

ABSTRACT

FRANKS, ATHENA ELAINE. Functional Behavioral Assessment in Consultation: A Comparison of Verbal Communication Patterns. (Under the direction of William P. Erchul, Ph.D.).

Verbal communication allows individuals to share information during consultation. Although there have been several studies investigating verbal communication patterns in traditional behavioral consultation, there have been very few investigating verbal behavior in its newer variants. Thus, the purpose of this study was to document and compare consultants' message control and relevant content used in two types of school-based behavioral consultation. The first type of consultation was considered a traditional behavioral/ "consultation as usual" model. The second type was behavioral consultation with an added functional behavioral assessment (FBA) component, which involves a comprehensive method of assessing a client's behavior through closely examining antecedents and consequences of the behavior (DuPaul et al., 2006; Jitendra et al., 2007). Verbal communication patterns in 16 Problem Identification Interviews were coded using the Consultation Analysis Record (Bergan & Tombari, 1975). Two hypotheses were posed: (a) consultants in the consultation condition with FBA would use greater message control than those consultants in the traditional behavioral consultation condition, and (b) consultants in the FBA condition would discuss more behaviorally-related topics than consultants in the traditional condition. Findings revealed that consultants did not use more message control in the FBA condition than in the traditional consultation condition. In fact, there was an indication that more control was used in the "consultation as usual" condition. Thus, the first hypothesis was not supported. However, as expected, findings indicated that consultants do cover more behavioral-related topics in the consultation condition with FBA. Future research considerations and limitations were discussed. Implications were provided, but are limited due to the small n , exploratory nature of the study.

Functional Behavioral Assessment in Consultation: A Comparison of Verbal
Communication Patterns

by
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A thesis submitted to the Graduate Faculty of
North Carolina State University
in partial fulfillment of the
requirements for the Degree of
Master of Science

Psychology

Raleigh, North Carolina

2009

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BIOGRAPHY

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ACKNOWLEDGEMENTS

Over these past few years, there have been many individuals that have guided and supported me on this journey to complete my degree. I sincerely thank all of these special individuals.

First and foremost, I would like to thank my family for holding me up no matter what was going on in my life. In particular, my mother's friendship, love, and professional guidance is more than any daughter could desire. I must also give a very special thanks to my husband, Pierce J. Gibbs. He has been by my side for the past 10 years providing unwavering love and support. I most of all appreciate his skill for helping me see the light at the end of the tunnel.

In addition, I would also like to thank my committee members: Dr. William Erchul, Dr. Collins, and Dr. Schulte for their many years of support. I would like to give a special thanks to my advisor, Dr. Erchul for his undying patience and guidance through this grueling project for me.

Lastly, but certainly no less important, I would like to extend my thanks to three very close friends who I was always able to rant and rave about graduate school and life in general: Niambi Hall-Campbell, Erin Banks, and Shola Dada. I certainly would not be here without having “partners in crime” as I went through this process. I would also like to give a special thanks to my school psychology crew: Stephanie Asbeck, Andrea Vise-McPherson, and Joylynn Miller.

TABLE OF CONTENTS

LIST OF TABLES	vii
CHAPTER 1: INTRODUCTION	1
CHAPTER 2: REVIEW OF THE LITERATURE	6
Consultation: History and Development.....	6
Historical Background	6
Consultation: Definition and Importance.....	8
Consultation Models	9
Mental Health Consultation	10
Organizational Consultation	10
Behavioral Consultation.....	11
School-based Behavioral Consultation	16
Studying Verbal Processes in School Consultation	17
Measuring Verbal Process: Consultation Analysis Record (CAR)	19
Description.....	19
Control in School Consultation.....	23
Bergan and Tombari (1976).....	26
Related Studies.....	28
Relevant Content Discussed in Behavioral Consultation	31
The Content of Consultant Messages during the PII	32
Functional Behavioral Assessment	34
Definition and Description.....	35

FBA vs. Behavioral Consultation	36
Federal Legislation and Accountability	37
FBA Effectiveness in the School Setting	39
FBA in Behavioral Consultation.....	40
Verbal Communication: FBA in Behavioral Consultation.....	44
Project PASS: A Lehigh University Study	48
Conclusion	50
CHAPTER 3: STATEMENT OF THE PROBLEM AND HYPOTHESES	52
CHAPTER 4: METHOD	56
Participants.....	56
Project PASS.....	56
Verbal Process Study	57
Instrumentation	58
Consultation Analysis Record.....	58
Procedure	58
Project PASS.....	58
Verbal Process Study	59
CHAPTER 5: RESULTS	62
Descriptive Statistics.....	62
Nonparametric Statistics	63

Hypotheses and Primary Analyses.....	64
Hypothesis One: Index of Control	64
Hypothesis Two: Index of Content Relevance	65
Additional Analyses.....	66
Hypothesis One: Index of Control	66
Hypothesis Two: Index of Content Relevance	66
CHAPTER 6: DISCUSSION.....	68
Comparing Verbal Control	68
Comparing Content Verbalizations.....	72
Additional Research Considerations.....	74
Limitations	75
References.....	76
APPENDICES	87
Appendix A. Summary of Additional Studies Using the CAR	88
Appendix B. GAI Initial Interview Form-1	92
Appendix C. IAI Problem Identification Interview	96

LIST OF TABLES

Table 1.	Procedural Objectives of the Behavioral Consultation Model	14
Table 2.	Descriptions of Major Categories and Subcategories of the CAR (Bergan & Tombari, 1975)	21
Table 3.	Descriptions of Indices of Effectiveness (Bergan & Kratochwill, 1990)	23
Table 4.	Descriptive Statistics for Indices of Consultant Effectiveness	63
Table 5.	Descriptive Statistics of Relevant Content Subcategories for the PII	64
Table 6.	Wilcoxon Signed-Rank Test Results for Hypotheses.....	65
Table 7.	Summaries of Additional Studies Using the CAR	88

CHAPTER 1

Introduction

School psychologists utilize consultation as a way to deliver educational and psychological services to children. It is often reported by school psychologists to be a preferred activity and one that they would like to participate in more often than they currently do (Costenbader, Swartz, & Petrix, 1992; Fagan & Wise, 2002). School consultation involves an indirect method of delivering services whereby a consultant (e.g., school psychologist) works with a consultee (e.g., teacher) to improve client (e.g., student) outcomes. It also can involve a problem-solving process that has been emphasized by federal legislation (i.e., IDEA 1997 & 2004) to use in the school setting (Erchul & Martens, 2002; Martens & DiGennaro, 2008). Research has indicated that school consultation is an effective method to address academic and behavioral problems of children (Erchul & Martens).

There are several consultation models that have been employed in the schools. However, behavioral consultation is typically the one most subscribed to by school psychologists due to its emphasis in graduate training programs (Costenbader et al., 1992). Behavioral consultation has been shown to be one of the more effective consultation models when compared to mental health and organizational consultation (Sheridan, Welch, & Orme, 1996). The behavioral consultation model consists of four stages: (a) problem identification interview (PII), (b) problem analysis interview (PAI), (c) plan implementation, and (d) problem evaluation interview (PEI) (Bergan & Kratochwill, 1990). Within each stage, there are several objectives that are supposed to be accomplished to assure a successful

consultation process. Previous research has shown that problem identification, achieved during the PII, is key to the success of behavioral consultation because it leads to plan implementation that, in turn, leads to problem resolution (Bergan & Tombari, 1976; McDougall, Reschly, & Corkery, 1988). Thus, there has been a focus on the PII within behavioral consultation research.

Because three of the four stages are interviews, it has been postulated that effective verbal communication is an important process variable to the success of the consultation process (Bergan & Kratochwill, 1990; Bergan & Tombari, 1976). Consultants' use of effective communication allows them to gather and disseminate the information needed to accomplish the goals of the interviews. Multiple coding systems have been applied to investigate the verbal processes that occur in school consultation (e.g., Martens et al., 1992). One in particular, the Consultation Analysis Record (CAR; Bergan & Tombari, 1976), was specifically developed for school-based behavioral consultation and has been used extensively in school consultation research. Because investigations of verbal processes have implications for client outcomes, research using the CAR is seen as important to advance behavioral consultation.

One controversial verbal process that has been investigated in the school consultation literature is consultants' use of interpersonal control. It has been proposed that this is an important process variable because it reflects consultants' attempts to guide and structure the problem-solving process, hence allowing them to effectively gain the information needed during the consultation (Bergan & Kratochwill, 1990; Bergan & Tombari, 1976). Early

research using the CAR indicated that consultants control the consultation process through the use of elicitors (e.g., questions) (Bergan & Tombari, 1976). Consultants' use of control has also been implicated from a relational communication perspective applied to school-based behavioral consultation (e.g., Erchul, 1987; Erchul & Chewning, 1990). Within relational communication research, results suggested that control is seen as a favorable process variable by consultees. However, whether consultants should use control during consultation has been debated. More recent research has provided inconsistent evidence regarding control as an important process variable, suggesting the need for continued research in this area (Busse, Kratochwill, Elliott, 1999; Houk & Lewandowski, 1996; Hughes & Deforest, 1998).

Another important process variable that has been investigated but has not received as much attention as control is consultants' presentation of relevant topics during consultation. Because the primary focus of the PII is to operationally define the problem behavior, Bergan and Kratochwill (1990) have suggested that consultants should center their verbalizations on the topics of children's observable behaviors and the situations in which these behaviors occur. In addition, another objective of the PII is to establish methods to record baseline behaviors, so consultants' verbalizations should also be concentrated around this topic. In general, the few studies that have investigated this variable have revealed that consultants are typically discussing topics regarding children's behavior (Martens et al., 1992; McDougall et al., 1988). However, given the limited research in this area, this is also a variable that requires further exploration. Newer school consultation models, often variants of behavioral

consultation, have emerged over the years. The verbal communication literature has investigated control and relevant content discussed in “traditional” consultation but there are very limited investigations of verbal processes in these other models of consultation. More recently, functional behavioral assessment (FBA) has been increasingly incorporated within a behavioral consultation framework due to federal legislation and the increasing emphasis in accountability (Drasgow & Yell, 2001; Martens & DiGennaro, 2008). In general, FBA consists of multiple approaches to identify the purpose of a targeted behavior. In addition, FBA has been shown to be effective within the school setting (Broussard & Northup, 1995; Ervin, Radford, Bertsch, Piper, Ehrhardt, & Poling, 2001). Preliminary research investigating FBA within behavioral consultation indicates that it does produce positive client outcomes, but it has not shown any significant differences in outcomes when compared to traditional behavioral consultation alone (Beavers, Kratochwill, & Braden, 2004; Schill, Kratochwill, & Elliott, 1998). However, there have only been two studies conducted investigating outcome differences and no studies have been completed that have investigated process differences (e.g., verbal communication) between traditional behavioral consultation and behavioral consultation with FBA. Potentially, a different style of communication in regard to how things should be said (i.e., process) and what should be said (i.e., content) may be necessary to produce significant differences in client outcomes.

Two studies were found that investigated verbal communication in behavioral consultation with FBA, with one comparing conjoint behavioral consultation with consultation that used FBA (i.e., Lee & Jamison, 2003; Moscovitz, 2004). Both studies

indicated that verbalizations regarding behavioral content are particularly high in consultation with FBA and also indicated positive treatment outcomes for a high usage of behavioral communication within this model of consultation.

Despite what has been done, several questions remain regarding this new variant of behavioral consultation involving FBA. For instance, because FBA involves a complex approach to identifying the function of behavior, are consultants more directive in their consultation style (i.e., controlling) to gain additional information regarding children's behavior? Because FBA is derived from many behavior analytical techniques, do consultants make proportionately more statements regarding behavioral content? The present study attempted to answer these questions by examining and comparing consultant verbalization patterns in this new model (i.e., behavioral consultation with FBA) and the traditional behavioral consultation model.

CHAPTER 2

Review of the Literature

This literature review will first provide a basic understanding of consultation through the presentation of its history and development and will include brief descriptions of consultation models relevant to the school setting. The review will then discuss school consultation and verbal communication occurring during consultation, such as consultants' use of control and relevant content verbalizations. The Consultation Analysis Record (CAR; Bergan & Tombari, 1975) will be presented in detail because it is the instrument used in this study. Relevant verbal communication studies utilizing the CAR are also considered. Additionally, this review will discuss functional behavioral assessment (FBA), how FBA has been employed in behavioral consultation, and the expected verbal communication in this new variant of consultation. Lastly, because data from a larger study was used in this research, a detailed description of that study will be provided.

Consultation: History and Development

Historical Background

Consultation has played a prominent role in the history of the delivery of mental health services, with influences from several fields such as psychiatry, psychology, social work, and education (Zins, Kratochwill, & Elliott, 1993). From these fields, several prominent figures and events have contributed to the increasing use of this method to deliver services. Furthermore, from these many influences, several models of consultation have emerged.

Although not originally termed *consultation* at the time, the process can be traced to the earlier professional activities of Lightner Witmer, who assisted teachers with students who had problems (Zins et al., 1993). Gerald Caplan, one of the most influential contributors to the consultation literature, advanced the field by providing a descriptive approach to the process of consultation (Erchul & Martens, 2002). Caplan is best known for the development of the mental health consultation model, which will be discussed later. Other individuals noted in the literature are Seymour Sarason and Irvin Berlin, known for their contributions to the organizational development literature (Zins et al.).

Beyond the many individuals who have contributed to the development of consultation, several events helped spur the popularity of this method to deliver mental health services. For many mental health professionals in the 1960s, providing direct services (i.e., therapy) was common practice (Zins et al., 1993). As Caplan and other professionals discovered, due to the limited number of mental health professionals, it was more efficient to consult with the primary caregivers of clients (Erchul & Martens, 2002). This situation afforded mental health professionals the capability of providing services to many clients, consequently making consultation a feasible and realistic approach (Erchul & Martens). In addition, many professionals were discontented with traditional approaches to providing services (Zins et al.).

