of CBC as a method of providing behavioral support for two students identified with EBD in mainstream classrooms. CBC provided the framework for defining, intervening, and collaboratively addressing the students’ challenging classroom behavior. The objective was to examine whether a treatment protocol consisting of self-management, goal setting, and contingency reinforcement delivered in the context of CBC would lead to an improvement in the students’ on-task and compliant behavior.

Method

Participants and setting

The participants were two male Caucasian students identified with EBD, their parents and their teachers selected from a suburban intermediate
school (grades 3–5) in a large south-east Florida county school district. The students were enrolled in grades 4 and 5. The school had a total enrollment of 944 students. Family socioeconomic status (SES) was considered middle to high, with approximately 16% of students’ parents meeting income eligibility for participation in the free and reduced lunch program. Special needs students were fully included either in classes co-taught with a special education teacher or in classes with a mainstream education teacher. Students requiring a more restrictive setting were provided special educational services at a separate school location within the same geographical area. Participants in the present study were fully included in their mainstream classrooms with one teacher and an average of 27 students. Neither received direct special educational services outside their respective classroom settings. The students’ mothers and teachers served as consultees during all phases of the consultation and intervention process. The consultant (author) was a school psychologist with experience in behavioral assessment and consultation practice.

Participant selection was based on teacher referral concerns and perceptions of disruptive behavior. For both students, the primary reason for referral was disruptive behavior that interfered with ability to complete tasks and comply with classroom rules and expectations for social conduct appropriate to their age group. As a result, they were in danger of being excluded from their mainstream classrooms. Selection criteria included (1) teacher referral; (2) verified emotional and/or behavioral disorder according to either criteria specified by state and local educational agencies or the Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV-TR: American Psychiatric Association, 2000) classification system; (3) inclusive education placement; (4) informed written consent; and (5) clinically significant ratings on the broad-based externalizing scale of the Teacher’s Report Form of the Child Behavior Checklist (CBCL–TRF: Achenbach and Rescorla, 2001). Both students received pharmacological treatment prior to consultation and maintained their medication regimen throughout all phases of the study.

Carl Carl was a 9-year-old fourth grade student who met the diagnostic criteria for attention-deficit/hyperactivity disorder (ADHD) and oppositional defiant disorder (ODD). He demonstrated chronic attentional and behavioral control difficulties, including impulsivity, noncompliance, and poor peer relationships. Carl’s behavioral presentation was characterized by clinically significant aggressive and disruptive behavior across home and school settings. Cognitive ability and academic skills were considered normative. Carl’s TRF profile included significant endorsements such as: Argues a lot; Doesn’t get along with other students; Can’t concentrate, pay attention; Disruptive
Mark was an 11-year-old fifth grade student with diagnoses of attention-deficit/hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), and serious emotional disturbance (SED). He was considered a highly impulsive student who was frequently off-task and non-compliant. Parent and teacher reported high levels of attention problems, interpersonal conflict, and oppositional behavior that interfered with learning and adjustment. Mark’s cognitive and academic skills were considered to be within normal limits. His TRF profile indicated significant endorsements for: Argues a lot; Impulsive, acts without thinking; Not liked by other students; Can’t sit still, restless; Disturbs other students; Fails to carry out assigned tasks. Mark’s mother and teacher, an educator with 17 years of classroom experience, served as joint consultees.

Consultation process
CBC followed the four-stage problem-solving process of the behavioral consultation model: problem identification (PI), problem analysis (PA), treatment implementation (TI), and treatment evaluation (TE), operationalized by three structured interviews (Kratochwill and Bergan, 1990; Sheridan et al., 1996a). All consultation interviews were conducted in the school’s conference room at mutually convenient times and ranged from 45 to 60 minutes in length.

