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Behavioral Consultation as a Process for Linking the Assessment and Treatment of Social Skills

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There has been recent interest in social skills assessment and treatment among researchers and practitioners. The research bases in these areas are expanding rapidly, and the identification of valid assessment methods and effective intervention strategies is promising. However, few researchers have identified ways in which social skills assessment and intervention can be linked in a practical manner. Likewise, the process by which services are delivered is rarely addressed. The purpose of this article is to present a model by which the interaction between social skills assessment and intervention can be enhanced, with a focus on the problem-solving process. One effective and efficient manner of providing services to socially unskilled children is through an indirect model of service delivery; that of behavioral consultation. Behavioral consultation is a four-stage problem-solving model that involves the cooperative efforts of two or more persons to clarify a student's needs and develop and implement appropriate strategies for intervention. This article presents the objectives and procedures of each stage of behavioral consultation as a process to facilitate accurate problem identification and effective problem resolution, with the goal of linking social skills assessment directly to treatment.

In recent years, social behavior deficits in children have been afforded a great deal of interest by both researchers and practitioners. Empirical

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research has indicated that social skill deficits in childhood, if left untreated, are relatively stable over time, are related to poor academic performance, and may be predictive of social adjustment problems and serious psychopathology later in life (Parker & Asher, 1987). Although social skills assessment and treatment are receiving increased attention in research and practice, the manner in which these important processes can be linked systematically has not been explicitly presented.

Ideally, the clinical assessment of socially maladjusted children should take a profile approach to identify clearly individual skills and deficits, and to recognize the specificity of children's responses (Dodge, McClaskey, & Feldman, 1983). In this regard, Dodge and his associates have presented a three-step assessment process for socially deficient children. The first step involves initial identification of the incompetent child, which they argue that previous procedures are capable of doing. Second, assessments should focus on identifying the particular social contexts, tasks, or situations in which the incompetent child displays deviant behavior. Finally, the source of the incompetence should be identified by assessing the child's component skills in each of the problematic social situations (Dodge & Murphy, 1984; McFall & Dodge, 1982).

Although the model suggested by Dodge and his colleagues provides a conceptual framework for social skills assessment, it fails to identify systematic ways in which assessment and intervention can be linked to enhance treatment efficiency and effectiveness. Gresham, Elliott, and their associates (Elliott, Gresham, & Heffer, 1987; Gresham & Elliott, 1984) have presented a model that outlines the importance of defining, assessing, treating, and evaluating social problems (hence, the acronym DATE). However, the process by which services can be delivered in the Assessment $\times$ Treatment interaction is not addressed. This is an important issue for practitioners working in applied settings, and for researchers attempting to understand empirically the critical components for effective problem solving.

The purpose of this article is to present a feasible model for linking social skills assessment and intervention. Our goal is to suggest practices by which the interaction between assessment and intervention can be enhanced, with a focus on the problem-solving process. One effective and efficient manner of providing services to these children is through an indirect model of service delivery; that of behavioral consultation. The advantages of this approach include its (a) behavioral, problem-solving emphasis; (b) indirect form of service delivery, which allows persons in the natural setting (i.e., parents and teachers) to be the primary treatment agents; and (c) use of objective multisource, multimethod data collection procedures. Such an approach allows one

to identify and analyze situational conditions, setting events, and interfering responses which impact the target behavior. The collection of data from a variety of sources and settings is emphasized, which allows for a functional assessment of target behaviors, and leads to the development of an appropriate, empirically-based intervention strategy. Likewise, continual and systematic evaluation of the child's responsiveness to treatment, and programming for maintenance and generalization of treatment effects are emphasized.

BEHAVIORAL CONSULTATION

Behavioral consultation is generally characterized as a four-stage problem-solving model that involves the cooperative efforts of two or more persons to clarify a client's needs and develop and implement appropriate strategies for intervention. There are four stages of behavioral consultation: problem identification, problem analysis, treatment implementation, and treatment evaluation (Bergan, 1977; Bergan & Kratochwill, 1990; Kratochwill & Bergan, 1990). These stages specify the steps that are required to move from problem specification to problem solution, and procedurally are operationalized through an interview technology. Table 1 outlines the respective stages and objectives of behavioral consultation.

Behavioral consultation, especially when conducted with parents and teachers in a conjoint fashion, has been shown to provide a feasible, effective means of linking assessment to treatment in the provision of indirect services to socially withdrawn children (Sheridan, Kratochwill, & Elliott, 1990). Conjoint behavioral consultation expands traditional behavioral consultation by linking parents and teachers systematically in addressing joint concerns regarding client needs. In this model, parents and teachers serve as joint consultees (i.e., consultation with parents and teachers occurs together, rather than in a parallel fashion). Thus, a collaborative home-school relationship is emphasized and interactions between home and school systems are focal (Sheridan & Kratochwill, *in press*).

There are many inherent strengths in conjoint behavioral consultation which enhance its potential effectiveness in remediating social skills difficulties. By actively involving parents and teachers in a structured problem-solving framework, comprehensive and systematic data can be collected on a child's social behaviors over extended temporal and contextual bases. Consistent programming across settings may maximize consultation treatment effects, allow for the assessment of behavioral contrast or side effects, and enhance generalization and maintenance.