During the 1960s, many therapeutic practices lacked evidence documenting their efficacy (Erchul & Martens, 2002). Traditionally, mental health services were aligned with the medical model, which emphasized a psychodynamic perspective and involved a diagnosis

and treatment process. This model was remedial in nature and was not effective in the prevention of mental health problems, which had become increasingly important to the field (Brown, Pryzwansky, & Schulte, 2001). Meanwhile, during this period, an increased awareness of the documented effectiveness of behavioral approaches had arisen. Also, the Community Mental Health Act of 1963 was passed, which mandated consultation as part of a collection of services required in order for community mental health centers to receive federal funding. As a result, many community organizations began to employ consultation as a method to deliver services, in addition to other techniques (Erchul & Martens; Zins et al.).

Consultation: Definition and Importance

Before proceeding, it is essential to provide a definition of consultation. Given the professional diversity of those who consult, *consultation* is used widely and represents many activities, thus resulting in multiple definitions (Brown et al., 2001). In general, consultation can be best described as “a fundamental form of interaction between a professional and an individual who wants to help a third party or a system to change” (Zins et al., 1993, p. 1).

Although multiple definitions exist, there are several similar characteristics among the different types of consultation. Commonly, consultation involves: (a) an indirect approach to deliver services, (b) a problem-solving process, (c) a voluntary participatory relationship on the part of consultee, (d) a dual purpose of remediation and prevention, (e) a cooperative relationship (Erchul & Martens, 2002), and lastly, (f) a relationship based on confidentiality (Gutkin & Curtis, 1999).

Despite the existence of multiple definitions across the consultation literature, consultation has been shown to be efficacious. This is important due to the growing emphasis within psychology and education for employing practices that are evidence-based (Begeny & Martens, 2006; Martens & DiGennaro, 2008). Results from earlier research (e.g., Mannino & Shore, 1975; Medway & Updyke, 1985) provided evidence to help substantiate a claim for the use of consultation. Specifically, in examining the effects of consultation in 54 studies drawing upon the mental health, behavioral, and organizational consultation models, Medway and Updyke found effect sizes (*ES*) between .47 and .71 for positive consultation outcomes when compared to control groups, with a mean *ES* of .47 resulting from a more conservative method of effect size calculation. Similarly, in a review of multiple consultation models, Mannino and Shore found positive outcomes for 69% of the studies. More recently, a review conducted by Sheridan, Welch, and Orme (1996) found that 76% of the studies reviewed had positive effects. In particular, the use of consultation in schools has shown to have significant effects on consultee and client outcomes (Erchul & Martens, 2002).

Consultation Models

As previously mentioned, several models of consultation have emerged from the field's many influences. West and Idol (1987; cited in Kratchowill & Bergan, 1990) identified 10 different models of consultation that have been developed over the years. For the purpose of this thesis, three models that are frequently used in the schools will be discussed: mental health, organizational, and behavioral consultation. Brief descriptions of

mental health and organizational consultation will follow, with a more detailed description of behavioral consultation provided due to its relevance to school psychology and the current study.

Mental health consultation. Gerald Caplan, a pioneer in the innovation of mental health consultation, was the first to provide a descriptive approach to this process (Erchul & Martens, 2002). He described four types of consultation: (a) client-centered consultation, (b) consultee-centered consultation, (b) program-centered administrative consultation, and (d) consultee-centered administrative consultation (Brown et al., 2001). Although Caplan's model takes a psychodynamic approach, it is also preventive in nature. Caplan suggested that when psychological dysfunction of a professional occurs, this interferes with his or her ability to provide effective services to a client. Through consultation, the consultant has the opportunity to address the personal needs of the professional (consultee), in turn helping the client. The preceding statement emphasizes the indirect approach of the process, as well as the consultee-centered type of consultation whereby the primary focus is on the consultee, and client change is secondary. This type of consultation is described because it is known as the cornerstone of the mental health model (Henning-Stout, 1993). The mental health consultation model has been very influential in the development of many other models of consultation, such as organizational and behavioral consultation (Henning-Stout).

Organizational consultation. Gaining knowledge of organizational consultation principles is of increasing importance for consultants because an organization that is efficient, effective, and healthy will be better able to accomplish its goals (Brown et al.,

2001; Henning-Stout, 1993). For instance, a school that is considered to be a generally healthy organization would result in adults (e.g., teachers) providing better services and children being better educated. Within organizational consultation, there is a greater emphasis placed on the larger environment. Organizational consultation may involve many individuals who have established micro-systems within a larger system with their own culture and norms (Brown et al.). Thus, this situation requires the consultant to use a broader framework, which includes the understanding of structural and interpersonal influences within the organization (Brown et al.; Zins et al., 1993). Within this broader framework, the consultant must be aware of three assumptions that underscore organizational consultation, which are the importance of: (a) knowing an organization's culture; (b) collectively including all stakeholders within the organization in planning, evaluating, and implementation; and (c) going beyond understanding to planning and implementing a program (Henning-Stout).

Behavioral consultation. Unlike the models presented previously, behavioral consultation is the model that is most often taught in the graduate training of school psychologists. Therefore, it is also the model that is most often used in the school setting by these professionals (Costenbader, Swartz, & Petrix, 1992). Erchul and Martens (2002) suggested two reasons why behavioral consultation is widely accepted and used within the school setting: (a) the behavioral approach is empirically supported; and (b) its goals are clearly delineated, which can lead to the development of standardized interviewing protocols, competency-based training programs, and measures of consultant effectiveness. Accordingly, consultants must be knowledgeable about behavioral approaches as well as

have the ability to relay this information within the consultation process. The transfer of behavioral knowledge and techniques to consultees best describes the preventive aspect of this model of consultation. It is assumed that once these techniques are acquired, they can be used by consultees for solving future problems.

What is known today as behavioral consultation was first delineated by Bergan (1977), who was influenced by the models of D'Zurilla and Goldfried (1971; cited in Erchul & Martens, 2002) and Tharp and Wetzel (1969; cited in Erchul & Martens). Each model applies behavioral and problem-solving techniques to assist in alleviating problems. In more detail, behavioral consultation is a problem-solving approach that consists of four stages, three of which are interviews. Although behavioral consultation is presented as distinct stages, there is considerable overlap between the processes that occur within each stage (Kratochwill & Bergan, 1990). In the first stage, a problem identification interview (PII) is conducted, which involves prioritizing problem behaviors, operationally defining the problem, and establishing methods to collect baseline data. In the second stage, a problem analysis interview (PAI) is conducted and an intervention is developed based upon the results of the baseline data collected. The third stage, plan implementation, involves the implementation of an intervention that was developed in the previous stage as well as the continuation of data collection. In the last stage, conducted through a problem evaluation interview (PEI), a determination is made whether the plan and/or intervention was effective and if there is a need to re-evaluate the originally identified problem and go through the problem-solving stages again (Kratochwill & Bergan, 1990). A description of objectives that

are to be accomplished in each stage is provided in Table 1.

Of the four described stages, research has shown the problem identification interview to be the most critical (e.g., Bergan & Tombari, 1976; McDougall, Reschly, & Corkery, 1988). In this interview, correctly identifying the problem can potentially lead to the implementation of an effective intervention (Kratochwill & Bergan, 1990). In a seminal study conducted by Bergan and Tombari (1976), the occurrence of problem identification was found to be the best predictor of plan implementation, which is a later critical stage in the behavioral model. Undeniably, the processes that take place in the PII are important.

Of the three major consultation models applied to the school setting, behavioral consultation has the most extensive research base. In a review of 46 journal articles and dissertations (Sheridan et al., 1996), 46% of the studies examined the effects of behavioral consultation, compared to 11% examining the effects of mental health consultation ($n = 5$) and only 4% examining the effects of organizational consultation ($n = 2$). Furthermore, behavioral consultation outperformed the mental health model. For behavioral consultation, 95% of the cases resulted in one positive outcome. In contrast, 60% of the studies that examined the effects of mental health consultation resulted in one positive outcome. Information was not reported on the outcomes of the organizational consultation model. Similarly, a study that assessed the effectiveness of behavioral consultation training on consultant and client outcomes found positive treatment outcomes for clients, with an overall average effect size of .95 (Kratochwill, Elliott, & Busse, 1995).

Table 1

Procedural Objectives of the Behavioral Consultation Model

Stages	Objectives
Problem Identification	<ol style="list-style-type: none">1. Assess the scope of consultee concerns2. Prioritize problem components or identify a target problem area3. Define the target problem in overtly observable behavioral terms4. Estimate the frequency, intensity, or duration of the problem behavior5. Identify tentative goals for change6. Tentatively identify environmental conditions surrounding the problem behavior such as antecedents, sequences, and consequences7. Establish data collection procedures and responsibilities8. Schedule the next interview
Problem Analysis	<ol style="list-style-type: none">1. Determine the adequacy of baseline data2. Establish goals for change3. Analyze environmental conditions surrounding the problem behavior as antecedents, sequences, and consequences4. Design and implement an intervention plan5. Reaffirm data collection procedures6. Schedule the next interview
Plan Implementation	<ol style="list-style-type: none">1. Determine whether consultee has requisite skills to implement the intervention plan2. Monitor data collection and overall plan operations3. Determine need for plan revisions

Table 1 (continued)

Procedural Objectives of the Behavioral Consultation Model

Stages	Objectives
Problem Evaluation	<ol style="list-style-type: none">1. Determine whether intervention goals are met2. Evaluate plan effectiveness3. Discuss continuation, modification, or termination of the plan4. Terminate consultation or schedule additional meetings to recycle through problem-solving stages

Note. From “School Consultation: Conceptual and Empirical Bases of Practice,” (2nd ed.) by W. P. Erchul and B. K. Martens, 2002, pp. 85-87. Kluwer Academic/Plenum Publishers: New York, NY.

Fuchs, Fuchs, Bahr, Fernstrom, and Stecker (1990) also found positive outcomes in a study investigating the components of behavioral consultation, as well as examining the effects of the model on children’s problem behaviors. Results indicated a reduction in children’s problem behaviors and improved ratings from teachers. Thus, behavioral consultation within the school setting has been shown to be particularly effective. Fortunately, as discussed above, this is the model that is most widely subscribed to by psychologists working in the schools.

School-Based Behavioral Consultation

There are several ways to describe the process of school consultation. However, given the general consensus that the process of consultation encompasses an interpersonal exchange in this proposed research, school consultation will be defined as:

a process for providing psychological and educational services in which a specialist (consultant) works cooperatively with a staff member (consultee) to improve the learning and adjustment of a student (client) or group of students. During face-to-face interactions, the consultant helps the consultee through systematic problem solving, social influence, and professional support. In turn, the consultee helps the client(s) through selecting and implementing effective school-based interventions. In all cases, school consultation serves a remedial function and has the potential to serve as a preventive function. (Erchul & Martens, 2002, pp. 13-14)

Consultation within the schools has become increasingly important over the past several years. With the passage of IDEA 1997 and its 2004 reauthorization, a problem-solving and/or prereferral intervention approach is strongly emphasized to help children with educational and behavioral problems (Erchul & Martens, 2002). Additionally, federal mandates for LRE (i.e., least restrictive environment) have driven state educational systems toward the inclusion of students with disabilities in regular education classrooms (Gutkin & Curtis, 1999). Given the increased number of students with special needs in regular classrooms, teachers are requiring additional support (Gutkin & Curtis). As such, consultation provides school psychologists the opportunity to provide the needed support to

teachers. In addition to the remedial aspect, consulting with teachers allows school psychologists the opportunity to “give psychology away,” hopefully affecting many more children through consulting with one adult (e.g., teacher) (Miller, 1969; cited in Gutkin & Curtis).

Interestingly, apart from federal mandates, school consultation is a preferred activity for many school psychologists (Fagan & Wise, 2002). Costenbader et al. (1992) found 11-20% of a typical day for school psychologists is spent in consultation activities, although most school psychologists would like to spend 31-40% of their time in consultation activities. Desired changes for the role of school psychologists were also found in a study conducted by Reschly and Wilson (1995), which indicated that both practitioners and academicians would like to increase their involvement in problem-solving consultation. Thus, in addition to being an efficacious treatment, school consultation is an activity that is preferred by many school psychologists (e.g., Fuchs et al., 1990; Ponti, Zins, & Graden, 1988; Sheridan et al., 1996).

Because behavioral consultation is the model of choice for many school psychologists, several researchers have investigated the verbal communication that occurs in this model. Therefore, the following section will provide a detailed discussion of verbal communication in school consultation with an emphasis on behavioral consultation.

Studying Verbal Processes in School Consultation

Verbal communication is an essential aspect of the everyday interactions between individuals. Along these lines, school consultation is based on a verbal exchange that occurs over several interviews between consultants and consultees (Bergan & Kratochwill, 1990).

As such, the study of the verbal processes that occur in school consultation is important. Several reasons exist that support this claim. First, in the schools, verbal communication in consultation serves as a primary way to gather information about educational and behavioral problems. Additionally, it serves as a way for consultants to disseminate information to consultees. Thus, consultants must have an awareness of their verbal processes and be able to effectively communicate their psychological and educational knowledge to consultees (Bergan & Kratochwill). Consultants' ability to effectively communicate by being strategic with their choice of words and style of communication increases the likelihood that information will be clearly disseminated, which in turn increases the effectiveness of the consultation process (Bergan & Kratochwill).

Second, in psychotherapy, a similar helping professional approach, research has found a relationship between therapist's verbal communication and client behavior outcomes. Because the consultation process relies heavily on verbal communication, presumably consultants' verbal communication can potentially affect consultees' behaviors (Martens, Deery, & Gherardi, 1991; Martens, Erchul, & Witt, 1992). Third, investigations of verbal communication can improve the practice of consultation. Determining what is said (i.e., content) and how it should be said (i.e., process) have implications on the effectiveness of the consultation process (Bergan & Kratochwill, 1990). Detailed analyses of verbal communication can help to identify what verbal processes are most efficient in order to produce positive outcomes for clients.

