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Conjoint Behavioral Consultation:
Involving Parents and Teachers in the Treatment of a Child with Selective Mutism

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Abstract: This paper provides a case example of the effects of a behavioral intervention implemented in the context of Conjoint Behavioral Consultation (CBC; Sheridan, Kratochwill & Bergan, 1996) for a five-year-old child with selective mutism. Programming common stimuli was combined with positive reinforcement and then implemented by a parent and teacher to improve a child's verbal interactions. Overall, the number of words spoken by the child client per day increased from 0 during baseline to a treatment mean of 7.7 words per day. An effect size of 1.60 was yielded, with 100% non-overlapping data between baseline and treatment phases. Additionally, treatment acceptability ratings from the parent and teacher of the child indicated that the consultation procedure was feasible and effective within the general education setting.

The Problem
In the past few decades, schools have attempted to move away from quick referrals of students with academic and behavior problems. Effective prereferral processes have evolved into problem-solving meetings often involving consultation (Gutkin & Curtis, 1999). However, most school consultation efforts have only included teachers, overlooking the important role of parents. Although previous research suggests parents and teachers are vital when working with selectively mute children (Kehle, Madaus, & Baratta, 1998; Powell & Dalley, 1995; Richburg & Cobia, 1994; Tatem & Delcampo, 1995), little research has involved both parents and teachers working conjointly throughout the problem-solving and intervention processes.

Selective mutism (SM) is most commonly revealed when a child speaks fluently at home, but refuses to speak in school (Joseph, 1999). Selective mutism in the school may pose many problems, such as missed opportunity for the child to practice and develop social skills (Rye & Ullman, 1999), inability of the teacher to assess academic skills and development (Giddan, Ross, Sechler, & Becker, 1997), and accidental negative reinforcement of muteness by the teacher (Kehle et al., 1998). Untreated SM may lead to pervasive effects on children. According to Giddan, Ross, Sechler, and Becker (1997), “the longer the child is silent, the more entrenched the behavior becomes” (p. 132). Furthermore, long-term effects such as anxiety problems may continue even after cessation of SM (Drewes & Akin-Little, 2002). Finally, enduring selective mutism may be further complicated by continued school failure and teasing by peers (Tatem & Delcampo, 1995).

Previous Research
School consultation services have been found to positively impact the development of children with various educational, behavioral, and/or psychological needs (Gutkin & Curtis, 1999). Consultation is considered a best practice in school psychology and regarded as “a major approach for providing psychoeducational services to children...” (p. 583, Kratochwill, Elliott, & Stoiber, 2002, p. 583). Furthermore, consultation with both parents and teachers creates a working partnership between home and school, thereby promoting treatment maintenance (Galloway & Sheridan, 1994) and generalization (Sheridan, Kratochwill, & Elliott, 1990). By utilizing each partner's knowledge and observations, parents and teachers working conjointly are better able to support the child’s learning and development than either one independently. In this way, shared responsibility in treatment planning and implementation is achieved through a “mutual effort toward a shared goal” (Christenson & Sheridan 2001, p. 37). Home-school consultation embodies a complementary relationship between families and educators that allows for shared treatment planning and implementation (Sheridan, Kratochwill, & Bergan, 1996).

The involvement of parents in treating SM is critical, as parents may be the only people who hear the child speak (Schill, Kratochwill, & Gardner, 1996). Powell and Dalley (1995) presented a successful case study that incorporated play therapy and several behavioral techniques while involving the child's parents and teachers. Programming common stimuli by involving the child's mother in the classroom and including reinforcement components, together with self-modeling tapes and play therapy, prompted the child to talk in school.
at a rate consistent with her peers. Additionally, Giddan et al. (1997) encouraged the use of a multidisciplinary team approach to determine goals, develop interventions, and assess progress for children with selective mutism. Giddan et al.'s (1997) successful treatment approach prompted the child to talk in various settings. In this study, parents were involved in quarterly clinical treatment conferences and participated in child therapy sessions with the psychologist. Additionally, positive reinforcement was given by the child's parent contingent upon speaking in community settings, and special prizes, contingent upon speaking in therapy, were earned in school from teachers. Although parents were involved in treatment in the aforementioned studies (Giddan et al., 1997; Powell & Dalley, 1995), they neglected to involve parents and teachers in all aspects of the decision-making and follow-through processes.