TABLE 1
Stages and Objectives in Behavioral Consultation

-
- I. Problem Identification
 - A. Define the problem(s) in behavioral terms.
 - B. Provide a tentative identification of behavior in terms of antecedent, situation, and consequent conditions.
 - C. Provide a tentative strength of the behavior (e.g., how often or severe).
 - D. Establish a procedure for collection of baseline data in terms of sampling plan, what, who, and how the behavior is to be recorded.
 - II. Problem Analysis
 - A. Evaluate and obtain agreement on the sufficiency and adequacy of baseline data.
 - B. Conduct a tentative functional analysis (i.e., discuss antecedent, consequent, and sequential conditions).
 - C. Discuss and reach agreement on a goal for behavior change.
 - D. Design an intervention plan including specification of conditions to be changed and the practical guidelines regarding treatment implementation.
 - E. Reaffirm record-keeping procedures.
 - III. Treatment Implementation
 - A. Determine whether the consultee has the necessary skills to effectively implement the plan.
 - B. Monitor the data collection procedures and determine whether the plan is proceeding as designed.
 - C. Determine whether any early changes or revisions in the treatment plan are necessary.
 - IV. Treatment Evaluation
 - A. Determine if the goals of consultation have been obtained.
 - B. Evaluate the effectiveness of the treatment plan.
 - C. Discuss strategies and tactics regarding the continuation, modification, or termination of the treatment plan.
 - D. Schedule additional interviews if necessary, or terminate consultation.
-

nance (Drabman, Hammer, & Rosenbaum, 1979; Stokes & Baer, 1977). Along with these positive outcomes, various process goals of the model have also been identified. These include (a) improving the communication and relationship between the child, family, and school personnel; (b) establishing constructive home-school partnerships; (c) promoting greater understanding and conceptualization of problems; (d) encouraging shared ownership for problem definition and solution; and (e) increasing the diversity of expertise and resources available for problem resolution (Sheridan & Kratochwill, in press). Given the nature and impact of children's social problems, a conjoint consultation approach seems particularly important in addressing the needs of this diverse population.

Before presenting the objectives and strategies of each stage of conjoint behavioral consultation, a point of clarification is in order. Although some current research efforts are focusing on formalizing and

systematizing the stages of consultation to study them empirically (Fuchs & Fuchs, 1989; Kratochwill, Van Someren, & Sheridan, 1989), in practice they tend to overlap in a dynamic, reciprocal fashion. For example, although the assessment of social deficits is the primary goal of problem identification, the entire assessment process continues throughout all of the stages of consultation, and plays a primary role in not only identifying the target behavior, but also in designing, refining, and evaluating interventions. Accurate, comprehensive assessments allow one to draw conclusions that are important throughout consultation, including issues regarding problem severity, interfering behaviors, the development of intervention strategies, and the degree of treatment success. With this in mind, we now focus on the goals and methods of each stage of behavioral consultation to facilitate accurate problem specification and effective problem resolution in the area of social skills deficits in children.

Problem Identification

The first stage of behavioral consultation is problem identification. The primary goal of this stage is to specify the problem behavior in clear, objective terms. A tentative conditional analysis and estimate of behavior strength are elicited. Likewise, collection of baseline data occurs across settings within a multisource, multimethod framework.

A standard battery of tests or methods for assessing social skills does not exist. Rather, the process of social skills assessment can be conceptualized as a series of hypothesis-testing sequences (Elliott, Sheridan, & Gresham, 1989). Consultants generate hypotheses based on information that is available at any point in the assessment process. These hypotheses are then tested at subsequent points through the gathering of additional information. The hypotheses generated dictate the direction of assessment, the questions to be answered, and the methods to be used.

A top-down assessment approach may be most practical and functional for behavioral consultants. As such, the process starts with a general and global assessment. The focus of assessment practices is continuously narrowed to specify and clarify the target for intervention. Through this narrowing, hypothesis-testing process, consultants continuously (a) clarify topographical and functional features of the target behavior(s), (b) explore important factors surrounding their occurrence, (c) identify areas of strengths and weaknesses, and (d) investigate personal and environmental conditions that could facilitate the development and implementation of an effective plan. Thus, a consultant might start by requesting the parent and teacher to complete behavior ratings scales to determine salient concerns of significant adults in a

child's life. Likewise, sociometric ratings can be used early in assessment to obtain a global index regarding social status within the peer group, and self-reports provide general information regarding perceptions of one's own skillfulness within a social context.

As objective participants in the problem-solving process, behavioral consultants have a unique vantage point. The relationship they establish with significant adults in a child's life is important, and allows them greater flexibility to conduct comprehensive assessments across sources and settings. Thus, behavioral consultants should elicit information from a number of sources and significant individuals in a child's social environment, including parents, teachers, peers, and the child himself or herself. The multitude of settings in which a variety of social behaviors may be exhibited should also be considered. Hence, assessments should be conducted at home, in structured and nonstructured school settings (e.g., classroom, playground, lunchroom, gymnasium), and under naturalistic and analogue conditions. Only then can the consultant analyze all the social behaviors and responses within a child's repertoire and determine personal and environmental variables that may enhance or impede the demonstration of positive targets.