To study verbal communication in school consultation, psychologists have used multiple verbal interaction coding schemes. At least four coding schemes have been used previously in school consultation research: (a) Roger and Farace's (1975) relational communication coding system (cited in Martens et al., 1992); (b) Folger and Puck's (1976) request-centered coding system (cited in Martens et al.); (c) Tracey and Ray's (1984) topic following-topic initiation coding system (cited in Martens et al.); (d) Consultation Analysis Record (CAR; Bergan & Tombari, 1975). Although multiple coding schemes have been applied, numerous studies have utilized the Consultation Analysis Record (Bergan & Tombari) to measure verbal processes (Busse et al., 1999). In the current study, the CAR was used to measure verbal processes, and thus a detailed discussion of this system follows.

Measuring Verbal Processes: Consultation Analysis Record (CAR)

Originally developed by Bergan and Tombari (1975), the Consultation Analysis Record (CAR) was created to study verbal processes in school consultation and is specifically intended for research and training purposes (Bergan & Kratochwill, 1990). Gutkin (1996) summarized several advantages of using the CAR to investigate verbal processes: (a) the CAR has been successfully used in numerous studies in the school consultation research literature; (b) unlike other coding schemes, the CAR was specifically developed for assessing verbal communication in school-based behavioral consultation; and (c) the CAR assesses both content and process (e.g., control) components in consultation.

Description. The CAR classifies verbalizations into four major categories: (a) source, (b) process, (c) content, and (d) control. Under each major classification category,

verbalizations can also be coded into subcategories. Table 2 provides a description of the major categories and subcategories (Bergan & Tombari, 1975). In addition, four indices of overall message effectiveness can be derived: (a) Index of Content Relevance, (b) Index of Control, (c) Index of Content Focus, and (d) Index of Process Effectiveness. Table 3 provides descriptions of these four indices. Higher scores on the indices indicate more effective consultant communication (Bergan & Kratochwill, 1990).

For verbal communication to be coded using the CAR, there are three important steps to follow (Bergan & Tombari, 1975). The first step involves determining what to code. This is accomplished by dividing verbal utterances into independent clauses. An independent clause is unit of observation that conveys a complete subject-action-object relation (Bergan & Kratochwill, 1990; Bergan & Tombari). However, instead of using independent clauses, other researchers have used *thought units* as a unit of observation (Hughes & DeForest, 1993; Sheridan, 1997). The second step involves determining how to code the unit of observation (e.g., independent clause). This step is accomplished by placing the message units into the major classification categories and subcategories, requiring each to be coded four times. The third component involves establishing interrater reliability. Bergan and Tombari suggested two points at which to establish interrater reliability: (a) coders assigning verbal utterances into independent clauses, and (b) coders assigning independent clauses to message classification categories or subcategories. Most studies utilizing the CAR have established interrater reliability only at the second point.

Table 2

Description of Major Classification Categories and Subcategories of the CAR (Bergan & Tombari, 1975)

Category and Subcategories	Description
Source	Identifies whether the consultant or the consultee is speaking
Process	Identifies the purpose of the verbalizations emitted by the speaker
<i>Evaluation</i>	<i>verbalizations that are value judgments of events, objects, and persons, often reflecting attitudes and emotions of speaker</i>
<i>Inference</i>	<i>verbalizations that are based on opinions rather than facts</i>
<i>Specification</i>	<i>verbalizations that give or request a definition or a description</i>
<i>Summarizations</i>	<i>verbalizations that give or request previously stated information</i>
<i>Validations</i>	<i>verbalizations that indicate agreement or disagreement regarding factual information</i>
Content	Identifies the topics discussed
<i>Background environment</i>	<i>verbalizations referring to the client's previous and current home and community factors</i>
<i>Behavior setting</i>	<i>verbalizations referring to events and behaviors that proceed, follow, and sustain behavior</i>
<i>Behavior</i>	<i>verbalizations referring to the client behaviors that are observable and covert, how these behaviors are recorded, and the intensity and purpose they serve</i>
<i>Individual characteristics</i>	<i>verbalizations referring to individual traits, such as personality, intellectual, and physical attributes</i>
<i>Observation</i>	<i>verbalizations referring to observing and recording client's behavior</i>
<i>Plan</i>	<i>verbalizations referring to strategies and steps to assist in solving problem behaviors</i>
<i>Other</i>	<i>verbalizations that do not refer to other content categories</i>

Table 2 (continued)

Descriptions of Major Classification Categories and Subcategories of the CAR (Bergan & Tombari, 1975)

Category and Subcategories	Description
Control	Identifies whether information was asked for or provided
<i>Elicitors</i>	<i>verbalizations that require a response or a behavior</i>
<i>Emitters</i>	<i>verbalizations that provide information</i>

Note. From Bergan, J.R., & Tombari, M.L. (1975). The analysis of verbal interactions occurring during consultation. *Journal of School Psychology*, 13, 209-226.

The reliability and validity of the CAR has been well demonstrated in several studies. Bergan and Tombari (1976) found interrater reliability (i.e., Scott coefficients) in the problem-identification interview to be .88 for control, .87 for content, and 1.00 for process. Adequate reliability was also established in another study, with Kappa coefficients for the PII being .84 for content, .94 for process, .94 for control, and .98 for source (McDougall et al., 1988). Construct validity for the CAR was demonstrated in a comparison study of verbal coding schemes (Martens et al., 1992). The purpose of the Martens et al. study was to demonstrate the applicability of four coding schemes to measure verbal processes in school-based behavioral consultation. It was found that the CAR along with the other three coding schemes consistently identified similar verbal communication constructs (e.g., control) (Martens et al.).

As previously discussed, four indices can be derived using the CAR. Of these indices, there are two that are relevant to the current study: the Index of Control and the Index of Content Relevance. Therefore, detailed discussions of these two indices will follow.

Table 3

Description of Indices of Effectiveness (Bergan & Kratochwill, 1990)

Index	Description
Index of Content Relevance	Refers to consultant verbalizations covering a balance of topics pertinent to the interview
Index of Interview Control	Refers to the use of elicitors
Index of Content Focus	Refers to determination that interview topics stay constant for brief periods
Index of Process Effectiveness	Refers to consultant's use of relevant process categories

Note: From *Behavioral Consultation and Therapy* by J.R. Bergan & T.R. Kratochwill, 1990, pp. 437-445. Plenum Press: New York, NY.

Control in School Consultation

Control has been defined and interpreted in many ways, often depending on the coding system that has been used. Within the CAR, control is defined as the ratio of elicitors (e.g., questions, imperatives) to emitters used by the consultant (i.e., Index of Control; Bergan & Kratochwill, 1990). Bergan and Kratochwill (1990) suggested, “to be effective, consultants must be able to produce utterances that will elicit the specific information needed” (p. 44). This is particularly important as it pertains to behavioral consultation, given the significance of correctly identifying the problem behavior in order to produce behavioral change. From the outset, Bergan and Tombari (1975) suggested that consultants should *guide* and *structure* the consultation process by using elicitors. Given this assumption and the objectives of the PII (see Table 1), they proposed that effective consultants will have elevated scores on the Index of Control, representing a high use of elicitors-to-emitters during consultation. Bergan and Tombari’s (1976) initial research investigating verbal

communication in school-based behavioral consultation supported their claim, as control was found to be an important process variable leading to problem identification during the PII.

For many years, Bergan and Tombari's (1975, 1976) assumption and research that supported the importance of consultants using control in consultation was not challenged. However, there was limited research being conducted investigating this phenomena. In the late 1980s and early 1990s, a line of research emerged that investigated the construct of control in school-based consultation from a relational communication framework (e.g., Erchul, 1987; Erchul & Chewning, 1990; Witt et al., 1991). Within this body of research, it was found that consultants exert more interpersonal control than consultees during behavioral consultation and that consultees favorably perceive consultants who do exert control. Although the findings of research were consistent with Bergan and Tombari's original proposal, this line of research sparked the "collaboration debate" (Erchul, 1999; Gutkin, 1999a, b; Schulte & Osborne, 2003).

The central question of the collaboration debate is, are consultants being truly collaborative if they are exerting control over the consultation process? In attempting to answer this question, it must be noted that conceptual barriers exist in the terminology used that has fueled this debate. For instance, like control, collaboration has also been defined in multiple ways with several theoretical perspectives influencing these definitions (Schulte & Osborne, 2003). In other words, many professionals define the concept of collaboration differently. In addition, the everyday concept of control is perceived negatively. Thus, for many individuals in the helping professions, control appears to be in opposition to the core of

their profession (Erchul, 1992). However, control has been described as a subtle process that occurs during behavioral consultation and does not suggest a lack of consultee involvement (Erchul). In fact, although Bergan and Tombari (1975) and Bergan and Kratochwill (1990) suggested that consultants should guide and provide structure to the consultation process, they also suggested that consultees should be actively involved in problem solving. The outcome of the “collaboration debate” is that consultants can simultaneously exert control and be collaborative, ultimately supporting Bergan and Tombari’s original assumption (Erchul; Gutkin, 1999; Schulte & Osborne).

Nevertheless, the concept of control continues to be a sensitive area of study. Recent research provides conflicting and inconclusive evidence regarding the impact of control during school-based consultation. In one study (Hughes & DeForest, 1993), a negative relationship was found between consultants’ use of elicitors and consultees’ perceptions of consultants. In another study (Busse et al., 1999), significant effects were not found for consultants’ use of control on outcomes measures of consultees’ perception of consultant and client treatment outcomes. Yet another study (Houk & Lewandowski, 1996) suggested that consultants who have high verbal control do not affect consultees’ willingness to participate in consultation. Given these inconsistencies, additional research is warranted. Thus, the current study will investigate verbal communication patterns specifically looking at consultants’ use of control.

In the following section, research that has measured verbal processes using the CAR and, more specifically, consultants’ use of elicitors, will be reviewed. The CAR has been

applied to study verbal communication in conjoint behavioral consultation (e.g., Sheridan, 1997) and school assistance team meetings (e.g., Lee & Boughtin, 1999); however, the focus of the current study is on verbal communication within a dyad (i.e., school psychologist and teacher). As such, only studies that have investigated verbal communication within this dyad are reviewed. See Table 7 (Appendix A) for additional studies that have used the CAR that are not included in this review. The following discussion will begin with the work of Bergan and Tombari.

Bergan and Tombari (1976)

Bergan and Tombari (1976) investigated consultant verbal communication using the CAR, which was newly developed at that time. The purpose of their study was to determine the relationship between consultant variables and the occurrence of problem identification, plan implementation, and problem solution. Specifically, consultant variables of interest were interviewing skills, efficiency of delivering services, and application of psychological knowledge. The CAR was used to assess interviewing skills by computing indices of consultants' effectiveness (see Table 3). Verbalizations were coded that occurred during the PII and PAI. Efficiency in the delivery of services was measured by looking at the average time it took consultants to engage in the first interview once the referral was made and the number of consultants' cases. To measure the application of psychological knowledge, an index of flexibility was developed that assessed the variety of psychological skills applied by the consultants. The sample consisted of 806 children and 11 psychologists with extensive training. Three multiple regression analyses were completed: (a) problem identification was

correlated with consultant variables; (b) plan implementation was correlated with problem identification and consultant variables; and (c) problem solution was correlated with plan implementation, problem identification, and consultant variables.

Results indicated that consultants' exertion of control (i.e., Index of Control) was significantly related to the occurrence of problem identification. Also, when plan implementation was regressed on consultants' variables and problem identification, only problem identification significantly contributed to plan implementation. This is particularly important because plan implementation accounted for 95% of the variance in problem solution. Lastly, consultants' variables had their greatest impact in the PII (Bergan & Tombari, 1976). These findings suggest that the problem identification is monumental in a plan being implemented, which is linked to the consultation process reaching the final stage (i.e., problem solution). Findings also suggest that it is important to examine consultants' variables in the initial stage (i.e., problem identification) of the consultation process.

The research conducted by Bergan and Tombari (1976) is seminal for several reasons. First, it established the importance of training in the consultation process. At the time the study was conducted, graduate training in consultation for school psychologists was limited (Bergan & Tombari). Second, these authors developed and used a standardized procedure for consulting and established a coding system to measure consultants' verbal communication during this process, which had not been done before. Lastly, their research also identified which areas of focus should be addressed in consultation training, such as consultants' use of elicitors (i.e., control) and accomplishing the objectives of the PII.

Several studies using the CAR as a research measurement followed after the initial work of Bergan and Tombari (1975, 1976), with each study contributing to the literature and supporting the study of verbal communication in school consultation. Most of the following studies have investigated the relationship between verbal communication and various outcomes (e.g., consultees' perceptions). For the purpose of the present study, verbal communication patterns are most relevant. Hence, in the review of the following studies, patterns of the verbal processes will be presented.

Related Studies

Martens, Lewandowski, and Houk (1989) sought to determine the relationship between consultant and consultee verbal processes and consultee perceptions of consultant effectiveness. To measure verbal processes, the CAR was used. Two trained coders were used to code verbalizations in each of the CAR's four major coding categories. Only PII verbalizations were coded. The sample consisted of 20 student and regular teachers as consultees and two master's level school psychologists trained in behavioral consultation as consultants.

Regarding consultants' and consultees' verbal communication patterns, results indicated that, on average, consultees talked more during consultation, emitting more verbalizations than consultants (73.8%). Although consultees talked more, consultants exerted more control, with 34% of their verbalization eliciting information and/or behaviors from the consultees. In contrast, only 1% of consultees' verbalizations consisted of elicitors.