Problem identification interview Conjoint problem identification interviews (CPIIs) were conducted with consultees to (1) establish rapport and a climate of shared responsibility, (2) share information about the goals of CBC, (3) establish agreement about roles and responsibilities, (4) operationally define target behaviors, and (5) discuss data collection procedures. Consistent with CBC, the consultation team reviewed the referral information and reached a consensus regarding the nature of the problem and the desired outcomes of consultation. The primary concern of consultees was the students’ attention deficits, noncompliance, impulsivity, aggression, and social problems. The consultation team identified off-task behavior and noncompliance with teacher requests/classroom rules as the primary targets for classroom intervention. Off-task behavior was operationally defined as behaviors where the student, after initiating the appropriate task-relevant behavior, attends to stimuli other than the assigned work. Noncompliance was defined as failure on the part of the student to initiate appropriate behavior in response to an adult request or classroom
rule. These target behaviors were considered appropriate as they were rated as the most problematic across school and home settings. An observational ratings recording method was selected and agreed upon by teachers as the most convenient and efficient method of documenting the students’ challenging classroom behavior. Baseline data were collected to help define the discrepancy between the students’ current levels of behavioral control and the desired level of behavior.

**Problem analysis interview** Conjoint problem analysis interviews (CPAIs) were conducted following establishment of a stable baseline. During this stage of consultation, the consultation team analyzed baseline data, explored alternative intervention strategies, agreed upon a goal for behavioral change, and discussed implementation of a behavior intervention plan. A review of the baseline data revealed a common pattern across students. Carl and Mark demonstrated consistently high ratings of target problem behavior (noncompliance and off-task behavior) during morning independent and small-group classroom instruction. Following a discussion of intervention strategies with empirically validated acceptability and efficacy, and a closeness of match with home and school ecosystems, the consultant recommended a self-management package consisting of self-monitoring, goal setting, and contingency reinforcement as the CBC-based treatment plan. The mutually agreed goal of the intervention was to reduce the students’ challenging behavior by applying a self-management procedure in the classroom and concurrent reinforcement across home and school settings. The rewards/incentives for on-task and compliant behavior were considered a major component of the self-management intervention. Parents and teachers were asked to involve student participants in the selection of incentives and to develop a reinforcement menu of tangible and activity rewards to ensure that students received positive reinforcement in school and at home. Materials such as observational rating scales, self-monitoring forms, and treatment plan checklists were placed in a folder for each consultee dyad. Teachers continued to collect observational data during the treatment implementation phase of consultation. The consultant checked data collection, visited classrooms, and met with parents and teachers to review the students’ behavioral progress, offer performance feedback, and provide encouragement for accurate implementation of the intervention. The objective was to provide direct support from the consultant, thereby enhancing treatment integrity (Noell et al., 2002).

**Treatment implementation** The agreed-upon self-management intervention plan was delivered to Carl and Mark during the treatment implementation stage of CBC. Two primary components were involved in the
procedure: (1) self-assessment and (2) self-recording. Self-assessment involved the covert questioning of behavior (e.g. ‘Was I paying attention?’) and self-recording the overt documentation of the response to the self-assessment question on a recording form. Students were told ‘self-management means accepting responsibility for managing and controlling your own behavior so that you can accomplish the things you want in school and at home’. Students were also given a definition and example of the target behaviors to be self-monitored. On-task behavior was defined as (1) seated at own desk, (2) eyes on the teacher, board, or seatwork, (3) work materials on desk, and (4) reading or working on an assignment. Compliant behavior was defined as following classroom rules by (1) asking relevant questions of teacher and neighbor, (2) raising hand and waiting turn before responding, (3) interacting appropriately with other students, and (4) complying with teacher instructions/directives. Teachers modeled the on-task behaviors and described classroom scenarios indicative of appropriate behavior.