Much of the research literature concerning selectively mute children in school has been conducted both inside and outside the classroom with teachers, therapists, and parents, independently. Some successful studies have utilized children's parents to help determine possible reinforcers (Kehle et al., 1998; Masten, Stacks, Caldwell-Colbert, & Jackson, 1996; Powell & Dalley, 1995), participate in stimuli programming techniques in the school (Kehle et al., 1998; Powell & Dalley, 1995), participate in family therapy (Tatem & DelCampo, 1995), and participate in behavior management training (Schill et al., 1996). Teachers have also been involved in the successful treatment of selectively mute children through stimulus-fading procedures (Richburg & Cobia, 1994), child therapy sessions (Masten et al., 1996; Rye & Ullman, 1999), and delivering positive reinforcement (Giddan et al., 1997; Kehle et al., 1998; Richburg & Cobia, 1994).

Teachers and parents have been jointly involved in the treatment of SM in a limited number of studies. Some studies have utilized self-modeling procedures by both parents and teachers in treating SM (Kehle et al., 1998; Powell & Dalley, 1995; Tatem & DelCampo, 1995). Additionally, Richburg and Cobia (1994) employed a team approach in which the teacher, parent, and school personnel met to plan the course of treatment for a child with SM. Positive outcomes, such as generalizable speech in new environments and across various persons, were accomplished. However, the parent was only included during treatment planning in this study and not in treatment implementation and evaluation.

Current accepted therapy involves a combination of techniques including behavior modification with family and school involvement in the treatment of selective mutism (Joseph, 1999). Most successful treatments have involved a variety of behavioral techniques including reinforcement and stimulus programming (Sheridan, Kratochwill, & Ramirez, 1995). The combination of stimulus programming procedures and positive reinforcement for talking can be utilized to generalize verbal behavior to different settings and persons (Richburg & Cobia, 1994). Previous research has utilized behavioral techniques with parent and/or teacher involvement to successfully treat selective mutism in children. However, no research has explored parent-teacher collaboration throughout the problem identification, analysis, planning, implementation, and evaluation of treatment.

The Solution

In the present study we sought to extend the literature by using conjoint behavioral consultation (CBC; Sheridan, Kratochwill, & Bergan, 1995) in the treatment of a selectively mute five-year-old boy. CBC is an indirect, structured model of service-delivery in which parents and teachers work together to address academic, social, or behavioral needs of an individual (Sheridan & Kratochwill, 1992). This model was utilized in the present case to create a home-school partnership, combine resources, and conjointly develop and implement an easy and effective treatment plan for a child who did not speak at school.

Method

Participants, Setting, and Referral Concern

The child participant in this study was a five-year-old male ("Robert") who attended kindergarten at a midwestern public elementary school. Robert was referred for consultation services by his teacher for concerns regarding his refusal to speak to teachers and peers at school. Robert's teacher reported that, although he played well with others, Robert used nonverbal communication (e.g., pointing, nodding his head, waving his hands, etc.) to express his needs and wants in the classroom and at recess. Robert's teacher and parent were involved in joint consultation interviews with a consultant. The consultant (first author) was a doctoral student in school psychology who had received advanced training in behavioral interventions and had completed a structured training program in joint behavioral consultation. The consultant conducted services under the supervision of an advanced doctoral student in school psychology and a university supervisor (second and third authors, respectively). All consultation meetings with Robert's parents and teacher were conducted at Robert's elementary school. The interventions developed through the consultation process were carried out by Robert's teacher and parents in the classroom and home settings, respectively.

Dependent Variable and Research Design

The dependent variable assessed in this case study was the number of words spoken in school by Robert per day during his daily classroom time (i.e., one and a half hours). This study used an A-B research design with controlled baseline and treatment phases (Kazdin, 1982). This design was utilized due to the naturalistic setting and conditions of the consultation process. Because of the collaborative nature of consultation, the parents and teacher chose when to continue and dismiss treatment and group meetings. Specific methods
were employed to address threats to internal validity and strengthen the design, such as the use of objective behavioral observations, treatment and process integrity procedures, and assessment of social validity (Galloway & Sheridan, 1994; Kratochwill, 1985).

**Conjoint Behavioral Consultation Procedures**

Conjoint Behavioral Consultation procedures were used to address Robert's refusal to speak in school. The CBC process consisted of four stages, implemented in a collaborative manner. Three of the four stages were initiated in the context of a structured interview with a consultant and Robert's teacher and parents. These stages were (a) conjoint problem identification, (b) conjoint problem analysis, (c) treatment implementation, and (d) conjoint treatment evaluation (Sheridan et al., 1995).