Similar results were found by Hughes and DeForest (1993), who used a modified version of the CAR to assess consultant directiveness and support and their relation to consultee perceptions of consultant effectiveness. The sample consisted of 17 doctoral students trained in an expanded model of behavioral consultation that emphasized the interpersonal and relationship building skills of consultation. Seventeen teachers from private and public schools served as consultees. Two trained coders coded consultant verbalizations in the PII and in the control and process categories of the CAR. Like Martens et al. (1989), 34% of consultant verbalizations were found to be elicitors.

Martens et al. (1992) used four coding schemes to assess verbal processes in school-based behavioral consultation. PII verbalizations were coded using each of the four coding systems that have been applied to school consultation, as previously mentioned. A modified version of the CAR was used to code verbalizations for both consultants and consultees. Four advanced graduate students trained in behavioral consultation served as consultants and four teachers served as consultees. Results supported the original findings of Bergan and Tombari (1976): consultants used more elicitors than consultees, with 29% of their verbalizations being coded as elicitors. Only 2.4% of consultee verbalizations fell in this category. Additionally, all four coding schemes consistently demonstrated that consultants successfully control the consultation process and that they often summarize and validate information (Martens et al., 1992).

More recently, Busse et al. (1999) investigated verbal processes and their relationship to child treatment outcomes and consultant perceived effectiveness. Verbalizations for both

consultants and consultees were coded for the three interviews in behavioral consultation (i.e., PII, PAI, PEI). Twenty-five graduate students with training in behavioral consultation served as consultants and twenty-six teachers served as consultees.

Similar to previous studies (Hughes & DeForest, 1993; Martens et al., 1989), in the PII, consultees made more statements (63%) than consultants (37%). Consultees also consistently talked more in each of the interviews types. However, in a two-way ANOVA, there was a significant effect for source (i.e., consultant or consultee) and percentages of elicitors (i.e., Index of control) across the interviews, which indicated that consultants consistently controlled the consultation process across the three interviews.

To summarize, although the research suggests that consultees do most of the talking during consultation, it also consistently has shown that consultants' verbalizations consist of high percentages of elicitors. Given this research, it can be concluded that, as measured by the CAR (Bergan & Tombari, 1975), consultants exert control during school-based behavioral consultation by guiding the process through the use of elicitors.

In addition to investigating consultants' use of elicitors, verbalizations that refer to content matter that is relevant to the behavioral interviews have been investigated. For instance, in Bergan and Tombari (1976), a regression analysis of problem identification on consultant variables indicated that the Index of Content Relevance accounted for 34% of the variance in the multiple correlation. These findings suggest the importance of consultants covering relevant topics areas in the PII. Therefore, a discussion regarding relevant content verbalizations within behavioral consultation will follow.

Relevant Content Discussed in Behavioral Consultation

Bergan and Tombari (1975) proposed that effective consultants should sufficiently cover pertinent content areas, based on the type of interview conducted. Thus, specific topics are suggested for each of the three behavioral consultation interviews. Because the PII is of interest in the current study, a discussion of content verbalizations that are relevant for consultants to be effective in this specific interview follows.

In general, the goal of the PII is to define the problem behavior and establish procedures to collect baseline data (Bergan & Kratochwill, 1990). As such, consultants should elicit behavioral descriptions so that the problem behavior can be operationally defined and measured. Accordingly, there should be a strong focus on consultants emitting and eliciting information regarding behaviors. Thus, for consultants to be effective in the PII, they should produce a balanced coverage of verbalizations in the behavior, behavior-setting, and observation subcategories of the CAR (Bergan & Kratochwill).

The Index of Content Relevance was used in the present study to assess whether consultants' verbalizations fall within the relevant topic areas (Bergan & Kratochwill, 1990). Therefore, content relevance is defined by the level of scores on this index, with higher scores representing consultants effectively using a balanced coverage of the relevant content areas (i.e., behavior, behavior setting, and observation). It is important to emphasize that a *balance* of verbalizations is required for consultants to receive a high score on the Index of Content Relevance. For example, consultants who adequately produce verbalizations in the observation and behavior subcategories but do not provide adequate verbalizations in the

behavior setting subcategory would receive lower scores on the index (Bergan & Kratochwill).

Before proceeding further, it is important to note that within the school consultation literature there are very few studies that have investigated the relevant topics that should be covered during consultation. Assessing whether consultants cover relevant topic areas as they pertain to the interviews is important because if relevant topics are not covered, it would presumably decrease the value of the consultation process. Given that only a few studies have investigated the relevant content verbalizations in behavioral consultation, additional research is needed. The present study investigated consultants' topic coverage in the PII and, as such, a discussion of consultants' content verbalizations as they relate to the PII follows.

The Content of Consultant Messages during the PII

As previously discussed, Martens et al. (1992) used multiple coding schemes to measure verbal communication found in the PII. In addition to the finding that consultants control the consultation process, results also indicated that the content of consultant verbalizations concern the child's behavior and behavior setting. Thus, this study supports the view that consultants' verbalizations during the PII are often about behavioral topics.

In another study (McDougall et al., 1988), a one-day training was conducted to determine the effectiveness of consultation skills, with a particular emphasis on the PII. To evaluate consultant skill development, the CAR was used to assess consultants' verbalizations before and after the training. In addition, a checklist was developed and used to determine whether PII objectives were met. In the training, consultants received written

materials (i.e., Kratochwill & Bergan, 1990), didactic instruction, demonstrations (video and live), and role-playing experiences in conducting the PII. Consultants' verbalizations were coded using all four categories of the CAR (see Table 2). Sixty-seven human service professionals participated in the workshop, although only 16 completed both baseline and post-training consultations (McDougall et al.).

Results indicated that behavior, behavior setting, and observation subcategories were used frequently during consultation. However, only verbalizations in the observation subcategory significantly increased after the training. The authors suggested that one reason for this occurrence was that behavior and behavior subcategories were already frequently used during the baseline consultation. Although not a significant finding, there was a mean increase for behavior setting verbalizations. Overall, the number of consultants meeting the PII objectives significantly increased after training. Results affirmed the overall effectiveness of the one-day training workshop (McDougall et al. 1988).

Although not always consistent across subcategories, these two studies generally suggest that in the PII, the majority of verbalizations are typically in the behavior, behavior setting, and observation subcategories. Consultants' verbalizations have been found to cover topics areas of the child's behavior and the behavior environmental influences. Training in the PII also indicated that verbalizations in some of these topic areas could increase. These findings are consistent with the purpose of the PII and the content matter proposed by Bergan and Tombari (1975).

The majority of the research conducted in school consultation has investigated the behavioral model of consultation. More specifically, most of the verbal communication research has focused on this model. However, behavioral consultation as it was originally delineated by Bergan (1977) has changed over the years. The model now incorporates several different contemporary methods, as well as being conducted within group settings. Functional behavior assessment (FBA) is one such method that is now being incorporated into the behavioral consultation framework. Because behavioral consultation cases that employed FBA will be examined in the proposed investigation, the topic of FBA is presented next.

Functional Behavior Assessment

School-based behavioral consultation has evolved over the years to incorporate many innovative educational technologies. Although behavioral consultation inherently encompasses many behavioral techniques (Martens & DiGennaro, 2008), FBA is now increasingly included within the behavioral consultation framework. Reasons for including FBA in school-based behavioral consultation revolve around federal legislation, with the increasing emphasis in accountability at the forefront. As previously acknowledged, behavioral consultation has become a “stand alone” service that occurs in student assistance team (SAT) meetings, thus becoming a vehicle for which school personnel can meet the needs of students while complying with federal law (Martens & DiGennaro). The following section presents: (a) a description and definition of FBA, (b) an analysis of the differences between FBA and behavioral consultation, (c) a discussion regarding how FBA is used to

enhance accountability practices, and (c) additional conditions in which the law encourages and requires that FBA be used.

Definition and Description

FBA is defined as a “collection of methods for gathering information about antecedents, behaviors, and consequences in order to determine the reason of behavior” (Gresham, Watson, & Skinner, 2001, p. 158). Antecedents refer to environmental influences that happen before the target behavior occurs. Consequences refer to the environmental influences that help to maintain or decrease the target behavior (Witt, Daly, & Noell, 2000). The primary purpose of FBA is to change the target behavior by identifying the reason (i.e., function) of the behavior in order to develop individualized interventions directly related to the functions.

Even after providing a definition of FBA, one major question still remains, what exactly occurs during this process? Federal legislation does not specify how a FBA should be conducted (Drasgow & Yell, 2001; Martens & DiGennaro, 2008). As such, there is no single best systematic approach to take in conducting a FBA, although several models have been proposed (e.g., Asmus, Vollmer, & Borrero, 2002; Witt et al., 2000). In spite of this lack of clarity in the legislation, FBA typically consists of indirect and direct methods to collect information. Indirect methods may include interviews, record reviews, and behavior rating scales; direct methods refer to direct observations of behavior (Gresham et al., 2001.). Although there are no stated “best practices” for conducting a FBA, a descriptive analysis of the FBA empirical literature indicated that direct observations were conducted in all of the

studies reviewed (Ervin et al., 2001). The repeated occurrence of direct observations in each of these studies may suggest the necessity of this data collection method to the assessment process. In addition, within FBA, a functional analysis is often conducted which involves an “experimental manipulation to test the effects on behavior” (Asmus et al., p. 72).

FBA vs. Behavioral Consultation

Many have argued that the purpose of adding FBA to behavioral consultation is to increase the effectiveness of the process (Mueller & Nkosi, 2007). It is reasonable to assume that individualized treatments that are directly linked to the contingencies of the behavior are most effective (Beavers, Kratochwill, & Braden, 2004; DePaul et al., 2006). FBA has been shown to be effective which will be discussed in detail later in this review. However, as previously mentioned, behavioral consultation was developed based upon behavioral theory and techniques. So, what is the difference between FBA and behavioral consultation?

Several researchers have argued that the behavioral consultation model often relies heavily on teachers’ verbal descriptions to define problem behaviors (i.e., topography) and to determine their operant functioning (e.g., Gresham, 1991; Mueller & Nkosi, 2007; Watson & Robinson, 1996). Although this is an initial step in the process, there is a need for a more in-depth approach to defining and hypothesizing about the problem behavior. Reliance on the topography of behavior may result in the development of interventions that are not based on the true function of the behavior.

The process of FBA provides a more in-depth investigation by including techniques such as multiple observations and functional analyses. Recall that observations provide a

direct method to assess a child's behavior. They are also an essential element of the functional analysis process. As mentioned, a functional analysis involves hypothesis testing by the manipulation of antecedents and consequences and has shown to better detect between multiple potential functions (Haley et al., 2003). However, Gresham (1991) argued that although these methods were originally assumed to occur within behavioral consultation, they often do not. More recently, Martens and DiGennaro (2008) also contended that these processes are not typically conducted by psychologists in the schools. So, although behavioral consultation derived from behavioral theory, it can not be assumed that this model contains the most effective behavioral analytic strategies.

Federal Legislation and Accountability

There are three aspects of FBA that provide school personnel with the means to demonstrate adherence to the federal law and accountability of its students' learning. The first aspect is that FBA incorporates many behavioral analytic techniques that have a substantial amount of research documenting their efficacy and effectiveness (Drasgow & Yell, 2001; Ervin et al., 2001). This is an important characteristic because federal legislation emphasizes the use of empirical supported interventions. Specifically, in the Individuals with Disabilities Education Improvement Act (IDEIA) of 2004, the use of interventions and/or strategies that have been demonstrated to be efficacious or effective based upon rigorous research are stressed (Martens & DiGennaro, 2008). Consequently, FBA is considered to be a viable method to comply with this feature of the federal law.

The second aspect of FBA allows school personnel to observe whether a student is responding to an empirically supported intervention by providing methods to document academic and/or behavioral progress in measurable terms. The documentation of services becomes particularly important because federal legislation mandates that a School Assistance Team (SAT) and/or Individualized Education Plan (IEP) team develop a Behavioral Intervention Plan (BIP) based upon the results of an assessment to help reduce behavioral problems or develop replacement behaviors for students with disabilities (Drasgow & Yell, 2001).

Lastly, in the school setting, federal legislation strongly encourages the use of FBA in some instances and requires it in others (Drasgow & Yell, 2001). FBA is encouraged when a student with disabilities is exhibiting behavioral problems that interfere with his or her learning or the learning of others. It is mandated when a student with disabilities is suspended for over 10 consecutive days and/or been removed and placed in an interim alternative educational setting (Drasgow & Yell).

Due to the increasing emphasis on accountability and the demands for schools to comply with special education legislation, FBA is frequently conducted in the schools. Because school-based behavioral consultation has become a mechanism that is utilized to address many behavioral and educational problems, FBA is often conducted within this problem-solving framework (Martens & DiGennaro, 2008). A discussion of the effectiveness of FBA in the schools will follow.

FBA Effectiveness in the School Setting

For many years, behavioral analysts have used FBA. As such, there is a substantial amount of literature documenting the effectiveness of FBA in multiple settings (Ervin et al., 2001). However, given the increased use of FBA in the schools, research is now accumulating in this setting. Targeted behavioral changes have been reported in many studies that have employed FBA in the schools. In a comprehensive descriptive analysis of studies that used FBA, Ervin et al. (2001) found that with the exception of 2 of 148 intervention cases, all reported that behavioral changes were in the targeted direction. As an example, in one study, the revision of an educational curriculum based upon FBA reduced problem behaviors and increased on-task behaviors for an adolescent girl with mild mental retardation (Dunlap, Kern-Dunlap, Clarke, & Robbins, 1991).