In addition to a multisource, multisetting approach, a variety of methods should be incorporated into the social skills assessment paradigm. Assessment strategies that have been found to be particularly important in obtaining a comprehensive evaluation of the child's social behaviors include parent and teacher rating scales, sociometrics, self-reports, behavioral interviews with various sources, and direct observations across settings. Table 2 provides a summary of these methods and their purposes. As illustrated, the direction of assessment allows the consultant continuously to narrow and refine target behaviors, identify salient factors and conditions surrounding their occurrence, and test hypotheses regarding potential factors that may enhance or impede intervention implementation and effectiveness. Behavioral concerns that are identified across parents, teachers, and children, and that are demonstrated across a number of social settings are likely to play a significant role in a child's overall social functioning, and may be appropriate targets for intervention.

Rating scales. Rating scale assessments are helpful in obtaining objective data regarding important components of a child's social skills from a variety of sources. Rating scales can provide an estimate of the frequency of behaviors, a tentative estimate of skill and performance deficits, and a guideline for interviews and direct observations across settings. Rating scale data can be obtained from at least three sources: adults, peers, and the child himself or herself.

TABLE 2
Summary of Social Skills Assessment Methods and Purposes

-
1. Teacher rating of social skills
 - A. Estimate frequency of behaviors.
 - B. Estimate behavior's importance to teacher.
 - C. Estimate skill and performance deficits.
 - D. Provide guideline for teacher interview and direct observations.
 - E. Evaluate social validity of intervention.
 2. Parent ratings of social skills
 - A. Estimate social skills deficits across settings.
 - B. Estimate parent's perceived importance of social behaviors.
 - C. Provide guideline for parent interview.
 - D. Evaluate social validity of intervention.
 3. Sociometrics
 - A. Measure social preference and social impact.
 - B. Obtain sociometric status classification (rejected, neglected, or controversial).
 - C. Evaluate change in social perceptions as a function of intervention.
 4. Self-report of social skills
 - A. Obtain child's perception of social behavior.
 - B. Consider child ratings in target selection.
 - C. Evaluate child perceptions regarding treatment effectiveness.
 5. Parent-Teacher interviews
 - A. Further delineate and specify target behaviors.
 - B. Explicate consultation goals and behavioral objectives.
 - C. Provide functional analysis of behavior in specific situations.
 - D. Identify setting events and conditional factors surrounding behaviors.
 - E. Assess treatment preferences and acceptability to consultees.
 - F. Develop cross-setting interventions to facilitate consistency and generalization.
 - G. Evaluate perceptions regarding treatment effectiveness.
 6. Direct observations
 - A. Provide functional analysis of behavior.
 - B. Obtain direct measure of behavior in applied settings.
 - C. Observe qualitative aspects of social behavior, such as nature, function, and peer reactions.
 - D. Allow social comparison of target child with matched peer.
 7. Child interview
 - A. Obtain child's perception of social behavior.
 - B. Consider child's input in selecting target behavior, goals of consultation, and intervention strategies.
 - C. Evaluate child perceptions regarding treatment effectiveness.
-

Note. From "Assessing and Treating Social Skills Deficits: A Case Study for the Scientist-Practitioner" by S. N. Elliott, S. M. Sheridan, and F. M. Gresham, 1989, *Journal of School Psychology*, 27, p. 202. Copyright 1989 by Pergamon Press, Inc. Reprinted by permission.

The Social Skills Rating System (Gresham & Elliott, 1990) provides reliable and functional data on a child's social behaviors and is a user-friendly scale that can be used with parents, teachers, and students. This system provides important information from various sources

on both the frequency and importance of various social behaviors across settings. It is very skill-based (e.g., "Invites friends over to play"), and offers a link to intervention. The separate forms for parents, teachers, and students provide important information across sources and settings.

The inclusion of adult rating scales in the assessment of social competence in children is based on the assumption that adults who know the child well are able to interpret and understand the child's social interactions with peers, in the social context in which they occur. However, a large portion of the peer culture is not accessible to adults, and adults' assessments may be biased by the child's academic performance or behaviors towards adults (Coie, 1985). Self-ratings are therefore helpful. Sociometric methods (i.e., peer ratings or nominations) also provide important contextual information regarding the child's relative standing within his or her social group.

Sociometrics. Sociometric methods are used to obtain information on the social impact and preference of the target child. They also allow for the classification of the sociometric status of the child (i.e., popular, rejected, neglected, or controversial), and are based on the assumption that the peer group may be a reliable source regarding a child's social acceptability and impact. Indeed, the peer group is most often the primary recipient of the child's social overtures (or lack thereof), and are most familiar with the social context in which social behaviors occur. Several sociometric methodologies are available, including positive and negative nomination techniques, and positive and negative rating scale methods (see McConnell & Odom, 1986, for a comprehensive review). Because there is some controversy regarding negative nomination techniques (e.g., "Circle the names of 3 children who you like the least"), Asher and Dodge (1986) developed a method which combines a rating scale (e.g., "On a scale of 1 to 5, how well do you like to play with each classmate?") with a positive nomination measure (e.g., "Circle the names of 3 children who you like the best"). This method has been found to be especially reliable in identifying rejected children, however, there have been some problems noted with its utility in classifying neglected children. Nevertheless, sociometrics appear to be very potent assessment methods for assessing social impact and acceptance by one's social group.