Following 2 days of practice, the students self-monitored their behavior on a daily basis. A self-recording sheet was taped to the upper right-hand corner of each student’s desk. Because they were the only students who were self-monitoring in their classrooms and other students might be disturbed by an auditory cue, the teachers physically cued the students to self-monitor by tapping the corner of their desks, on average, every 10 minutes during approximately 50 minutes of independent and small-group classroom instruction (Cole et al., 2000; Shapiro et al., 2002). When cued, the students asked themselves ‘Was I on task?’ and ‘Was I following directions/classroom rules?’ Students then marked the self-recording sheet with a ‘plus’ or ‘minus’, indicating their response to the self-assessment questions. Daily goals were set at equal to or greater than 80% positive responses for on-task and compliant behavior. Teachers held a brief meeting with students each afternoon to review ratings, determine whether behavioral goals were met, and sign the self-recording sheet. When their daily goals were met, the students could make a selection from a group of incentives such as additional computer time, access to a preferred game or activity, extra recess time, etc. The self-recording sheet was then sent home each day for parent signature so parents could review their child’s behavior and provide rewards contingent on meeting behavioral goals. The self-management intervention continued for approximately 15 school days, after which the procedure was faded by increasing the intervals between self-monitoring cues. The goal was to have the students self-monitor their behavior independently.

**Treatment evaluation interview** The final interview for both cases was the conjoint treatment evaluation interview (CTEI). The purpose of the
CTEI was to discuss progress towards consultation goals and modifications to the treatment plan, and to determine whether the intervention plan was effective. A judgment of the congruence between consultation objectives and performance was based on comparison of the data collected during baseline and treatment phases of CBC. Parents and teachers were asked whether consultation services should be kept in place, modified or terminated. Because consultees were generally satisfied with the improvement in the students’ behavior, the self-monitoring intervention plan was faded. Parents and teachers agreed to continue their home–school communication via a daily report of student behavior. Ratings of student behavior, consultant effectiveness, and treatment acceptability were completed following the CTEI. Behavioral observations were conducted approximately 4 weeks later to determine maintenance of treatment effects.

**Outcome measures**

**Observational rating scale** An observational ratings recording method was used to provide a repeated measure of disruptive classroom behavior. The highly complex, time consuming and intensive nature of traditional observational methods such as interval recording made their use impractical in the present study. Ratings recording provide a solution to the dilemma of balancing the need for an accurate and reliable measure of behavior with the demands of time, resources, and expertise available to the classroom teacher (Abidin and Robinson, 2002; Steege et al., 2001).

The teachers rated their overall impressions of Carl and Mark’s behavior two or three times weekly following 50 minute instructional periods that included both independent and small-group instructional activities. The target behaviors of off-task behavior and noncompliant behavior were aggregated under the global category of ‘disruptive off-task behavior’. Ratings were made on a nine-point Likert-type scale, with 1 indicating a high rate of problem behavior occurrence and 9 indicating a low rate of problem behavior occurrence (1 to 3 = poor; 4 to 6 = needs improvement; 7 to 9 = good). Prior to data collection, teachers were trained didactically by the consultant to (1) observe the student and identify target behaviors, (2) review the Likert scale, and (3) practice observing and recording the corresponding numerical rating. During the practice sessions, the consultant served as a secondary observer/rater and independently rated the students’ behavior during the training sessions until interobserver agreement reached 80%. Behavioral ratings data were collected throughout all phases of consultation (baseline, treatment implementation, and follow-up) and used as time series data to assess the effectiveness of the intervention plan.
Behavioral checklist  The Teacher’s Report Form of the Child Behavior Checklist (CBCL–TRF: Achenbach and Rescorla, 2001) is among the most frequently used instruments for quantifying children’s internalizing and externalizing problem behavior. The reliability and validity of the TRF are well established (see Achenbach and Rescorla, 2001). Research indicates that students with EBD typically score highest on the externalizing and the aggressive behavior scales of the TRF (Nelson et al., 2003).

Teachers completed the TRF at baseline and at the time of consultation termination. Raw scores and normalized T-scores were obtained for the social problems, attention problems, aggressive behavior syndrome scales and the broad-based externalizing scale. Students’ behavior was classified as ‘clinically significant’ versus ‘normal’ according to the borderline clinical cutpoint that begins at the 93rd percentile (T = 65) for the syndrome scales and the 84th percentile (T = 60) for the externalizing scale (Achenbach and Rescorla, 2001). Carl and Mark’s TRF scale scores were all within or above the borderline clinical range prior to intervention, indicating significantly more behavior problems than typically reported by teachers of students of a comparable age and gender.