One of the criticisms of the empirical literature focusing on FBA in the schools is that there is very limited research that have applied FBA to children with average intelligence in regular education classes or those with high incidence disabilities (e.g., ADHD) (Ervin et al., 2001). Research in this area has become increasingly important as federal legislation recommends the use of FBA with children without documented disabilities and for the prereferral intervention process. Therefore, researchers are increasingly applying FBA in the regular education setting with children of average intelligence. In one study (Broussard & Northup, 1995), three elementary school-aged boys exhibited remarkable improvements in targeted behaviors with reductions in problem behaviors and increased academic completion. In fact, two of the children did not exhibit any of the targeted problem behaviors after

implementation of the interventions developed from the FBA. Another study applied FBA in the regular education setting for two adolescent boys diagnosed with ADHD and ODD (Ervin, DuPaul, Kern, & Friman, 1998). Intervention development based upon the function of behaviors resulted in increased on-task behavior for both students.

FBA in Behavioral Consultation

As mentioned, both federal legislation and documented effectiveness have increased the use of FBA in the school setting, with it often being conducted within the behavioral consultation model (Martens & DiGennaro, 2008). However, some researchers have questioned the value of this added component to behavioral consultation. Does behavioral consultation with FBA produce greater positive outcomes for students than traditional behavioral consultation? Thus far, research in this area has not found any significantly greater outcomes, although the research is very limited. Specifically, there are only two studies located that examined FBA in a behavioral consultation framework.

Before proceeding, it is important to note that neither of these studies employed a functional analysis (i.e., experimental manipulation) as part of FBA. Although a functional analysis is not a required element of FBA, there is some evidence to indicate that a functional analysis may be able to discern the function of behavior in some situations where a FBA alone does not (Sterling-Turner, Robinson, & Wilczynski, 2001; as cited in Martens & DiGennaro, 2008). Hence, the lack of a functional analysis can potentially affect the outcomes if the purpose of targeted behavior is not correctly identified. A presentation of these studies follows.

Schill, Kratochwill, and Elliott (1998) sought to demonstrate the effectiveness of FBA in behavioral consultation relative to traditional behavioral consultation. Participants consisted of 11 consultees (teachers from Head Start program), 13 children, parents, and 13 consultants (school psychology graduate students). To assess consultation outcomes, several measures were used: direct observations, the Consultant Evaluation Form (Erchul, 1987; cited in Schill et al.), the Treatment Evaluation Inventory-Short Form (TEI-SF; Kelley, Heffer, Gresham, & Elliott, 1989; as cited in Schill et al.), teacher follow-up surveys, consultants' reports, and cost of consultation.

Statistical analyses did not indicate any significant differences between the FBA condition and the traditional behavioral consultation condition. The average effect size for the traditional condition was .52 and the average effect size for FBA condition was .84, demonstrating the effectiveness of both conditions. There were no significant differences on any of the outcome measures. Overall, consultees were satisfied with the consultation experience and moderate levels of treatment integrity were obtained.

In the second study (Beavers, Kratochwill, & Braden, 2004), two conditions (i.e., functional assessment vs. empiric) were compared within a behavioral consultation framework. The empiric condition was consistent with the traditional behavioral consultation model. The authors wanted to determine the effectiveness of the consultation conditions on intervention outcomes. Eighteen teachers served as consultees and three school psychology graduate students served as consultants. Thirty-two children were referred primarily for reading problems. To assess consultation outcomes, direct

observations, curriculum-based measurement (CBM), Treatment Inventory Scale, Treatment Evaluation Inventory-Short Form (TEI-SF; Kelley, Heffer, Gresham, & Elliott, 1989; as cited in Beavers et al.), and Goal Attainment Scaling (GAS; Kiresuk, Smith, & Cardillo, 1994; as cited in Beavers et al.) were used. Additional outcome measures were cost, duration, and teachers' treatment selection.

Similar to Schill et al.'s (1998) results, analyses indicated no significant differences between the functional assessment and empiric conditions for treatment integrity, consultees' satisfaction with interventions, and overall effectiveness. The average effect size for the functional assessment condition was .63 and for the empiric condition, .48. However, treatment effects were significant for the functional assessment condition, only when comparing reading to math curriculum-based assessments. Additionally, the functional assessment condition cost more to deliver than the empiric condition. Consultants also spent significantly more time on the consultation process in the functional assessment condition.

Findings from both of these studies employing FBA in behavioral consultation indicate the effectiveness of FBA within this model. Although effect sizes were larger in consultation conditions with FBA, these two studies did not indicate significant differences when consultation conditions were compared. Given that the results of these two studies did not yield significant differences, why further study this new variation on behavioral consultation? First, at the present time, federal law still mandates that FBA be used in certain situations (Drasgow & Yell, 2001). Second, the research in this area is still very limited. As noted, only two studies were found that investigated differences in outcomes between the two

forms of consultation. There have been no studies investigating any process differences between these two consultation conditions.

By attempting to identify what processes are occurring in this new form of behavioral consultation, ways to improve the outcomes of FBA in behavioral consultation may be identified. In addition, practitioners and researchers of behavioral consultation can be informed of the most appropriate ways to conduct this new variant of behavioral consultation. Consequently, this knowledge can lead to more effective training procedures for consultants and other school personnel involved in the FBA process.

One way to investigate the processes that occur in this new variant of behavioral consultation is to study verbal communication. An initial investigation in the verbal communication patterns can: (a) determine if school personnel (i.e., consultants and/or consultees) are adequately covering the relevant behavioral topics in order to correctly identify the function of the behavior and (b) determine whether there is a need for a consultant to use a more directive approach (i.e., use more elicitors) in order to cover the relevant behavioral topics. Due to the complex nature of FBA, strategic communication may be particularly important in this new form of behavioral consultation. For example, there is some evidence to suggest that teachers are not well versed in behavioral techniques and principles due to a lack of training (Begeny & Martens, 2006). Thus, this may require that behavioral consultants use more elicitors to guide the consultation process so that the necessary information is gained regarding children's behavior.

Verbal Communication: FBA in Behavioral Consultation

To date, only one published study and one dissertation have assessed the verbal processes within a consultation framework that employed FBA. First, Lee and Jamison (2003) conducted a study to examine the influences of FBA in SAT meetings. Specifically, they wanted to determine: (a) whether SAT members would select appropriate interventions linked to the function of behavior, (b) in what stage of the SAT process the appropriate intervention would be identified, and (c) the communication patterns in the SAT meetings. The seven regular participants were the social worker, school psychologist, principal, teachers (kindergarten, first, and second grade), and the SAT liaison. The reading teacher and school nurse also participated, depending on the referral concern. None of the participants had experience with FBA, but all received training in effective SAT procedures and processes. The SAT process consisted of four stages congruent with behavioral consultation interviews and FBA procedures that took place over three meetings: (a) referral stage, (b) descriptive stage (similar to the PII), (c) interpretive stage, and (d) verification stage. Two measures were used in this study: Functional Behavior Assessment-IRS (Lee & Jamison, 2002; as cited in Lee & Jamison, 2003) and CAR (Bergan & Tombari, 1975). Verbalizations from all of the meetings were coded using the CAR.

Regarding verbal processes, results indicated that the referring teacher talked more during the descriptive stage (similar to the PII) compared to the other team members. In general, more elicitors than emitters were used in the descriptive stage. In regard to the content discussed, more behavior setting verbalizations were observed across all interviews,

but more so in the descriptive stage. In comparison to other content codes (except the “other” subcategory), more verbalizations were in the behavior subcategory, especially in the descriptive stage. Verbalizations in the observation subcategory were higher in the interpretative stage of the process. Overall, as would be expected given the FBA, results indicated a high use of statements regarding the child’s behavior (Lee & Jamison, 2003).

For her dissertation, Moscovitz (2004) investigated the relationships between three verbal processes and treatment outcomes in two problem-solving consultation conditions. One condition used FBA and the other condition used conjoint behavioral consultation (CBC; Sheridan, 1997; as cited in Moscovitz). The specific verbal processes investigated were directive, functional, and behavioral processes. *Directive verbal processes* refers to overt attempts to influence the consultation process (i.e., elicitors, summarization, and process overt categories). *Functional verbal processes* refers to verbalizations required for the problem-solving task. *Behavioral verbal processes* refers to overt behaviors and the context that they occur in (i.e., behavior setting and behavior categories). The author predicted that there would be more behavioral topics discussed in the FBA condition than CBC condition. It was also predicted that there would be a need to use a more directive communicative approach in the FBA condition than CBC condition in order to guide the process.

Twelve children were identified for consultation. Consultees were 10 teachers and other school personnel, such as the behavioral specialist, school psychologist, school counselor, and classroom therapist. The consultants were four trained research assistants. To

measure directive and behavioral verbal processes, the CAR (Bergan & Tombari, 1975) was used. To measure functional verbal processes, the Problem Solving Functional Coding System (PSF) was devised based upon Hirokawa's Function-Oriented Interaction Analysis System (1990; as cited in Moscovitz). Verbalizations were coded for all meetings conducted.

In regard to behavioral content, an ANOVA indicated significant differences for behavioral setting and consultation condition (i.e., FBA or CBC). Behavioral setting subcategory verbalizations were higher in CBC than FBA. An interaction was significant for consultation condition and effect size, such that FBA cases had higher behavior setting verbalizations in cases with low effect sizes. No significant effects were found for verbalization in the behavior subcategory. However, when verbalizations in the behavior setting and behavior subcategories were combined (i.e., Behavioral communication), the FBA condition had significantly higher proportions of Behavior communication in large effect size cases. CBC had significantly higher Behavior communication in small effect size cases. For directive verbal processes, no significant main effects were found for the use of elicitors for consultation conditions or treatment outcome. When combining elicitors, summarizations, and process overt statements (i.e., Direct communication), a significant effect was found for condition and treatment outcomes. Specifically, there was a significantly higher use of Direct communication in small effect size cases (Moscovitz, 2004).

Overall, results indicated that the FBA consultation condition consisted of verbalizations regarding the children's behavior and environmental contexts and that these

behavioral content verbalizations led to positive outcomes for children. Contrary to the author's predictions, a more direct communication approach did not differ between consultation conditions but did for treatment outcome, such that higher use of directive communication hampered the treatment outcomes.

Based upon the findings of these two studies, it can be concluded that consultation that incorporates FBA will contain a high use of verbalizations regarding child behavior and the background for which the behaviors occur. In addition, the results from Lee and Jamison (2003) support previous verbal communication research that has documented a high use of elicitors during the initial stage of consultation. Lastly, Moscovitz's (2004) results suggest that there are no significant differences in the use of elicitors when comparing behavioral consultation with FBA and conjoint behavioral consultation. However, it is unknown if these results would hold true when comparing traditional behavioral consultation with behavioral consultation incorporating FBA.

Both Lee and Jamison (2003) and Moscovitz (2004) investigated verbal communication in a group context. However, dyadic behavioral consultation is still relevant, and the focus of the present study was on verbal processes within dyadic behavioral consultation employing FBA. School-based behavioral consultation employing FBA was used in a longitudinal study conducted recently at Lehigh University. In the current investigation, audiotaped consultation cases taken from the Lehigh study were used to examine verbal processes in two consultation conditions. Accordingly, a description of the Lehigh study is presented next.

Project PASS: A Lehigh University Study

The diagnosis of Attention Deficit Hyperactive Disorder (ADHD) has been found to have a considerable impact on students' academic and social functioning. Thus, DuPaul et al. (2006) developed the Promoting the Academic Success of Students with ADHD project (Project PASS), a longitudinal study that began in 2000. DuPaul et al. have suggested that there is limited research on the effectiveness of school-based interventions in the general education setting. Additionally, there has been a lack of individualized approaches taken, with greater emphasis on reducing disruptive behavior in children with ADHD, and limited research on the generalizability of outcomes.

The purpose of Project PASS was to investigate the effects of two models of consultation and intervention development on academic and behavior outcomes of children with ADHD (DuPaul et al., 2006; Erchul et al., 2007, Jitendra et al., 2007). The two consultation conditions in this study were the General Academic Intervention (GAI) model and Individual Academic Intervention (IAI) model. Both consultation models were consistent with Bergan and Kratochwill's behavioral consultation model. The GAI model is considered to be "consultation as usual" and is the control condition. In the initial interview (PII) of the GAI, consultants were to focus on the clients' academic problems, current behaviors, and goal setting. But, in the GAI student's progress monitoring was not collected, thus there was no discussion regarding procedures to collect data in the PII. The IAI was the experimental condition, and included FBA. In the initial interview of the IAI, consultants focused on a broader array of issues than in the GAI, such as teacher education; academic

problems; antecedents, behavior, and consequences; patterns of the behavior; goal setting; and goal prioritization. Consultants were also supposed to obtain detailed information surrounding the lessons that would be covered during their future direct observations (DuPaul et al.).

When the present study was authorized to be conducted, Project PASS consultations had been held on 167 children identified with ADHD placed in first through fourth grade. The majority of these children were diagnosed with combined-type of ADHD. Also, most of the students were in regular education settings (77%). From the outset, no significant differences were found between groups in demographic variables. Seventy-two student cases were conducted using the GAI consultation model and 64 were conducted using the IAI consultation model. Consultation occurred over a 15 month period with outcomes assessed at five points during the process (DuPaul et al., 2006; Jitendra et al., 2007).

Results indicated no significant differences between the two consultation conditions on important consultation outcomes. Specifically, there were significant academic gains in reading and math as well as moderate levels of goal attainment for both conditions. Teachers reported significant gains in motivation and engagement and high acceptability of interventions within both conditions. Although the findings for both conditions were similar, at the 12 month point of assessment, group differences began to emerge in the areas of treatment integrity, with the GAI condition decreasing (DuPaul et al., 2006; Jitendra et al., 2007).