Self-reports. Along with adult and peer ratings, a child's own perceptions regarding his or her social skillfulness and status are important. Children can provide accurate information regarding their own behaviors and perceptions (Witt, Cavell, Heffer, Carey, & Martens,

1988), and self-reports provide important information that is not otherwise accessible to consultants (i.e., the child's thoughts and cognitions). It is now believed that an individual's cognitions may play a pivotal role in social behaviors (Dodge, 1980), so consultants must elicit self-perceptions and cognitions early and throughout the assessment-intervention process.

In keeping with a global, top-down approach, behavior rating scales completed by the child provide helpful information regarding general social skills and behaviors. The Social Skills Rating System (Gresham & Elliott, 1990) contains a self-report scale for students at elementary and secondary levels. It is recommended that consultants administer the scale to a student individually. Ratings on critical items can then be used to guide and structure a child interview, assess the child's interpretation of social situations, obtain direct and specific information to confirm or disconfirm hypotheses, and further narrow appropriate targets for intervention.

Behavioral interviews. Behavioral interviews across sources are critically important in the assessment of children's social difficulties. They allow for the specific identification and delineation of target behaviors, and they also allow for a functional analysis of social behaviors in specific situations.

The vehicle through which behavioral consultation is operationalized procedurally is the behavioral interview. Thus, within this framework, standardized interview data are obtained readily. As indicated previously, it is important to obtain such data from parents and teachers alike, and a conjoint consultation approach, in which parents and teachers are joined to work mutually and collaboratively throughout the entire assessment and intervention process, seems particularly fruitful. The efficacy of conjoint behavioral consultation in the treatment of socially withdrawn children has received some initial empirical support (Sheridan et al., 1990).

Direct observations. Direct observations of a child's social behaviors provide the most direct and specific assessment information. They provide opportunities for consultants to conduct functional analyses of the child's behaviors in a social context, and to observe behaviors of peers in reaction or as a precursor to the target child's behaviors. Direct observations also allow for a social comparison with a matched peer, that will be important in determining the social validity of treatment effectiveness. As with other assessment methods, direct observations should occur across settings. Consultants should conduct observations periodically to generate and test hypotheses directly. Likewise, parents

and teachers can be trained to conduct simple observations to obtain consistent and on-going behavioral data over contextual bases.

Although direct observations of the rate of social interaction have been used to identify socially withdrawn or isolated children, their validity has been questioned (Asher, Markell, & Hymel, 1981). It has recently been suggested that children with low rates of interaction are not necessarily socially rejected or neglected, and that they may not be at an unusually high risk for later maladaptive behaviors. It may be that the rate of social interaction, however, is an appropriate target for intervention in a child identified on some other basis (e.g., peers' nominations). On the other hand, high rates of aggression are clearly related to teachers', parents', and peers' evaluations, and appear to be appropriate for targeting in social skills assessment and intervention. In either case (i.e., rate of social interaction or rate of aggression), qualitative aspects of the social behaviors (e.g., nature or function of the behavior) also should be assessed in direct observations.

Problem Analysis

The second stage of behavioral consultation is problem analysis. Problem analysis is the critical stage during which assessment data are linked directly to treatment. The main objectives of problem analysis include (a) evaluating the initial assessment data, (b) conducting a functional analysis of conditions that may impact the target behavior, (c) identifying behaviors that may interfere with the display of prosocial behaviors, (d) identifying the nature of the social skill difficulties (i.e., skill deficits, performance deficits, self-control skill deficits, self-control performance deficits), and (e) designing a plan for problem resolution.

During problem analysis, the social target should be analyzed at several levels. First, it is important to analyze the specific behavioral domain(s) in which the child displays social inadequacies. Second, a functional analysis of the requisite social skill components related to adequate performance of the target behavior must be conducted. Third, it is important to identify the social-cognitive/self-control deficits which may be interfering with adequate social performance. Finally, it is imperative to evaluate the situational, temporal, and environmental conditions surrounding the occurrence (or nonoccurrence) of the target behavior. Only following this detailed behavioral, cognitive, and environmental analysis is the development of a comprehensive treatment program possible.

In behavioral consultation, the procedures of problem analysis are instituted via the Problem Analysis Interview (PAI). Specific questions that the consultant should investigate are presented in Table 3. These

TABLE 3
Important Consultation Questions to Pursue in Problem Analysis

-
1. Which behaviors are skills deficits and which behaviors are performance deficits?
 2. Are interfering behaviors present?
 3. Does the behavior(s) occur across situations and settings?
 4. What is the functional analysis of the behaviors?
 - A. What events precede the occurrence of the target and interfering behaviors?
 - B. What events follow the occurrence of the target and interfering behaviors?
 - C. Does the classroom environment set the occasion for social skills to occur?
 - D. Does the home environment set the occasion for social skills to occur?
 - E. Do peers, parents, or teacher reinforce, ignore, or punish socially skilled behaviors?
 5. Are similar behaviors reinforced, ignored, or punished consistently across settings?
 6. Do observations agree with parent, teacher, and child ratings and interviews?
 7. What is the child's sociometric status in the classroom?