Conjoint problem identification. During the conjoint problem identification interview (CPII), a target behavior was identified and valid procedures for collecting baseline data were discussed. During this interview, "words spoken" by Robert at school was identified as the target behavior for consultation. A data collection system was developed to monitor Robert's speaking in school. It was decided that Robert's teacher would keep a log of the frequency of Robert's spoken words during one and a half hours in the kindergarten classroom each day. Data were collected during the entire time Robert was in the classroom each day, excluding recess and specials. Baseline data were collected for three weeks before the conjoint problem analysis interview was conducted. The teacher reported there was no instance of Robert's speech in school for three months prior to data collection.

Conjoint problem analysis and treatment implementation. Two weeks following the CPII, a conjoint problem analysis interview (CPAl) was conducted to evaluate the baseline data, decide upon a behavioral goal for Robert, and discuss the various factors that influenced Robert's refusal to speak at school. Additionally, during the CPAl, the consultation team collaboratively developed an intervention to address Robert's needs. Evaluation of the baseline data indicated that Robert did not speak any words per day for the entire period of data collection. Given Robert's low baseline data, it was decided that a reasonable goal for Robert was to speak an average of one word per day at school. Analysis of Robert's speaking behavior in the classroom indicated that Robert frequently made noises or nonverbal gestures (e.g., pointing, nodding, waving his hand, etc.) when he was excited, unhappy, or needed something, but that he did not use actual words to communicate with others. Robert's mother reported that Robert experienced a similar difficulty with speaking to others during his first year of day care (age three). She stated that Robert gradually started speaking after becoming comfortable with staff and peers and after the implementation of specific interventions (i.e., one-on-one teacher attention and teacher encouragement of peers to continue talking to Robert, regardless of if he responded verbally).

Based on this analysis, intervention procedures were developed to increase the frequency of Robert's speaking in the classroom and at recess (see Intervention Procedures).

Conjoint treatment evaluation. The last stage of CBC was the conjoint treatment evaluation interview (CTEI). During this stage, the consultation team examined the behavioral data collected to evaluate the effects of the treatment, discussed plans for modification of the intervention, and determined whether or not the goals of consultation had been met. A total of four conjoint treatment evaluation interviews were conducted with Robert's teacher and parents to monitor and evaluate Robert's progress. During the second CTEI, Robert's teacher reported that it was difficult for her to monitor Robert's spoken words per day because their frequency had increased substantially. It was decided that the consultant would continue to collect behavioral data through weekly probes (i.e., data were collected once per week during the target times). Additionally, during the second CTEI meeting, the reinforcement component of the intervention was modified to include reinforcement for talking to his teacher, his peers, and other teachers. This change was made due to the fact that Robert was observed to be speaking to his classroom teacher only and did not speak to his peers and other teachers. The modified reinforcement included stickers and rewards for times when Robert spoke to classmates and other teachers as well as his classroom teacher. During the last CTEI, it was determined that the behavioral goal had been met (i.e., an average of one word per day), and consultation services were formally terminated.

**Intervention Procedures**

An intervention was jointly developed by the teacher and parent during the CPAl to increase the number of words spoken by Robert at school per day. The intervention procedures utilized in this case included programming common stimuli and reinforcement.

Programming common stimuli. Programming common stimuli (Kehle et al., 1998) was implemented to increase the frequency of Robert's spoken words at school. Since school was the only place in which Robert did not speak, talking was established in an alternative setting with the teacher and reinforcement was programmed into the classroom setting in the presence of the common stimulus (teacher). Robert spent one-on-one unstructured time outside of the classroom with his teacher. On one occasion Robert's teacher took him to lunch at a local restaurant and then to her house, thus pairing the teacher, an individual linked with the stimulus for not speaking (i.e., Robert's classroom), with a discriminative stimulus for speaking (i.e., being outside of the classroom). Programming common stimuli and reinforcement were used to increase frequency of speaking in the classroom. Once Robert became comfortable talking with the teacher in an outside environment, it was hypothesized that he would continue to talk to his teacher in the school environment. The consultant encouraged the teacher to engage in a greater number of one-on-one
interactions with Robert outside the school setting. However, the teacher was unable to participate in more interactions due to time constraints and scheduling problems.