Similar to other studies (Beavers et al., 2004; Schill et al., 1998), significant differences between two models of consultation were not obtained. But, unlike the previous research, DuPaul et al. (2006) and Jitendra et al. (2007) examined the effects of the two models over a much longer period of time. Their results indicated that although initial effects were similar, differences began to emerge after a year of implementation. This finding may have implications for differences in verbal communication across the two consultation conditions (Erchul et al., 2007).

Conclusions

School-based consultation has been around for many years and has evolved due to many professional influences (Zins et al., 1993). From these professional influences, several consultation models have emerged that are used in the school setting (e.g., mental health, organizational consultation). In particular, behavioral approaches (e.g., Bergan, 1977) have had a significant impact on school-based consultation. Behavioral consultation is a problem-solving process that occurs between consultants and consultees to assist in solving academic and behavioral problems (Bergan & Kratochwill, 1990). Behavioral consultation has become an important intervention tool within the school setting (Martens & DiGennaro, 2008), and has been shown to be effective within that setting (e.g., Sheridan et al., 1996).

Because behavioral consultation relies heavily on the verbal communication between consultants and consultees, it is important that consultants have good communication skills (Bergan & Kratochwill, 1990). To determine what verbalizations are most important, the CAR (Bergan & Tombari, 1975) was developed to assess verbal processes that occur in

school-based behavioral consultation. Several verbal process variables have been identified as being important, such as consultant's use of message control and the relevant content discussed. Research has found that consultants use elicitors to control the consultation process, and that the topics that are most often discussed in the PII are regarding children's behaviors.

However, behavioral consultation has evolved and often incorporates FBA, primarily due to the federal government and the increasing demands for accountability in the school setting (Martens & DiGennaro, 2008). Although FBA has been found to be effective within consultation, in the comparison of two consultation conditions (i.e., behavioral consultation with FBA and behavioral consultation alone), two studies did not find significant differences in outcomes (i.e., Beavers et al., 2004; Schill et al., 1998). Research is still very limited in this area, as there have not been any investigations on the process differences (e.g., verbal processes) between these two consultation conditions.

CHAPTER 3

Statement of the Problem and Hypotheses

School consultation is an indirect process that allows consultants (e.g., school psychologists) to provide services to clients by interacting with consultees (e.g., teachers) with the goals of improving outcomes for clients and increasing consultees' knowledge. School psychologists historically have viewed school consultation as a preferred method to deliver services (Gutkin & Curtis, 1990). In addition, research suggests that school consultation is efficacious. Most school psychologists utilize a behavioral model of consultation, likely due to the emphasis of this model in many training programs (Costenbader et al., 1992). Behavioral consultation consists of four stages; however, research indicates that the initial stage (PII) of consultation is perhaps the most critical to achieving successful outcomes (Bergan & Tombari, 1976).

Because school-based behavioral consultation relies heavily on the verbal communication between consultants and consultees, researchers have investigated the verbal processes occurring in this dyad. In behavioral consultation, it is essential for consultants to be able to effectively communicate and be strategic with their communication given the objectives that are to be accomplished during the process (Bergan & Kratochwill, 1990). Several coding systems have been used to measure verbal communication in school-based behavioral consultation, one being the Consultation Analysis Record (CAR; Bergan & Tombari, 1975). Early research investigating verbal communication found that consultant's use of control is important to the consultation process. Specifically, control is particularly

important in the identification of the problem in the PII. Later research indicated that behavioral consultants who control the consultation process are perceived favorably by consultees. However, more recent research investigating control has suggested results to be somewhat inconsistent. Thus, there continues to be a debate regarding the importance of whether consultants should use control in consultation. The inconsistencies within the school consultation literature make the continuation of the study of this variable particularly important. In addition to control, research has investigated verbalizations that address the relevant content discussed during consultation; this research indicates that consultants cover topics regarding children's behaviors in the PII (Bergan & Tombari, 1976; Martens et al., 1992). However, there is a scarcity of research examining the relevant content that should be discussed in school-based behavioral consultation.

Research investigating verbal communication in school-based behavioral consultation has advanced the practice of consultation by providing an in-depth analysis of the processes that occur, but it is important to note that behavioral consultation itself has evolved over the years. The basic stages of behavioral consultation have remained the same, but due to the increase in emphasis on data-driven approaches and federal legislation, FBA has now been incorporated into the behavioral consultation framework.

A recent study conducted at Lehigh University (DuPaul et al., 2006; Jitendra et al., 2007) used a model of consultation that included functional behavioral assessment (FBA). This study examined the effects of Generic Academic Intervention consultation (i.e., traditional behavioral consultation) and Individualized Academic Intervention consultation

(i.e., new model) on academic and behavior outcomes of students with ADHD. The primary reason for investigating these two types of consultation was to examine the differential impact of various models of consultation applied to this group of children.

Researchers have investigated the verbal processes involved in the original model of behavioral consultation; however, only two studies to date have investigated the verbal communication that occurs in behavioral consultation with FBA. Furthermore, no studies have examined the differences in verbal communication between traditional behavioral consultation and behavioral consultation with FBA. An investigation of the verbal processes in this new model of consultation would be important in improving the delivery of psychological services by identifying the verbal processes that may be more appropriate to use in this model.

Thus, the purpose of this study was to document and compare patterns of consultant control and content relevance in the problem identification interview (PII) of two models of behavioral consultation (i.e., IAI, GAI) used in the Lehigh University study. The CAR coding system was used to examine verbatim transcriptions of seven IAI initial consultation interviews and seven GAI initial consultation interviews.

Two hypotheses were proposed:

1. Consultants engaged in the IAI consultation condition will have higher scores on the Index of Control than consultants engaged in the traditional form of behavioral consultation (GAI).

Rationale: The IAI interview protocol contains more statements to elicit information from consultees compared to the GAI protocol. Additionally, given the complexity of FBA and the need to identify the function of behavior, it was predicted that consultants would use more elicitors to assist in identifying the problem behavior.

2. Consultants engaged in the IAI consultation condition will have higher scores on the Index of Content Relevance than consultants engaged in the GAI consultation condition.

Rationale: Content relevant to problem identification is found mainly in the behavior, behavior setting, and observation categories of the CAR. Because the IAI model includes a functional behavioral assessment component, it was predicted that additional information would be elicited in these categories as compared to the GAI, which does not contain this component.

CHAPTER 4

Method

Data for the current study were drawn from a larger data set from the Project PASS study conducted at Lehigh University (DuPaul et al., 2006). Specifically, eight IAI and eight GAI audiotaped/transcribed consultation cases were used in this investigation. A within-group design was employed, such that each pair (i.e., consultee and consultant) conducted both an IAI and GAI consultation case together. For clarity, the participant characteristics and the procedures of the larger sample are described first. Following these descriptions, participant characteristics and the procedures of the current verbal process study are described.

Participants

Participant characteristics of the larger sample (i.e., Project PASS) are taken from 42 IAI consultation cases that were reported in Erchul et al. (2007). It is important to note that participants in the GAI consultation condition held characteristics similar to participants in the IAI consultation condition, as will be described below.

Project PASS. In the larger sample, consultants consisted of five school psychology graduate students affiliated with Lehigh University. All consultants were Caucasian, with four females and one male. The mean age of consultants was 26.6 years. Three consultants held bachelor's degrees and two held master's degrees.

The consultees were 42 elementary school teachers with the majority being women (81%) and Caucasian (86%). In regard to educational background, 62% of consultees held

master's degrees and 38% held bachelor's degrees. The average professional experience for consultees was 10.3 years. The majority of the teachers taught in the regular educational setting (87%).

The clients were 42 elementary school-aged children. Clients were chosen by their teachers for consultation services due to significant difficulties related to ADHD symptoms and academic problems that resulted in below average achievement in reading or math. The majority of clients were male (83%) and were diagnosed with ADHD combined-type (67%). Thirty-three percent of the clients were also diagnosed with Oppositional Defiant Disorder (ODD) while 19% were also diagnosed with Conduct Disorder (CD). Twenty-four percent of clients were taking psychotropic medications at the time of the study. Most of the clients were in regular education settings.

Verbal process study. Consultants were four school psychology graduate students. The consultees were eight elementary school teachers with professional teaching experience ranging from 3 to 28 years ($M = 14$). In regard to educational attainment, six teachers had master's degrees and two had bachelor's degrees. The majority of the teachers taught in the general education settings ($n = 6$), with two teachers teaching in special education settings. All consultees were female, with the majority being Caucasian; one was of Hispanic descent. The clients were 16 children diagnosed with ADHD in grades two through fourth from the larger study. There were 13 boys and 3 girls in this sample.

Instrumentation

Consultation Analysis Record (CAR). The CAR was used to measure verbal communication in the IAI and GAI consultation conditions. As previously discussed, the CAR was developed to measure verbal interactions within behavioral consultation. The coding system consists of four major verbalization communication categories: (a) Source, (b) Content, (c) Process, and (d) Control. Within each major category, there are subcategories that are further described in Table 2. To measure a consultant's interview effectiveness, four indices can be derived based upon the consultant's verbalizations used during consultation process (see Table 3). Prior research has demonstrated adequate reliability and validity for the CAR (e.g., Bergan & Tombari, 1976).

Procedure

Project PASS. Two consultation conditions, IAI (with FBA) and GAI, were utilized in the larger Project PASS study. As previously noted, the IAI consultation condition included an FBA component. However, both of the consultation conditions were consistent with Bergan and Kratochwill's (1990) behavioral consultation model. A protocol for each condition was developed and followed by the consultants (see Appendix B). Consultation cases were audiotaped to check for procedural integrity of the consultation process and, in reviewing a random sample of 20% of IAI consultation conditions, consultants met interview objectives 94.8% of the time. Consultants also received on-going supervision by the principal researcher. Students were randomly assigned to each consultation condition. Several outcome measures were used and reported in DuPaul et al. (2006), Jitendra et al.

(2007), and Erchul et al. (2007). However, they will not be discussed here because the current study only investigated consultants' verbal communication patterns in the two consultation conditions.

Verbal process study. Prior to coding, undergraduate students affiliated with North Carolina State University transcribed verbal messages verbatim from consultation audiotapes from the Lehigh study (Erchul et al., 2007). The transcribers received training on transcribing and completed readings on verbal communication and behavioral consultation, which were overseen by Dr. William Erchul. Many tapes were transcribed for the Erchul et al. study but only eight IAI interviews and eight GAI consultation interviews were used in the current study. In the Erchul et al. study, up to thirty minutes of verbal communication was transcribed for each interview. However, for this study, the verbalizations of the entire interview were investigated. Thus, six of the interview cases required additional transcription, which was completed by this author. Each interview consisted of a teacher-consultant dyad that completed an IAI and a GAI problem identification interview (PII).

Consultants' verbalizations were coded utilizing the CAR as described by Bergan and Kratochwill (1990). First, all consultant verbalizations were divided into thought units. A thought unit is a statement or phrase that expresses a complete thought; it may contain more than one independent clause and is consistent in content and focus (Hughes & DeForest, 1993). There were a total of 3,197 thought units from the 16 transcripts. After verbalizations were divided into thought units, they were coded using only the CAR's control and content categories. Two indices that served as dependent measures in this study were calculated: the

Index of Control and the Index of Content Relevance. To derive the Index of Control, a consultant's ratio of elicitors-to-emitters was measured. To derive the Index of Content Relevance, consultants' verbalizations in relevant topic areas were used. Specifically, consultant verbalizations were measured by the proportion of verbalizations falling in the behavior, behavior setting, and observation subcategories. Proportions were converted into bit scores using the bit table provided in Bergan and Kratochwill. Higher scores represent a better balance of coverage in the relevant content areas.

Three school psychology graduate students functioned as coders (including the author of this study). At the time, two of the coders had completed formal coursework in school consultation. However, each coder received additional information and training on coding verbal communication. Training consisted of discussions, reading materials from Bergan and Kratochwill (1990), a written manual, and practice coding verbalizations with feedback. Inter-rater agreement (i.e., $\frac{\text{agreement}}{\text{agreement} + \text{disagreement}} \times 100$) of 90% for Control and 80% for Content Relevance was met on several IAI practice interviews before coding the actual interviews used in the study. Additional training and practice was completed if coders did not meet the set criteria. Coding disagreements were resolved through discussion, with the author of this study considered to be the expert.

After the training, inter-rater reliability was established for the control and content categories of the CAR. To establish inter-rater reliability, three randomly selected cases were used. Inter-rater reliability for the Control code was 94% and for the Content code was

89%. As a more conservative estimate of reliability, Kappa coefficients were also calculated. Coefficient Kappa for the Control code was .86 and for the Content code, .81.

CHAPTER 5

Results

In this section, data analysis procedures and results will be presented for the current study. First, descriptive statistics will be presented. Second, because nonparametric statistics were chosen as the primary statistical procedure, a rationale and description will be provided. Third, the hypotheses and results of the primary analyses will be discussed. Lastly, additional parametric analyses will be presented. To conduct the statistical procedures, the Statistical Package for Social Sciences (SPSS, 16.0 student version) was used.

Descriptive Statistics

As discussed previously, two indices of consultant effectiveness were derived for each consultation condition (i.e., IAI & GAI), resulting in four variables. Table 4 presents descriptive data for each of the four variables. Table 5 presents descriptive data for each of the relevant content subcategories used to derive the Index of Content Relevance.