Rejected: Interfering behaviors likely to be aggressive, disruptive behaviors

Neglected: Interfering behaviors likely to be social withdrawal, anxiety, etc.

Controversial: Child likely to have combination of socially skilled behaviors and externalizing behaviors (disruption, aggressive behavior, etc.)
 8. What behaviors are not occurring that teacher considers to be critical for classroom success?
 9. What are some of the child's strengths or assets?
 10. What is the child's perception of her or his own social behavior and sociometric status?
 11. What interventions are likely to be successful with this child?
 12. Can these interventions be implemented in the classroom?
 13. Can these interventions be implemented at home?
 14. If classroom-based and home-based interventions are not feasible, can these interventions be implemented through other means?
 15. What other resources are available to help promote positive social behaviors?
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Note. From "Assessing and Treating Social Skills Deficits: A Case Study for the Scientist-Practitioner" by S. N. Elliott, S. M. Sheridan, and F. M. Gresham, 1989, *Journal of School Psychology*, 27, p. 203. Copyright 1989 by Pergamon Press, Inc. Reprinted by permission.

questions will help the consultant and consultee formulate hypotheses when attempting to identify environmental contingencies and conditions which may be related to the target behavior, and those which may enhance or impede the display of alternate, prosocial behaviors.

A comprehensive, cross-setting behavioral assessment should provide information on whether social deficits are a result of difficulties in response acquisition, or response performance (Kratonchwill & French, 1984). Skill deficits (or response acquisition deficits) occur when an individual has not learned skills that are necessary to exhibit a socially competent response. Performance deficits arise when an individual fails to successfully perform behaviors that are within one's repertoire. Gresham and Elliott (1984) extended this two-way classification scheme

to include four general areas of social skills problems (see Figure 1). Their scheme of social skills difficulties distinguishes whether or not a child knows how to perform the target skill (i.e., skill or performance deficit), and also ascertains the presence of emotional-arousal or other interfering responses (e.g., anxiety, fear, anger, impulsivity) which interfere with the acquisition or performance of appropriate social behaviors (Elliott et al., 1987; Gresham & Elliott, 1984). This type of conceptual scheme is important because if children can be correctly classified through careful problem analysis, interventions likely to be effective can be identified readily. Figure 2 illustrates the manner in which consultants can use this heuristic classification model to link assessment directly with intervention.

Social skill deficits characterize children who either have not acquired the necessary social skills with which to interact appropriately with others, and those children who failed to learn a critical step in the performance of the skill. Interventions employing direct instruction, modeling, coaching, and behavioral rehearsal frequently are used to remediate such social skill deficits (Elliott et al., 1987; Gresham & Elliott, 1984), and have received empirical support (Gresham & Nagel, 1980; Oden & Asher, 1977).

Social performance deficits describe children who have the appropriate social skills within their behavioral repertoire, but they fail to perform them at acceptable levels. Interventions that manipulate antecedents and consequences are effective interventions for this group. For example, peer initiations, contingent social reinforcement, and group contingencies have been recommended (Elliott et al., 1987; Gresham & Elliott, 1984). Strain and his associates (Strain, Shores, & Timm, 1977) found peer initiations and interventions particularly effective for children demonstrating performance deficits.

Self-control social skills deficits are used to describe children for

	Acquisition Deficit	Performance Deficit
Emotional Arousal Response Absent	Social Skill Deficit	Social Performance Deficit
Emotional Arousal Response Present	Self Control Skill Deficit	Self Control Performance Deficit

FIGURE 1 Conceptual classification system for children's social skills problems. From *Psychoeducational Interventions in the Schools* (p. 152) by S. N. Elliott, F. M. Gresham, and R. W. Heffer, 1987, New York: Pergamon Press. Copyright 1987 by the Pergamon Press, Inc. Reprinted by permission

	No Interfering Problem Behaviors	Interfering Problem Behaviors
Social Skills Acquisition Deficits	Direct instruction Modeling Behavioral Rehearsal Coaching	Modeling Coaching Differential Reinforcement of a Low Rate of Response (DRL) Differential Reinforcement of Other Behavior (DRO) Reductive procedures to decrease interfering problem behaviors
Social Skills Performance Deficits	Operant methods to manipulate antecedent or consequent conditions to increase the rate of existing behaviors	Operant methods to manipulate antecedent or consequent conditions to increase the rate of existing prosocial behaviors Differential Reinforcement of a Low Rate of Response (DRL) Differential Reinforcement of Other Behavior (DRO) Reductive procedures to decrease interfering problem behaviors
Social Skills Strengths	Reinforcement procedures to maintain desired social behavior Use student as a model for other students	Reinforcement procedures to maintain desired social behavior Reductive procedures to decrease interfering problem behaviors

FIGURE 2 Heuristic model for linking social skills assessment to intervention. From *The Social Skills Rating System* (p. 61) by F. M. Gresham and S. N. Elliott, 1990, Circle Pines, MN: American Guidance Service, Inc. Copyright 1990 by the American Guidance Service, Inc. Reprinted by permission.

whom interfering responses or behaviors have prevented skill acquisition. Two important criteria determine the existence of a self-control social skills deficit: (a) the presence of an emotional-arousal or other interfering response (e.g., social anxiety or impulsivity); and (b) the child's not knowing or never performing the skill in question. Interventions designed to remediate these types of problems involve primarily emotional-arousal reduction techniques, such as desensitization and relaxation, paired with self-control strategies such as self-talk, self-monitoring, and self-reinforcement (Elliott et al., 1987; Gresham & Elliott, 1984, 1990). Likewise, because these children display skill deficits, it is likely that direct instruction, coaching, modeling, or other methods that actively train social skills may be required. However, whether or not these are necessary treatment conditions for this group of children is an empirical question.