Reinforcement. Robert's teacher and parents identified stickers and adult attention as reinforcers used previously in home and at school to motivate Robert, and a reinforcement plan was developed that included these components. Robert earned stickers for each word spoken during choice time per day. Robert's sticker chart also served as a home-note that was sent home to his parents each day. Robert's parents reinforced Robert for speaking at school by providing him with daily rewards (e.g., ice cream, one-on-one time with his parents, choosing a special movie to watch) for speaking at least one word per day. Additionally, verbal praise and attention were provided to Robert by his teacher and his parents for any instances of speaking at school.

Assessment Procedures. Data were collected through event recording procedures, whereby the number of words spoken by Robert per day were logged. Robert's teacher collected data daily during baseline and the first three weeks of treatment. The researcher collected all data following the third week of treatment implementation through random weekly probes.

TREATMENT INTEGRITY PROCEDURES
The integrity of both the consultation process and the implementation of the intervention procedures were assessed in this study. To verify that the consultation interviews conducted in this study were consistent with the CBC model, the CBC Objectives Checklists (Sheridan, Eagle, Cowan, & Mickelson, 2001), listing the CBC interview objectives completed by the consultant, were used. CBC interviews were audiotaped, and two trained observers coded all interviews in terms of their adherence to each of the interview objectives.

The fidelity with which Robert's teacher and parents implemented the intervention was also assessed. The steps of the intervention were clearly and objectively listed on a "plan worksheet" created by the consultant, and the teacher and parents self-recorded adherence to each of the steps. The CBC consultant also observed the teacher's implementation of the intervention. These observations were not objectively recorded; however, high implementation integrity was subjectively documented by the consultant.

SOCIAL VALIDITY PROCEDURES
Assessments of social validity (i.e., clinical meaningfulness of Robert's behavior change) were conducted in this study. Parent and teacher subjective ratings on the Consultant Effectiveness Form (CEF; Erchul, 1987) and the Behavior Intervention Rating System (BIRS; Von Brock & Elliott, 1987) were used to assess the social validity of the intervention procedures and the consultation process.

Parent and teacher satisfaction with and acceptability of CBC services were assessed in two ways. First, the CEF, a 12-item, seven-point Likert-type scale was completed by Robert's parents and teacher upon termination of consultation. Items on this scale requested information on consultees' perceptions regarding the helpfulness of the consultant, the benefits of consultation, and overall satisfaction with the consultation experience. Research with the CEF has yielded adequate internal consistency estimates (alpha = .95; Erchul, 1987). For CBC, alpha coefficients of \( r = .83 \) and \( r = .89 \) were found for teacher and parent scales, respectively (Sheridan et al., 2001).

Robert's parents' and teacher's subjective perceptions of treatment acceptability and efficacy were assessed on a revised version of the BIRS. The BIRS consists of 24-items rated on a six-point Likert scale. Factor analysis of the BIRS has yielded three factors: Acceptability, Effectiveness, and Time to Effect (Elliott & Von Brock Treuting, 1991). In a study investigating the reliability and construct validity of the BIRS, Von Brock and Elliott (1987) reported alpha coefficients of .97 for the total scale, and .97, .92, and .87 for the Acceptability, Effectiveness, and Time to Effect factors, respectively. Minor revisions of the BIRS' original wording have been made to make the instrument applicable to consultation procedures (Freer & Watson, 1999; Sheridan & Steck, 1995). An analysis of the internal consistency of the revised BIRS total scale in a sample of CBC participants yielded alpha coefficients of \( r = .95 \) and \( r = .93 \) for parents. Robert's teacher and parents completed the revised version of the BIRS to assess acceptability and perceived efficacy of consultation services upon completion of the case.

RESULTS AND DISCUSSION
Figure 1 presents the number of words spoken during the one and a half hour classroom time per day by Robert in school. Before the consultation process, Robert's teacher reported that he did not speak for three months. After the Problem Identification Interview, Robert's teacher collected data for three weeks, revealing that Robert spoke 0 words per day. After implementation of the programming common stimuli and reinforcement procedure, Robert's talking immediately increased in trend and level, as he spoke an average of 5.3 words per day measured by daily teacher data during the first three weeks of intervention. Data from consultant observations indicated that Robert's talking increased on a gradual trend to 15 words per day; however, two weeks after a week-long school holiday (spring break), Robert's talking decreased to seven words per day. It was hypothesized that prolonged absence from the classroom and peers was related to Robert's regression of words spoken. Robert's talking eventually increased to an average of 12.5 words per day during the last four weeks of the intervention. Furthermore, Robert continued to speak an average of 12.5 words per day during the two-week follow-up period. Overall, Robert's words spoken per day increased from 0 at baseline to a treatment mean of 7.7 words per day. Additionally, an effect size of 1.60 was yielded, including 100% of the data non-overlapping between baseline and
In addition to an increase of words spoken, Robert talked to multiple persons, including four different teachers and various peers throughout treatment. Robert's teacher also reported that Robert became more comfortable with speaking in groups, as he participated in reporting the "news" to his classmates on a regular basis.