Treatment acceptability  An adaptation of the Behavior Intervention Rating Scale (BIRS: Von Brock and Elliott, 1987) was used to assess the consultees’ perceptions of the acceptability and effectiveness of CBC and the self-management intervention. This instrument has been used to document social validity outcomes in CBC studies (Cowan and Sheridan, 2003; Finn and Sladeczek, 2001). The BIRS acceptability factor comprises 15 items scored on a six-choice Likert scale ranging from ‘strongly disagree’ to ‘strongly agree’. The higher the rating, the more acceptable the consultation process. The BIRS effectiveness factor comprises seven items and provides a measure of perceived consultation effectiveness. Parents and teachers completed the BIRS following the final consultation interview.

The Children’s Intervention Rating Profile (CIRP: Witt and Elliott, 1985) was used to quantify student ratings of treatment acceptability. The scale has been used in clinical settings and field-based consultation research, and is recommended for collecting data on students’ perception of intervention acceptability (Cowan and Sheridan, 2003; Wilkinson, 2003). Students were asked to respond to seven items on a six-choice Likert scale ranging from 1 (disagree) to 6 (agree) pertaining to the fairness and acceptability of the intervention plan.

Consultant effectiveness  The Consultation Evaluation Form (CEF: Erchul, 1987) was used to assess consultees’ perception of consultant effectiveness and consumer satisfaction. The CEF is a 12-item, seven-choice
Likert scale that requires the consultee to rate statements describing the consultant on a scale ranging from ‘strongly disagree’ to ‘strongly agree’. The CEF has been used in school-based behavioral consultation research to assess interpersonal competencies and the degree to which consultees found the consultant helpful (Sheridan et al., 2001; Wilkinson, 2003). Parents and teachers completed the CEF following the treatment evaluation interview.

Design and data analysis
The effects of CBC and self-management on challenging behavior were evaluated by replicating consultation and intervention procedures across students during the same academic semester (Harris and Jenson, 1985). This nonconcurrent multiple baseline (or natural multiple baseline) design has been shown to be a valid and useful approach in dealing with the complexities of research in actual practice settings (Galloway and Sheridan, 1994; Gresham and Noell, 1993; Jones et al., 1997; Noell et al., 2002; Wilkinson, 1997). A visual (graphic) presentation of the data and the percentage of nonoverlapping data points (PND) were employed to compare changes in ratings of challenging behavior across baseline, treatment, and follow-up phases for each student. Individual scores on the TRF were examined to determine whether there was a statistically significant reduction in syndrome scale ratings from pre- to post-treatment and whether perceived changes in students’ behavior moved from the clinical to the normative range of functioning. Using this combined social validation procedure provides practitioners with a method of documenting educationally significant changes in behavior (Gresham and Noell, 1993). The results of the BIRS, CIRP and CEF were analyzed descriptively to determine levels of perceived acceptability, effectiveness, and consumer satisfaction.

Results
Observational ratings
Figure 1 graphically displays the observational ratings scale data for Carl and Mark. Visual analysis indicates stable baselines and an immediate effect on the students’ challenging behavior with the introduction of the treatment plan. The behavioral trend was positive with 100% nonoverlapping data points from baseline to treatment. Carl and Mark demonstrated increases in behavioral control (on-task behavior and compliance) of 68% and 60%, respectively. Mean teacher ratings were 5.00 (SD = 0.66) during baseline and improved to 8.21 (SD = 0.69) with implementation of the self-management intervention. This represents an average improvement in behavior of 64% from the baseline to treatment phases of consultation.
Observational rating data collected at a 4 week follow-up reflect maintenance of positive treatment effects, average behavior control remaining 42% above baseline conditions.