Finally, children with self-control social performance deficits have a

particular social skill in their repertoire, but their performance is hindered by both interfering responses, and by problems of antecedent or consequent control. Identification of a self-control social performance deficit also rests on two criteria: (a) the presence of an emotional-arousal response, and (b) inconsistent performance of the social skill in question. Appropriate interventions here might include self-control strategies to teach inhibition of inappropriate behavior, stimulus-control training to teach discrimination skills, and contingent reinforcement to increase the frequency of appropriate social behaviors (Elliott et al., 1987; Gresham & Elliott, 1984, 1990). It may also be necessary to address the emotional-arousal or other interfering responses directly through techniques such as desensitization and relaxation, however, this has not been tested empirically.

In behavioral consultation, one of the main objectives of the PAI is to develop an intervention to address the specific behavioral problem (Bergan & Kratochwill, 1990; Kratochwill & Bergan, 1990). Preferences of the treatment agents (i.e., parents, teachers) are important in the development of a feasible and manageable plan. Because the effectiveness of an intervention is based largely on behaviors of treatment agents (i.e., consultees), it is critical that they find the procedures practical, feasible, and otherwise acceptable. Treatment acceptability should be assessed by consultants during problem analysis through interviews and/or rating scales. The Behavior Intervention Rating Scale (BIRS; Von Brock & Elliott, 1987) provides a formal, data-based method of collecting pre-treatment acceptability information. The BIRS also can be used informally to guide an interview focusing on treatment acceptability issues.

A number of factors have been identified that impact consultees' acceptability of an intervention. These include time required to implement the intervention, risk to the target child, potential side effects for other non-target students, and perceived fairness (Elliott, 1988; Kazdin, 1981). Likewise, there is likely a reciprocal relationship between treatment acceptability, effectiveness, use, and integrity (Witt & Elliott, 1985). The critical importance of a consultee's acceptability of an intervention and its impact on subsequent stages of problem solving has been highlighted by Witt and Elliott (1985), who suggested that:

acceptability is ultimately the initial issue in the sequence of treatment selection and use. Once a treatment is deemed acceptable, the probability of using the treatment is higher relative to other treatments . . . if the effectiveness of the treatment meets or exceeds the expectations of the service provider, the probability is enhanced of judging the treatment acceptable. (p. 274)

Considering the importance of treatment acceptability and its impact on use, integrity, and effectiveness, consultants must recognize that the consultee(s) make the final decision regarding plan selection. Support and empathy are therefore essential. This is particularly true in cases where parents and teachers have observed the client experience social difficulties over extended periods of time, with previous interventions having little or no impact. In these cases, constructive feedback, patience, and flexibility are important to generate and agree upon specific plan strategies and tactics.

Treatment Implementation

Once the target behavior is clearly identified and specified, the baseline assessment data are systematically analyzed, the nature of the social difficulty is ascertained, and the treatment plan is agreed upon, the treatment implementation stage of behavioral consultation ensues. This is the stage during which the treatment plan is implemented by treatment agents. A cross-setting intervention approach appears necessary to maximize treatment effects of social skills interventions (Sheridan et al., 1990) and to monitor the existence of behavioral contrast effects (Walker, Hops, & Johnson, 1975). The active involvement of parents and teachers via conjoint behavioral consultation allows for the implementation of a systematic plan across settings.

A number of specific procedures have been identified as effective treatment methods for social skills deficits. The myriad of procedures, however, can be classified under approximately five major heading: coaching, modeling, operant conditioning, social-cognitive procedures, and peer pairing. Coaching procedures involve direct verbal instruction and discussion as the major mediums of intervention. Modeling involves the use of films, audiotapes, videotapes, or live demonstrations of skills to be acquired. Operant procedures consist primarily of providing social or material reinforcement of targeted prosocial behaviors in naturalistic or analogue settings. Social-cognitive interventions focus on the cognitive processes associated with social competence, and include a number of diverse procedures, such as role-taking, problem solving, and the use of self-statements. Peer intervention efforts use peers to initiate and/or enhance interactions with target children.

Schneider and Byrne (1985) reported the results of a major meta-analytic investigation that provided comparative effectiveness data for each of the major approaches to social skills interventions. From the extensive data provided by these researchers, it is clear that no single treatment approach or technique is uniformly effective. Rather, the success of social skill training procedures varies considerably among

subjects, settings, and therapists. Some generalizations, however, can be made. First, from comparison of the mean effect sizes across all studies with all types of problems, operant techniques generally were found to be more effective than modeling and coaching procedures, which in turn were more effective than social-cognitive methods. Second, training tended to be more effective for withdrawn than for aggressive children. The difference was most pronounced in modeling studies, which were highly effective for withdrawn children. Coaching and operant techniques were found to be most effective for aggressive children. Schneider and Byrne suggested that problems of withdrawal may be more related to skill deficits, and are alleviated by training appropriate skills using such techniques as modeling. Aggression, on the other hand, may have more to do with the application of skills already acquired, with an inability to use these skills in troublesome situations. These children may benefit from coaching in the use of appropriate prosocial behaviors in aversive or troublesome situations, with contingent reinforcement to increase and maintain the use of these behaviors.