Other descriptive procedures were also performed. A test of distribution normality, the Kolmogorov-Smirnov test (Field, 2005), was conducted. Results did not indicate that the distributions for each of the four variables were significantly non-normal. But, as with many statistical analyses, results can be affected by a small sample size, and this situation can lead to a decrease in power to detect whether a distribution is non-normal (Field). So, a review of other descriptive data such as graphs (e.g., histograms, boxplots, normal Q-Q plots) is recommended (Field). In a visual examination of these graphs, no outliers were identified,

Table 4

<i>Descriptive Statistics for Indices of Consultant Effectiveness</i>						
Variable	Median	Mean	SD	Range	Kurtosis (z-scores)	Skewness (z-scores)
Index of Control (IAI)	.20	.24	.08	.13-.36	-1.62(-1.09)	.41 (.55)
Index of Control (GAI)	.33	.30	.12	.11-.44	-1.07 (-.72)	-.56 (-.75)
Index of Content Relevance (IAI)	.98	1.00	.16	.76-1.21	-1.52(-1.03)	-.04 (-.06)
Index of Content Relevance (GAI)	.81	.83	.17	.57-1.07	-.83 (-.56)	.03 (.04)

but there was an indication of skewed distributions for some of the variables. Of particular note, the index of control for the IAI condition appeared to be very positively skewed. Because the assumption of a normal distribution for each of the four variables is still in question given the small sample size, nonparametric statistics were chosen for use in the current investigation.

Nonparametric Statistics

Nonparametric statistics are recommended for small sample sizes and when the standard assumptions for using parametric statistics are not met. Thus, the Wilcoxon Signed-Rank Test (Field, 2005; Siegel, 1956) was the nonparametric statistic chosen to test the study's two hypotheses. The Wilcoxon test is the equivalent of a dependent sample *t*-test and is reported to have a power efficiency of .95 for small sample sizes (Siegel). Similar to other nonparametric analyses, the Wilcoxon test ranks the data and then analyses are performed

Table 5

Variable	<i>Descriptive Statistics of Relevant Content Subcategories for the PII</i>							
	Behavior Setting		Behavior		Observation		Total	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
IAI	24.12	6.81	50.62	24.81	12.88	10.38	87.62	38.35
GAI	9.50	4.69	45.62	18.46	5.50	10.17	60.62	29.13

based upon the ranks. Consequently, this test is able to reveal both the direction (i.e., examination of ranks) and magnitude of the differences (Field; Siegel).

Hypotheses and Primary Analyses

Results for the following hypotheses are presented in Table 6. Given that each hypothesis was directional, an alpha level of .05 for a one-tailed test of significance was used. Additionally, as per the recommendation of Field (2005), when using nonparametric statistics, the median is reported rather than the mean.

Hypothesis One: Index of Control. Hypothesis One stated that consultants engaged in IAI condition (i.e., behavioral consultation with FBA) would have higher scores on the Index of Control, indicating a greater use of elicitors than consultants engaged in the GAI consultation condition (i.e., traditional behavioral consultation). To compare the two conditions, a Wilcoxon Signed Rank test was performed. Results were not significant in the direction predicted. Specifically, in the IAI condition, consultants did not significantly exert more control ($Mdn = .20$) through using elicitors than consultants in the GAI condition ($Mdn = .33$), $z = -1.40$, $p >.05$. In fact, although not at a statistically significant level, ranked data

Table 6

Wilcoxon Signed-Rank Test Results for Hypotheses

Variable	<i>z</i> -score	<i>p</i> -value
Index of Control (H1)	-1.40	.081
Index of Content Relevance (H2)	1.96	.025*

Note. $n = 8$, matched cases

*Statistically significant at $p < .05$, one-tailed test

(6 out of 8 matched cases) indicated that consultants exerted more control in the GAI condition rather than in the IAI condition. Thus, Hypothesis One was not supported.

Hypothesis Two: Index of Content Relevance. Hypothesis Two stated that consultants engaged in the IAI consultation condition would have higher scores on the Index of Content Relevance, indicating a greater proportion of relevant verbalizations for the PII in the behavior, behavior setting, and observation subcategories than consultants engaged in the GAI consultation condition. Again, to compare the two consultation conditions, a Wilcoxon Signed-Rank Test was performed. Results were significant in the predicted direction. Specifically, in the IAI condition, consultants used proportionally more verbalizations pertaining to behavioral content ($Mdn = .98$) than the consultants in the GAI condition ($Mdn = .81$), $z = 1.96$, $p < .05$. Thus, Hypothesis Two was supported.

In summary, the findings of the primary analyses of this research did not indicate that consultants exerted more verbal control through using elicitors in behavioral consultation that incorporates FBA as originally predicted. In fact, results suggested the opposite, such that consultants exerted more verbal control in traditional behavioral consultation, though not at

statistically significant levels. However, as predicted, results of this research did suggest that consultants achieve a better balance of behavioral topics in the behavioral consultation condition with FBA.

Additional Analyses

To further explore verbal communication between the IAI and GAI consultation conditions, additional analyses were performed. Given that inferential statistics are most commonly used and that distributions for each variable were not significantly non-normal, parallel inferential procedures were also conducted and are presented for each hypothesis below. An alpha level of .05 for a one-tailed test of significance was also used.

Hypothesis One: Index of Control. As discussed above, Hypothesis One predicted that consultants in the IAI consultation condition would use more elicitors (i.e., control) than consultants in the GAI consultation condition. To compare these two conditions, a dependent sample *t*-test was performed. Results were not significant, indicating that consultants did not exert more control in the IAI consultation condition ($M = .24$, $SE = .03$) than consultants in the GAI consultation condition ($M = .31$, $SE = .04$, $t(7) = -1.35$, $p > .05$). The results for this analysis were consistent with the findings of the primary analysis for this variable, suggesting no significant differences between consultation conditions.

Hypothesis Two: Index of Content Relevance. As discussed above, Hypothesis Two predicted that consultants in the IAI consultation condition would use more behavioral verbalizations in the relevant categories for the PII than consultants in the GAI consultation condition. Again, to compare the two conditions, a dependent sample *t*-test was performed.

Results were significant, indicating that consultants in the IAI condition ($M = 1.01$, $SE = .06$), did use significantly more behavioral content verbalizations than consultants in the GAI condition ($M = .83$, $SE = .06$, $t (7) = 2.06$, $p <.05$). Thus, results were consistent with the primary analysis findings.

Overall, there was consistency among the findings for both the nonparametric and inferential statistical analyses conducted in this study. Both sets of findings indicated verbal communication differences across the two types of consultation conditions, but only for the Index of Content Relevance variable.

CHAPTER 6

Discussion

The aim of this investigation was to document and compare patterns of verbal communication found in traditional behavioral consultation (i.e., Generalized Academic Intervention; GAI) and behavioral consultation with FBA (i.e., Individualized Academic Intervention; IAI). In this section, findings and interpretations are presented by the study's two hypotheses. Then, a discussion of future research considerations and limitations follow.

Comparing Verbal Control

It is well established that consultants verbally control the consultation process during the problem identification interview (PII) by using elicitors (e.g., questions, imperative statements) (Bergan & Tombari, 1976; Busse et al., 1999; Hughes & DeForest, 1993), changing topics (Witt et al., 1991), and influencing consultee's verbal responses (Erchul, 1987; Erchul & Chewning, 1990). Therefore, in this investigation, there was no question regarding consultants' use of elicitors to control the consultation process but rather, would they exert even more control in a new variation of behavioral consultation? Hypothesis One predicted that consultants engaged in the IAI consultation condition (behavioral consultation with FBA) would have higher scores on the Index of Control than consultants engaged in the GAI consultation condition (traditional behavioral consultation). Recall that higher scores on this index would indicate that consultants used a higher percentage of elicitors than emitters (i.e., statements) during the consultation (Bergan & Tombari, 1976). In so doing, consultants would control the consultation process. However, the results did not suggest that consultants

guided and/or structured (i.e., controlled) the process in the FBA consultation condition any more than they did in the traditional behavioral consultation condition. On the contrary, ranked data from the Wilcoxon analysis revealed that consultants used more control in traditional behavioral consultation. Thus, Hypothesis One was not supported.

These results were surprising and in total contrast to what would be expected given previous research on pre-service teachers' knowledge of behavioral concepts. For instance, Begeny and Martens (2006) found that many pre-service teachers, both from regular and special education, had limited training and knowledge regarding behavioral techniques and principles. So, it was assumed that consultants would need to elicit additional information in order to specify children's behavior sufficiently. Furthermore, given the inclusion of FBA, a more comprehensive behavioral approach, it was assumed that consultants would need to go above and beyond typical requests for information in order to directly link interventions to the functions of children's behavior. The results, however, did not support either claim and several explanations are possible.

First, because the traditional behavioral consultation model derives from behavioral theory, perhaps there is not a need for additional questions or imperative statements. The use of additional elicitors also was not found in a comparison study between consultation with FBA and conjoint behavioral consultation (Moscovitz, 2004). So, is it possible that the behavioral consultation model (Bergan & Kratochwill, 1990) is adequate alone to get the information needed, and does not require the addition of FBA? This hypothesis would be consistent with the null findings found in the outcome studies previously discussed (i.e.,

Beaver et al., 2004; Schill et al., 1998). But, what if consultants *should* use additional elicitors to gather behavioral information? Are they asking *enough* questions to correctly identify the function of behaviors in order to develop better interventions? Whether or not consultants need to increase their control in the FBA consultation model is undetermined and requires further investigation.

A second explanation is that the teachers' experience and education could have been mediating factors in consultants needing to exert more (or less) message control during the consultation process. This theory is obviously contrary to Begeny and Martens (2006); however, they only considered pre-service training and not levels of professional experience in their study. Like many other professions, education personnel often participate in professional development activities after degree completion, not to mention the experience that is received from being on the job (e.g., mentoring for experienced teachers). In the present investigation, out of the seven consultees, five had master's degrees. Furthermore, the average years of experience was 14. Due to the combination of experience and education, these teachers could have come to the "consultation table" already possessing a substantial amount of background knowledge regarding behavioral techniques and instruction. In this case, it is possible that these consultees would have been better able to describe the students' behaviors with greater specificity. Along these lines, Conoley, Conoley, and Gumm (1992) found that if teachers provided detailed descriptions of children's behaviors, then consultants were better able to operationally define the problem. Bergan and Kratochwill (1990) also suggested the importance of recognizing how teachers'

knowledge of classroom management practices can influence consultants' verbal behavior. Hence, it is reasonable to hypothesize that if consultees are already equipped with adequate knowledge of behavioral theory and concepts, then consultants may need to use fewer questions (i.e., less message control) in order to gather specific behavioral information. Thus, the consideration of teacher's education and experience and its impact on verbal communication in the consultation process requires further investigation.

A third possible explanation is that the teachers could have been controlling (i.e., influencing) the consultation process in the IAI consultation condition. In a recent verbal process study (Erchul et al., 2007) that also used IAI Problem Identification Interviews from the original investigation conducted at Lehigh, results revealed that in the IAI consultation condition teachers' dominance was significantly correlated with perceived treatment effectiveness and student behavioral progress. This study also indicated that teachers' dominance was significantly negatively correlated with consultants' dominance, suggesting that only one participant is influencing the process at one time. These results highlight the dynamic nature of the verbal communication process and its outcomes in consultation. However, in the current study only consultants' verbalizations were coded so it remains unclear whether the teachers were actually controlling the consultation process. Thus, it would certainly be beneficial to extend the current research by examining and comparing the verbal communication of the teachers as well.

Comparing Content Verbalizations

Given that the focus of this investigation was on the verbal communication of the problem identification interview and based upon Bergan and Kratochwill's model (1990), behavioral-related topics were expected to be the primary focus of discussion for both consultation conditions (i.e., IAI & GAI). But, because consultants in the IAI condition were involved in conducting a FBA, it was expected that consultants in this consultation condition would need to focus even more on behavioral topics so that the function of the behavior would be correctly identified. Specifically, Hypothesis Two predicted that consultants engaged in the IAI condition would have higher scores on the Index of Content Relevance than consultants engaged in the GAI condition. Higher scores would suggest that consultants used proportionally more verbalizations pertaining to client's actual behavior, behavioral settings (i.e., antecedents and consequences), and observations (i.e., plans to collect baseline data). Hypothesis Two was supported and results indicated that consultants' verbalizations in the consultation condition with FBA (i.e., IAI) did indeed focus on more behavioral-related topics than consultants' verbalizations in the traditional behavioral consultation condition.

As expected, these results are consistent with the premise that FBA reflects a more in-depth assessment of behavior. For example, Moscovitz (2004) found that behavioral content verbalizations were higher in the FBA consultation condition than in conjoint behavioral consultation. In addition, the current study provides further support for the behavioral consultation model delineated by Bergan (1977). Consultants' verbalizations do primarily

center on behavioral topics in the Problem Identification Interview; however, this study's findings indicate that more of these topics are covered in behavioral consultation that includes FBA. The current findings and those of Moscovitz thus imply that there may be a need for consultants to cover more behavioral topics in the PII when conducting consultation that incorporates FBA. However, given the limited research comparing and examining verbal communication differences in consultation with and without FBA, further research is warranted.

Specific procedures of the original study (DePaul et al., 2006; Jitendra et al., 2007) may have contributed to the significant findings. For instance, collecting baseline data was not an objective of the PII in the GAI consultation condition but was an objective in the IAI condition (See Appendix B). Traditionally, in behavioral consultation (Bergan & Kratochwill, 1990) baseline data collection is one of the last tasks that consultants are supposed to accomplish in the Problem Identification Interview. Recall that as measured by the Consultation Analysis Record (CAR), high scores on the Index of Content Relevance represent a high proportion and *balance* of verbalizations in each of these three subcategories: behavior, behavior setting, and observation. Verbalizations that referred to observing and recording baseline data of a child's behavior would be coded in the observation subcategory of the CAR. Consequently, in this study, the IAI condition would inherently produce higher scores on the index because it covers an objective of the consultation process that is measured by the CAR but is not specified in the GAI condition.

Additional Research Considerations

Hughes and DeForest (1993) mentioned that, “different consultant verbal behavior may be differently effective in different models of consultation” (p. 369). The findings of this study indicated that consultants’ verbal communication patterns in a new variation of behavioral consultation differ from those in traditional behavioral consultation. However, it is important to note that the verbal processes examined in this study were not linked to outcomes. In order to expand upon these findings, the next logical step would be to investigate outcome differences between consultation conditions for the verbal processes of control and content relevance.