**Behavioral checklist**

The TRF (Achenbach and Rescorla, 2001) was administered at baseline and following consultation to determine perceived changes in students’ challenging behavior. The reliable change index (RC) was used to determine whether students’ TRF scale scores were significantly reduced following treatment (Gresham and Noell, 1993; Jacobson et al., 1984). This index is

![Behavior ratings for students across consultation phases](image-url)
each student’s difference score (post – pre) divided by the standard error of measurement. An RC of larger than ±1.96 indicates that treatment produced a significant ($p < 0.05$) change in behavior. TRF raw scores were used for analyses rather than T-scores in order to maximize statistical power and take into account the full range of variation in the scales (Achenbach and Rescorla, 2001). Normative comparisons of TRF data were used to determine whether changes in students’ T-scores moved from the clinical to the normative range of functioning following consultation. As indicated in Table 1, there was a statistically reliable change in behavior from pre- to post-treatment ($p < 0.05$) on the attention problems, aggressive behavior, and externalizing scales for both students. Their T-scores fell below the borderline clinical cutpoint to the normative range of functioning for the attention problems and aggressive behavior syndrome scales ($T \leq 65$) and the broad-based externalizing behavior scale ($T \leq 60$). Mark also demonstrated a significant improvement in behavior on the social problems syndrome scale following implementation of the self-monitoring intervention.

**Treatment acceptability**

Consultees’ acceptability of CBC and self-management was assessed on the acceptability factor of the BIRS (Von Brock and Elliott, 1987). On a six-point Likert scale, parents and teachers reported average item ratings of 5.83 and 5.63, respectively. This translates to a high level of perceived acceptability. Among the items that consultees endorsed as highly acceptable were ‘Consultation was an acceptable intervention for the problem’, ‘The

<table>
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<tr>
<th>Student</th>
<th>Raw score</th>
<th>T-score</th>
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<tbody>
<tr>
<td></td>
<td>Pre-treatment</td>
<td>Post-treatment</td>
</tr>
<tr>
<td>Carl</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soc</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Attn</td>
<td>31</td>
<td>18*</td>
</tr>
<tr>
<td>Agg</td>
<td>16</td>
<td>6*</td>
</tr>
<tr>
<td>Ext</td>
<td>18</td>
<td>8*</td>
</tr>
<tr>
<td>Mark</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soc</td>
<td>7</td>
<td>3*</td>
</tr>
<tr>
<td>Attn</td>
<td>38</td>
<td>19*</td>
</tr>
<tr>
<td>Agg</td>
<td>14</td>
<td>3*</td>
</tr>
<tr>
<td>Ext</td>
<td>11</td>
<td>3*</td>
</tr>
</tbody>
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Soc = social problems; Attn = attention problems; Agg = aggressive behavior; Ext = externalizing behavior.

* Denotes a statistically reliable change between pre- and post-treatment ($p < 0.05$).

** Denotes a clinically significant change between pre- and post-treatment.
problem was severe enough to warrant the use of consultation’, ‘Most parents and teachers will find consultation appropriate for other behavior problems’, and ‘I would be willing to use consultation again’.

The consultees’ subjective perception of the effectiveness of CBC was measured on the effectiveness factor of the BIRS (Von Brock and Elliott, 1987). Parents and teachers reported average item ratings of 5.08 and 5.07, respectively. This suggests that consultees viewed CBC as a highly effective process. Items rated as most effective included ‘Consultation should produce a lasting improvement’, ‘The child’s behavior should remain at an improved level’, and ‘Consultation should not only improved the child’s behavior in the classroom and at home, but in other situations as well’.

Students’ acceptability of the self-monitoring intervention was assessed with the CIRP (Witt and Elliott, 1985). Carl and Mark provided an average score of 3.36 on a six-point Likert scale, reflecting a generally acceptable rating of the behavioral intervention plan. The students agreed that ‘The plan was fair’, ‘The plan would be good for use with other students’, and ‘I liked the plan used for my behavior problem’.