Although operant reinforcement procedures appear generally effective in increasing the social interactive behaviors of socially deficient children across groups, they may be insufficient in producing qualitative changes in the child's social competence. Operant procedures that direct treatment goals toward increasing peer interaction may be reinforcing peer interaction per se, but not necessarily social skillfulness, peer acceptance, or qualitative aspects of interactions. There are many problems associated with this limited conceptualization of social behavior. First, simple reinforcement overemphasizes rate of interaction, and disregards the quality of social interaction and responses. Second, it fails to provide instruction or training of more appropriate means of social interaction with which to replace inappropriate behaviors (Michelson & Mannarino, 1986). Thus, in practice most effective social skills interventions are combined procedures rather than a single technique.

A related problem with simple operant procedures is that focusing strictly on skill-based or behavioral components of social deficits fails to address the social perceptions and cognitions of a child. Dodge and his associates have found that aggressive boys actually display faulty social attributions and limited problem-solving capacities (Dodge, 1980; Dodge, Murphy, & Buschbaum, 1984; Dodge & Somberg, 1987; Steinberg & Dodge, 1983). They tend to attribute their own misfortunes to hostile behaviors of peers, they interpret social cues from their peers as signs of hostility, and they infer hostile intentions even in ambiguous situations. Also, their problem-solving strategies tend to be less effective, less specific, less relationship enhancing, and more aggressive than

those of their socially skilled counterparts. Relatedly, Asher and Renshaw (1981) found that children with social problems often have a tendency to define interpersonal goals in ways that promote inadequate social interactions.

One important aspect of social skillfulness concerns the goals that children set for themselves in particular situations (Doll, Gettinger, & Salmon, 1990). Because most social interactions take place automatically (i.e., without explicit deliberation or reflection), it is unlikely that children are usually aware or conscious of their social goals or problem-solving strategies. So along with coaching, modeling, and operant procedures, interventions that encourage deliberate social planning, alternative problem-solving skills, interpersonal goal-setting strategies, and behavioral rehearsal may be instrumental in a total treatment package.

Although behavioral consultants are not active in the direct implementation of an intervention, certain consultant practices are important in this stage. One main objective of behavioral consultation during treatment implementation is determining whether the treatment agent has the requisite skills to implement a program as intended (with integrity; Bergan & Kratochwill, 1990; Kratochwill & Bergan, 1990). Depending on the skill level and expertise of the consultee, training or modeling of the intervention procedures may be necessary prior to treatment implementation. Relatedly, because the outcome of consultation is largely dependent upon the degree to which the treatment plan is implemented as intended, consultants should not only provide additional training as necessary, but also collect treatment integrity data whenever possible. Consultees can also collect treatment integrity data by completing checklists or self-observation reports (Gresham, 1989).

Although consultee training and monitoring of treatment integrity are important to maximize the effectiveness of an intervention, they potentially may jeopardize the consultation relationship. Consultant care must be taken to promote skill acquisition and demonstration in a facilitative, rather than authoritarian fashion. The consultant's interpersonal skills of genuineness, respect, and perspective-taking are required in this stage to guard against a condescending appearance. Likewise, consultants should take every opportunity to reinforce consultees positively for their implementation efforts.

Treatment Evaluation

The fourth stage of behavioral consultation is treatment evaluation. Consultation goals during this stage include evaluating treatment effectiveness, and programming for generalization and maintenance (Bergan

& Kratochwill, 1990; Kratochwill & Bergan, 1990). In contrast to the initial assessment of social skills, consultants should take a bottom-up approach during treatment evaluation. Thus, direct observations, behavioral interviews, parent-teacher self-ratings, and sociometric scales should be used to assess treatment effectiveness and social validity of behavior change.

The effectiveness of social skills interventions is determined by several interrelated components, including degree of behavior change, immediacy of change once treatment is implemented, and maintenance and generalization of behavior change once intervention strategies are no longer in place. Although group research designs have been the most common and prevalent method for evaluating intervention research, single-subject designs are legitimate for evaluating interventions in applied settings. These designs allow consultants to establish a functional relationship between implementation of the intervention and behavior change, and they permit evaluation of interventions within the environment in which the behavior is naturally occurring. Using such methods, consultants can determine degree of effectiveness by comparing the amount and stability of the target behavior prior and subsequent to treatment. Immediacy of change is also easily determined by examining the degree of behavior change upon introduction of the social skills intervention. High impact, strong interventions will produce treatment effects that show little overlap with the baseline data series, and will be clearly visible via graphic display (Shapiro, 1987). And, by (a) increasing the number of subjects, behaviors, or settings; (b) varying the length of baseline; and (c) employing other methods to strengthen the experimental design, various threats to internal validity can be ruled out.