Bergan and Tombari (1975) recommended the use of the CAR for research and training purposes. They proposed that high index scores indicated effective verbal communication but, what is “high”? More specifically, what scores on the indices would indicate an effective level of verbal communication? For instance, Schulte (2008) suggested that if criteria were developed for this coding scheme, it could have greater utility in determining adherence to procedural objectives. An investigation in determining cut-off scores could be accomplished two ways: (a) setting a priori criteria/levels of effectiveness and (b) examining various outcomes of consultation effectiveness, and then determining what scores provided the most favorable outcomes. Although the CAR has been used extensively in research, it would have greater utility if some refinement of the coding system along these lines were completed.

Lastly, many researchers have called for the training and preparation of teachers so that they can better serve in the consultee role (Martens & DiGennaro, 2008; Mueller & Nkosi, 2007; Watson & Robinson, 1996). From a verbal communication standpoint, it appears that to increase the efficiency of the behavioral consultation process, it would be helpful if teachers had some level of competency and knowledge of behavioral principles and instruction (Conoley et al., 1992). There is evidence that consultees' verbalizations regarding behavior content can increase through the use of training (Anderson, Kratochwill, & Bergan, 1986). In addition, the CAR could be useful to help determine how much behavioral knowledge has been obtained and, possibly with refinement, provide indicators of competency. So, with the use of the CAR and/or other behavioral measures, investigations specifically examining the behavioral content of teachers' verbalization during consultation are recommended.

Limitations

There are several issues of internal and external validity that limit the findings and conclusions of this study. The first issue of internal validity concerns the use of a small sample size in this study. Nonparametric statistics were used to increase the power to detect differences; however, it would have been more ideal to have had a larger sample in order to provide a more robust ability to detect significant findings. Second, although it was known that all of the students were diagnosed with ADHD, it was unknown what specific type of ADHD (i.e., Attentive, Hyperactive, or Combined) each student had. Consequently, the consultation conditions (IAI & GAI) were not matched according to the children's diagnosis.

It is possible that the intensity of the child's problem behavior could have influenced the number of questions and/or behavioral content emphasis during the consultation process.

In regard to external validity, several issues appear relevant. First, graduate students were used as consultants in this study. Although this is a common practice within the consultation literature (e.g., Busse et al., 1999; Beavers et al., 2004; Erchul et al., 2007), it limits ability to generalize these findings to professional consultants in the field. Consultants in practice are generally more experienced and may utilize different patterns of verbal communication. For instance, they may not need to elicit more information as the quality of their questions may be better. Second, an interview protocol was used in this study. This method allowed for greater procedural integrity in the study, but it limited generalizability. It is unknown whether many school psychologists use a protocol to the degree it was adhered to in the original Lehigh study. Third, as previously mentioned, the teachers in this sample were highly educated as most had advanced degrees. This level of training is not always found in many school systems. There remains the possibility that these teachers received some training in behavioral principles and instruction, thus affecting consultants' verbalizations. Lastly, only verbalizations in the PII were coded. Again, this limits the ability to generalize these findings to the entire process of consultation. In fact, recently, Erchul et al. (2009) found significant verbal process and outcome differences in the Problem Analysis Interview (PAI) from those in the Problem Identification Interview.

In conclusion, prior research that has investigated differences between consultation with FBA and traditional consultation has focused only on treatment outcomes. Although

this focus is pertinent and warranted, additional research is needed to further explain the results of these outcome studies. The current investigation helped to fill in this gap by identifying differences in process variables between these two types of consultation conditions. As expected, behavioral topics appeared to be used more by consultants in situations where functional behavioral assessment is part of the consultation process. On the other hand, consultants in the FBA condition did not use proportionally more questions or imperative statements to get additional behavioral information. But, because the findings of the present study were not related to outcomes its implications are not crystal clear. Consequently, future researchers are urged to examine and compare both process and treatment outcomes within other variants of behavioral consultation.

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APPENDICES

Appendix A

Table 7

Summary of Additional Studies Using the Consultation Analysis Record (CAR)

Study	Participants	Purpose	Key Results
Tombari & Bergan (1978)	60 student teachers	Determine difference between behavioral and medical model cues and their impact on teachers' verbalizations, perceptions of student problems, and perceptions of solving future problem behaviors	(a) Behavioral and medical verbal cues elicited descriptions of the problem behavior consistent with that perspective; (b) behavioral verbal cues increased teachers' perceptions of solving future problems.
Anderson, Kratochwill, & Bergan (1986)	56 teachers	Determine the effects of a two-day training in behavior modification and consultation on teachers' attitudes of behavioral strategies, their knowledge obtained, and their perceptions of the effectiveness of the training	(a) Training significantly increased consultees' verbalizations regarding children's behavior during the PII and PAI; (b) consultees found the training to be effective compared to the control group.

Table 7 (continued)

Summary of Additional Studies Using the Consultation Analysis Record (CAR)

Study	Participants	Purpose	Key Results
Martens, Deery, & Gherardi (1991)	7 teachers and 2 school psychologists	Examine consultants' use of statements of reflected affect and reflected content	(a) Consultants' use of summarization statements resulted in consultees talking about their feelings regarding the child's problem behavior; (b) agreement increased when consultants used summarization statements of reflected content.
Conoley, Conoley, & Gumm (1992)	18 graduate students	Determine consultees' verbal influence in the problem identification interview	(a) Consultees' verbalizations and conceptualization of the problem influenced consultants' ability to define the problem; (b) consultees with a behavioral model perspective increased the likelihood of consultants describing the problem behavior in measurable terms.

Table 7 (continued)

Summary of Additional Studies Using the Consultation Analysis Record (CAR)

Study	Participants	Purpose	Key Results
Gutkin (1996)	41 graduate students and professionals in the educational and psychological fields	Examine leadership and control in the consultation process and the relationship with consultants' effectiveness	(a) Consultees talked more and consultants used more elicitors; (b) content code leadership was better when both consultants and consultees led the consultation process; (c) process code leadership was better if consultants led the consultation process.
Hughes et al. (1997)	41 graduate students and 39 students	Examine differences in the questions asked by the consultants and consultees perceived effectiveness of the consultants	(a) No significant correlations were found between type of questions and consultees' perception of consultants' effectiveness; (b) frequency data indicated a significant correlation between consultants' effectiveness and accepted inference questions.

Table 7 (continued)

Summary of Additional Studies Using the Consultation Analysis Record (CAR)

Study	Participants	Purpose	Key Results
Sheridan (1997)	Not reported	Examine the verbal communication of CBC	(a) Teachers used more elicitors in CBC than in teacher-only consultation; (b) CBC consultants talked more and used more elicitors than in teacher-only consultation.
Lee & Boughtin (1999)	8 teachers	Determine the effects of a collaborative problem solving training on the verbal processes and outcomes of school assistance team meetings	(a) Following training, significant increases occurred in observation, process overt, and plan verbalization subcategories; (b) decreases occurred in verbalizations regarding children's behavior.

Appendix B

GAI Initial Interview Form-1

Student:

School:

Date of Interview:

Teacher:

What are the primary academic areas of concern? Please specify.

Reading-

Math-

What do you view as the problem behaviors contributing to these academic difficulties (e.g., attending behaviors, task difficulty, task length, motivation, organizational skills, failure to complete homework assignments)?

Reading-

Math-

Do these problems vary as a function of the setting (i.e., classroom, group versus individual work, teacher present, certain peers present)?

Reading-

Math-

What is the child's current level of performance in this academic area?

Reading-

Grade:

Is there a problem with work completion? If yes, explain:

Is there a problem with work accuracy? If yes, explain:

Math-

Grade:

Is there a problem with work completion? If yes, explain:

Is there a problem with work accuracy? If yes, explain:

Given the child's current level of performance, what do you think are reasonable short-term and long-term goals for this child? Please prioritize.

	Short-Term Goal (approx. 1 month)	Long-Term Goal (end of current semester)	Priority #
Reading Goals			
1.			
2.			
3.			
Math Goals			
1.			

2.			
3.			
Behavioral Goals			
1.			
2.			

What intervention strategies have you attempted with this child? And what was the child's response to each attempted intervention?

	Intervention Strategies	Child's Response
Reading Interventions		
Math Interventions		

What are some strengths of the child? Specify strengths in academic subject areas, academic behavior, and strengths of the child, in general.

Set-up time to review all assessment results and choose an intervention.

Date: _____ Time: _____

Give teacher a method of contacting you, the Project Coordinator, and/or Dr. DuPaul.
Give teacher a **list of project staff** members and their phone numbers. Highlight individuals who may be contacting the teacher, and specify possible reason for contact.

Give Progress of Target Behaviors to the Teacher to complete!
Base Goals on the Long-Term (semester goals) as Specified by the Teacher.

Appendix C

IAI PROBLEM IDENTIFICATION INTERVIEW

Student Name: _____
Birthdate: _____
Grade: _____
Interviewer: _____

Teacher Name: _____
School: _____
Date of Interview: _____

What is the primary academic concern for this child? Specify as much as possible.

*Note: If problem behaviors are identified (e.g., off-task, lack of focus), ask the teacher to specify how the problem behavior(s) affect reading or math acquisition or performance.

Reading: _____

Math: _____

In your opinion, is this deficit considered a skills deficit or a performance deficit?

On a scale of 1 to 5, with 5 being the most severe, how would you rate this child's academic difficulties in this identified area of concern?

Reading: 1 2 3 4 5

Math: 1 2 3 4 5

Identify the setting when the child appears to have the *most* academic difficulties?

- Large group?
- Small group?
- Independent Seat Work?

Identify the setting when the child appears to have the *least* academic difficulties?

- Large group?
- Small group?
- Independent Seat Work?

What are the antecedent conditions/teachers behaviors that occur most frequently before the student demonstrates academic difficulties? Record in academic areas identified as primary area(s) of concern.

	Most Problems	Least Problems
Reading		
Math		

Consider these as possible antecedents:

- Teacher asks questions (e.g., “Who was the first president of the US?”)
- Teacher presents item (e.g., “The next problem is three times two.”)
- Teacher shows or models how to do an item (e.g., “There is an ‘e’ at the end of this word [pointing to the word ‘time’ on the board], so I will say that name of the letter ‘i’ when reading ‘time’”)
- Teacher prompts the students (e.g., “The word begins with an ‘f’ sound. What is the word?”)

What is the child's typical response to the identified antecedent? Record in academic areas identified as primary area(s) of concern.

	Most Problems	Least Problems
Reading		
Math		

Consider these as possible responses:

- Verbal response (e.g., “George Washington”)
- Written response (e.g., writing “24” on the board or worksheet in response to math problem)
- Raises hand
- Disruptive behavior

After the child exhibits this typical response to the identified antecedent, what is the typical consequent condition (teacher or peer behavior)? Record in academic areas identified as primary area(s) of concern.

	Most Problems	Least Problems
Reading		
Math		

Consider these as possible consequences:

- Teacher reprimands (e.g., “Stoop playing with your pencil!”)
- Teacher redirects (e.g., “Do you have your book open to page 14 so that you can answer the questions?”)
- Teacher corrects error (e.g., “No, the correct answer is 12”)
- Teacher delivers reward (e.g., “You finished your seat work. Now you can go over to the free play area.”)
- Peer attention
- Allowed to escape or avoid task/situation

Validate typical antecedents, behaviors, and consequences.

Do you see any pattern to this type of academic behavior?

Time of day?

Time of week?

Specific setting events.

Does the target student engage in off-task or disruptive behaviors?

Yes No

If “Yes,” describe them.

Based on the identified academic area of concern for this student and his/her current level of performance, what do you believe are reasonable goals for this student? Specify.

Goal #	Reading	Math
1		
2		
3		
4		

Please prioritize these goals from most to least. Note any behavioral goals (e.g., increase in on-task behavior) as secondary to academic goals.

Priority #	Reading	Math
1		
2		
3		
4		

FBA Assessment

Rationale for baseline data collection/FBA

Clarify when to observe, based upon when the problem is most prevalent.

Date of observation:

Time of lesson:

What will happen during this lesson time?

What do you expect the student to do during this lesson time?

Examples of teacher expectations of student during lesson time:

- Write
- Say
- Look at/Listen
- Do/manipulate
- Draw
- Mark
- Match
- Select

Will the student be expected to produce work samples (e.g., filled-in workbook pages)?

Yes No

If "Yes;" Can we obtain copies after the observation?

Yes No

**What do you expect the student to be able to do as a result of the lesson to be observed?
What do you expect the students to learn?**

How will you (teacher) know whether the students have learned the lesson? How will you (teacher) assess the child's understanding of the lesson?

Mutually agree on baseline data collection procedures. This will include a functional assessment of academic behavior, but may include additional observations if deemed necessary.

Do you currently collect assessment data on this academic area of concern?
 Yes No

What will be recorded? _____

How will the data be recorded? _____

How much behavior will be recorded? _____

The recording schedule? _____

Who is to collect the data? _____

Summarize and validate to clarify and check the validity of what has been communicated.

Is there a consensus between the consultant and consultee about...

The behavior(s) of concern	<input type="checkbox"/> Yes	<input type="checkbox"/> No
The conditions under which behavior(s) occur	<input type="checkbox"/> Yes	<input type="checkbox"/> No
The procedures established for recording behavior	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Arrange a time for the next interview. _____, 2001 at _____ : _____ AM/PM

Arrange a time to contact consultee during collection of baseline data.

_____ , 2001 at _____ : _____ AM/PM

Let the consultee know how to contact the consultant.

Consultant's Review of Permanent Products: This can be completed any time (make the arrangements during this interview).

	Reading	Math
Percentage of Completion		
Percentage of Accuracy		
Quality of Handwriting		

Additional Notes: _____