Treatment integrity, as assessed by teacher completion of a self-report worksheet of intervention steps, denoted 100% adherence to programming common stimuli and reinforcement procedures during the first week of treatment. However, although the teacher was provided with the plan worksheet weekly (including clearly and objectively defined steps), the teacher failed to complete any worksheets after the first week.

Integrity of CBC interviews was also assessed. All CBC interviews were audiotaped, and the consultant's demonstration of specific objectives per interview was coded by independent, trained observers. Across all interviews, 95% of the objectives were achieved.

Parent and teacher acceptability of CBC was assessed with the BIRS and CEF. In general, Robert's teacher and mother reported that the procedures were very acceptable (mean item scores of 6.0 and 5.73 on the six-point Likert Acceptability Factor scale). Mean item scores across the three factors suggested that consultees perceived the treatment procedures to be moderately efficient and effective (Effectiveness factor mean = 3.43 [teacher] and 3.67 [parent] on a six-point Likert scale). Additionally, on the CEF, overall satisfaction with the consultant and consultation experience was rated by the teacher and parent as highly satisfactory (mean item rating of 6.60 [teacher] and 6.13 [parent]) on a seven-point Likert-type scale.

The current study has implications for teachers and school psychologists. The indirect service delivery model of CBC links families and teachers to provide agreed-upon, feasible treatment plans without time-consuming, and perhaps costly, direct services. In the context of this study, behavioral interventions implemented by parents and teachers proved effective.

**Figure 1**

*Number of words spoken in school during one and a half hour sessions in the classroom as recorded by the teacher and consultant.*

Note: The data indicate Robert's talking behavior during his entire classroom time per day (i.e., one and a half hours), excluding recess and specials. The double line break after the first baseline point denotes three months of no speech by Robert prior to consultation as reported by the teacher. Baseline data were collected for three weeks prior to the CPAI; however, only the last four points were plotted. All baseline points were 0. The teacher collected daily data during points 2 through 19. All data points thereafter were collected through random weekly probes by the consultant. This change in data collection procedures is denoted by the second phase line. The second double line break after point 25 signifies a week-long spring break.
effective and easy to implement to increase the rate of speaking of a five-year-old boy with selective mutism. The use of the CBC allowed for comprehensive plan development with both parent and teacher involvement across settings, produced a shared responsibility of treatment goals and outcomes, and prompted partnering to address future concerns.

Although there were many positive outcomes as a result of the study, several limitations are noted. Foremost, the teacher was involved in only one instance of one-on-one time with the child-client outside the school. More frequent interactions may have shown higher treatment gains. Furthermore, one-on-one teacher time outside of school with gradual introductions of peer(s) may have increased the treatment effects as well. For example, it may have been advantageous for the teacher to take Robert and one of his classmates to a setting outside of school. This may have then generalized to speech with peers in the classroom setting. Additionally, the consultant was unable to collect reliability data on the number of words spoken. This information would have allowed for the confirmation of the accuracy of the teacher's and consultant's observations. Finally, although treatment integrity was assessed using a plan worksheet, no objective measures were utilized. Furthermore, the teacher only completed the plan worksheet for one week of the intervention, thus providing a limited assessment of the integrity of which the intervention was implemented. Whereas the consultant observed the classroom weekly, objective observations of the teacher rewarding the Robert with a sticker for words spoken, for example, would have been valuable to ensure reliable treatment implementation. It should be noted, however, that a typical consultant in a naturalistic school setting, such as a school psychologist, may have difficulty implementing a systematic objective observation due to practical considerations, such as time constraints.

Future research should continue to explore the use of conjoint behavioral consultation as a model of service delivery for addressing SM, and other concerns. Whereas the current study shows positive effects of parent and teacher involvement with the treatment of selectively mute children, more research is needed to determine the effects of interventions across systems. In this case, the CBC model facilitated parent-teacher collaboration throughout the problem-solving and treatment processes, allowing for acceptable interventions and positive outcomes. Future research should continue to explore the outcomes derived from treatments developed and delivered through working partnerships between home and school systems.

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References


Treatment of Selective Mutism in the Context of CBC