Consistent with time-series designs is the need to utilize a multimethod approach in evaluating the impact of an intervention. Thus, social validation is also important to assess in applied research and practice. Social validity refers to the demonstration that therapeutic changes are socially important to the client (Kazdin, 1977). Consultants can investigate social validation through subjective evaluation or social comparison with nondeviant peers. Subjective evaluation involves global and overall appraisals of the child's social functioning and performance. This method of social validation addresses the question of whether behavior changes have led to qualitative differences in how the child is viewed by significant others. Thus, during Treatment Evaluation Interviews, parents and teachers can be asked to provide general perceptions regarding the child's social behavior changes. Likewise, global checklists and sociometric ratings can provide a data-based method of subjective evaluation.

Social comparison is assessed through the identification of nondeviant peers, and the level of their behavior serves the criterion by which clinical importance of treatment is evaluated. This method of social validity allows consultants to determine whether the child's behavior following treatment is distinguishable from behaviors of nondeviant peers (Kazdin, 1977). Thus, during treatment evaluation, direct observations of matched peers can be conducted to determine comparability of the target child's social behaviors with those of his or her peers. These observations can be conducted easily by teachers, with intermittent observations by consultants to substantiate conclusions regarding treatment effectiveness.

In sum, direct observations, behavioral interviews, rating scales, self-reports, and sociometric ratings are important in treatment evaluation. Single subject designs allow consultants to determine whether a functional relationship exists between specific intervention strategies and behavior change, and address the need for modification, continuation, or termination of treatment. When combined with social validation methods, the consultant is also able to assess empirically perceptions of significant others regarding impact of the intervention on the child's social behaviors and status.

Generalization, Maintenance, and Follow-Up

To be truly effective, behaviors taught in any behavioral training program should generalize across time, settings, individuals, and behaviors. Much of the consultation and social skills training research has failed to address generalization issues in the past (Kratochwill, Sheridan, & Van Someren, 1988). Application of social skills outside the training setting rarely occurs naturally; rather, generalization must be programmed actively by consultants and consultees. Many procedures known as "generalization facilitators" (Michelson, Sugai, Wood, & Kazdin, 1983; Stokes & Baer, 1977) have been discussed to enhance generalization beyond the specific parameters of an intervention. Examples of generalization facilitators include: (a) teaching behaviors that are likely to be reinforced and maintained by the natural environment (prosocial behaviors are an excellent example); (b) teaching a variety of alternative positive social responses; (c) making the training situation as comparable to the natural environment as possible by training across stimuli (e.g., persons, settings) that are common to the natural environment (which is an inherent strength of the behavioral consultation model); (d) fading training consequences to approximate naturally occurring contingencies; (e) reinforcing the application of positive social skills in new and appropriate situations; (f) reinforcing social goal-

setting, accurate self-reports, and self-monitoring of performance; and (g) including peers in training. Finally, formal follow-up data over time, collected by consultants via direct observations, behavioral interviews, and multisource ratings, are important both clinically and scientifically.

CONCLUSIONS

There is a need to understand the critical components of effective problem solving for socially unskilled children. A structured consultation model can be particularly effective in addressing the diverse and complex needs of this population of children. In this article, we have presented behavioral consultation as one model of service delivery that provides a heuristic framework and facilitates a direct link between the assessment and treatment of social deficits in children. Inherent in this model are several components that are critical in the Assessment $\times$ Treatment interaction. These include identifying the child with difficulties, assessing the behavioral domain(s) in which the child displays social inadequacies, and conducting a functional assessment of the social skill components related to adequate performance of the target behavior(s). Concurrently, it is important to identify the social-cognitive/self-control deficits which may be interfering with adequate social performance, and evaluate the situational, temporal, and environmental conditions surrounding the occurrence (or nonoccurrence) of the target behavior. Following this detailed behavioral, cognitive, and environmental assessment, consultants and consultees will be better able to develop a comprehensive treatment program to address specific behavioral, social-cognitive, and self-control deficits. Finally, continued direct assessments across sources and settings will allow consultants and consultees to evaluate treatment effectiveness, modify existing contingencies, and assess side effects of the interventions.

In the assessment and treatment of social deficits in children, it is important to consider not only content issues, but also the process by which decisions are made and services are delivered. It is particularly desirable to involve parents and teachers in collaborative, shared problem solving through a conjoint behavioral consultation approach. Ideally, this will help establish constructive home-school partnerships, provide a broader range and understanding of the child's social difficulties, identify a wider range of possible resources, and promote ongoing communication and problem-solving beyond the immediate consultation experience. Consultants should use their unique vantage point in the consultation relationship to conduct comprehensive assessments across sources, settings, and tasks. This will allow them to analyze the

range of social responses within a child's repertoire, and determine personal and environmental variables that may enhance or impede the demonstration of positive social behaviors.

In developing social interventions, consultants should make every effort to engage the consultees actively and constructively. Given the reciprocal nature between acceptability, use, integrity, and effectiveness, continuous assessment of consultees' perceptions regarding treatment acceptability and social validity are important. Consultants must be available to provide on-going support and reinforcement to consultees. Finally, consultants must be flexible to alter plans to increase treatment effectiveness or acceptability, and modifications should be instituted when warranted to best meet the needs of clients and consultees.

AUTHORS' BIOGRAPHIES

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