**Consultant effectiveness**

The CEF (Erchul, 1987) was administered to consultees following the final consultation interview to assess their perceptions of consultant effectiveness and consumer satisfaction with CBC services. Table 2 displays the mean CEF ratings for consultees and items. Out of a possible score of 7, the average item score for parents and teachers was 6.67 and 6.96, respectively. This indicates a high level of perceived effectiveness and satisfaction with

<table>
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<tr>
<th>Item</th>
<th>Parent</th>
<th>Teacher</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Consultant was generally helpful</td>
<td>6.50</td>
</tr>
<tr>
<td>2</td>
<td>Consultant offered helpful information</td>
<td>7.00</td>
</tr>
<tr>
<td>3</td>
<td>Consultant’s goals were similar to my own</td>
<td>6.50</td>
</tr>
<tr>
<td>4</td>
<td>Consultant helped find alternative solutions</td>
<td>6.50</td>
</tr>
<tr>
<td>5</td>
<td>Consultant was a good listener</td>
<td>7.00</td>
</tr>
<tr>
<td>6</td>
<td>Consultant helped identify resources</td>
<td>7.00</td>
</tr>
<tr>
<td>7</td>
<td>Consultant fit into school environment</td>
<td>6.50</td>
</tr>
<tr>
<td>8</td>
<td>Consultant encouraged other points of view</td>
<td>6.50</td>
</tr>
<tr>
<td>9</td>
<td>Consultant viewed role as a collaborator</td>
<td>6.50</td>
</tr>
<tr>
<td>10</td>
<td>Helped apply discussion to specific situation</td>
<td>6.50</td>
</tr>
<tr>
<td>11</td>
<td>Consultant offered help without taking over</td>
<td>6.50</td>
</tr>
<tr>
<td>12</td>
<td>Would request services from consultant again</td>
<td>7.00</td>
</tr>
<tr>
<td><strong>Average across items and consultees</strong></td>
<td><strong>6.67</strong></td>
<td><strong>6.96</strong></td>
</tr>
</tbody>
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Possible responses ranged from (1) ‘strongly disagree’ to (7) ‘strongly agree’ on a seven-point Likert scale.
the consultant and the consultation experience. Parents and teachers strongly agreed to items such as ‘The consultant offered helpful information’, ‘The consultant was a good listener’, ‘The consultant helped identify resources’, ‘The consultant viewed his role as a collaborator’, and ‘I would request services from this consultant again’.

**Treatment integrity**

In order to enhance the treatment integrity of the consultation process the consultant used detailed protocols to ensure that each interview included the goals and objectives for CBC (see Sheridan et al., 1996a). To verify fidelity to the self-management procedure, teachers were asked to complete a treatment plan checklist by indicating whether each component (e.g. cued student to self-monitor, gave incentive when earned, sent self-recording checklist home for signature) was fully or partially implemented. The checklists and self-recording sheets were reviewed during treatment implementation and at the conclusion of consultation to determine whether the intervention plan was implemented as planned. An evaluation of permanent products indicated 90% adherence to the treatment plan.

**Discussion**

The present study provides important data documenting the utility of an ecological systems approach to consultation and contributes to a growing body of research in a relatively new area of consultation. The intervention package consisting of CBC and self-management was associated with an immediate and distinguishable improvement in ratings of behavioral control (on-task and compliant behavior) for both students. Moreover, the treatment effects were maintained over time. Further evidence of positive treatment effects was reflected in consultees’ satisfaction with the process (acceptability) and outcomes (effectiveness) of consultation. They consistently agreed that CBC was an acceptable and effective process to use for the students’ behavior problems and that most parents and teachers would find the model appropriate for other behavior problems. Consultees indicated a strong willingness to use CBC again and recommended the use of consultation to other parents and teachers. Parents and teachers also reported high levels of satisfaction with the consultant and CBC services. This is important in that CBC occurs within a relationship framework. Their strong endorsement of items relating to collaboration, communication, and active listening illustrates the interpersonal skills that effective consultants use to build and maintain rapport, trust, and positive working relationships with consultees.

An important consideration is whether CBC and self-monitoring produced socially important (valid) changes in the students’ classroom
behavior. According to the TRF, there was a statistically reliable and clinically meaningful change in the students’ inattention and off-task behavior, aggression and noncompliance, and broad-based externalizing problem behavior following consultation. The reduction in teacher-reported aggressive behavior is especially important in that decreases on the TRF aggressive behavior and externalizing problems scales are associated with significant improvement in academic and general classroom functioning as well as less restrictive educational programming by school personnel (Mattison and Spitznagel, 2001). The decrease in attention problems is also notable and suggests that CBC and self-monitoring might be an effective strategy for reducing the challenging behavior associated with ADHD.

Limitations and directions for future research
Although the present findings provide encouraging evidence of CBC’s acceptability and effectiveness, some research limitations are evident. For example, a more rigorous single-subject design is required to rule out historical threats to internal validity. A nonconcurrent design and equal phases leave open the possibility that a nonexperimental event had an effect on behavior change. Thus, it is not possible to state with complete certainty that the students’ behavioral improvement was a function of the intervention plan. A related methodological limitation involves the small sample size. Given that CBC was initiated with only two cases, generalization of these procedures to other consultants, consultees, and students with EBD requires replication. Another limitation involves the reliability and validity of observational ratings by classroom teachers. Although interobserver data were collected prior to consultation, objective behavioral observations and interrater agreement (reliability measures) indices were not completed during the consultation process. Independent observations or traditional direct recording methods may have produced a more precise measure of student behavior. Practical constraints associated with school-based research such as student and teacher absences, scheduling problems, and time limitations limited the number of observation rating sessions that could be completed during the consultation process. Extending the treatment and follow-up phases of CBC would have increased the robustness of the study’s design and strengthened confidence in the outcomes of treatment.

Further research is needed to document the effectiveness of CBC as a service delivery model for students with EBD in inclusive classroom settings. Importantly, the aforementioned methodological limitations require attention. Strategies to address practical issues such as the reliability of observational ratings, systematic assessment of treatment integrity, and longer-term follow-up are required. The potential of CBC and self-management to promote generalization is one of its attractive benefits.
More research is needed on the generalization of treatment effects across settings, students, and behaviors.

The independent variable was conceptualized as a treatment package comprising CBC and self-monitoring. Neither can be identified in isolation as producing the identified behavioral change. A component analysis should be completed to determine the differential effects of CBC and self-monitoring on treatment outcomes. Lastly, future consultation studies might include parent and teacher outcome measures in addition to traditional client outcome measures to assess gains for consultees.

Implications and conclusion
The results of this study have important implications for educational practice. Research clearly indicates that students benefit from home–school partnerships with educators and that active parent involvement is related to positive outcomes for students, families, and teachers (Christenson, 2004; Christenson and Sheridan, 2001). CBC offers practitioners a structured approach for intervening and engaging educators and families in mutual problem-solving and shared decision-making, which, in turn, has the potential for enhancing children’s behavioral competency. Importantly, the model provides a framework within which support professionals can bridge the research-to-practice gap, foster a collaborative process, and deliver high quality consultative services to all stakeholders in real world settings. CBC would seem to hold considerable promise as a method for parents to support their child’s education, and for educators and families to partner in the design and implementation of inclusive intervention strategies.

In conclusion, the present study provides an application of case-based research in practice and extends the literature on CBC to inclusive educational settings. The findings suggest that CBC can be a useful vehicle for promoting a shared responsibility between home and school systems and that applying empirically supported interventions within the model can result in acceptable and effective treatment outcomes for students with emotional and behavioral challenges in mainstream classrooms. If the inclusion of students with EBD is to succeed, teachers and parents must be provided with significant consultative support, evidence-based interventions with high levels of acceptability, and ongoing collaborative efforts between home and school (Shapiro et al., 1999).

References
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