

ABSTRACT

BENNETT, MEGAN SCHAMBERGER. Exploring Relational Communication Patterns in Prereferral Intervention Teams. (Under the direction of William P. Erchul.)

The purpose of this research was to understand the relational communication patterns that characterize school-based prereferral intervention teams (PITs). Prior research has suggested that although many states either require or recommend PITs, little is known about what occurs during PIT meetings (Truscott, Cohen, Sams, Sanborn, & Frank, 2005). A relational communication perspective emphasizes that within interpersonal interactions (such as those that occur in group-based situations), speakers are constantly redefining their roles, positions, and relationship through conversations (Erchul, Grissom, & Getty, 2008). A popular way of studying relational communication in dyadic or group situations is through coding systems such as the Family Relational Communication Control Coding System (FRCCCS; Heatherington & Friedlander, 1989). In this study, 15 PIT meetings were used as the basis of analyses and each meeting was audiotaped, transcribed, and coded using the FRCCCS. Additionally, each coder completed the PIT Meeting Evaluation Coding Sheet that assessed participants' adherence to a traditional problem-solving framework. Important results included: (a) relatively consistent domineeringness (i.e., attempted influence) scores, with the exception of the referring teacher; (b) overall relatively consistent dominance (i.e., successful influence) scores; (b) significantly greater ($p < .05$) domineeringness by the school psychologist when compared to the referring teacher; and (c) no significant differences in dominance scores between the school psychologist and teacher. In sum, the current study represents an important first step in understanding communication patterns in school-based groups, which will continue to be important as schools transition to using response-to-intervention (RTI) models of service delivery.

Exploring Relational Communication Patterns in
Prereferral Intervention Teams

by
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BIOGRAPHY

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Introduction

Prior to 1975, students who were identified with an educational disability were often placed in a separate setting. The Education for All Handicapped Children Act of 1975 (Public Law 94-142), mandated that all children with disabilities receive a free and appropriate education in *the least restrictive environment*. Following the implementation of this law, there was a large influx of students being identified as eligible for special education services. The increase in students led many to question whether the least restrictive environment provision was being met and whether other service delivery options could be used to help struggling students (Algozzine, Christenson, & Ysseldyke, 1982). The prereferral intervention system, for example, represents a potential way to meet the requirements of the law and provide services to children in the least restrictive setting. Prereferral interventions are initial strategies or supports that are given to students experiencing academic and/or behavioral difficulties. The purpose of prereferral interventions are to offer assistance to students in an effort to prevent inappropriate testing and special education services (Graden, Casey, & Christenson, 1985).

Today, prereferral interventions are widely used in schools, most often delivered through prereferral intervention teams (PITs) (Truscott, Cohen, Sams, Sanborn, & Frank, 2005). Though different models exist, PITs are generally composed of a group of multidisciplinary professionals (e.g., referring teacher, school psychologist, administrators, regular education teachers, special education teachers, specialists) who come together to assist general education teachers in developing interventions for students who are

experiencing difficulties. Following PIT-based intervention development, teachers are typically responsible for delivering the intervention to the student. After a period of time, the PIT meets again to evaluate student progress and success of the intervention. If the intervention is deemed to be unsuccessful, the student may be referred for a comprehensive special education evaluation (Slonski-Fowler & Truscott, 2004).

Although research has demonstrated support for PITs in improving both student (e.g., academic achievement) and systemic (e.g., referral rates) outcomes (Burns & Symington, 2002), there is relatively little known about what occurs during PIT meetings. There are multiple reasons for better understanding the various processes that occur within PITs. First, research has noted inconsistencies in PIT implementation both within and between states. Most notably, PITs often vary in member composition, overall goals, and interventions created (Truscott et al., 2005). Second, PITs are often recognized as the precursor to modern-day educational practices such as response to intervention (RTI; Burns, Wiley, & Viglietta, 2008). More specifically, within an RTI framework, multidisciplinary teams similar to PITs are used to make educational placement decisions. Given the demonstrated variability among PITs and the likelihood of increasing usage of multidisciplinary teams, it is important to explore the various processes that occur within PITs.

Verbal interactions are clearly integral to the PIT process; however, this area has been relatively neglected by researchers. One way to understand verbal interactions is to employ a relational communication perspective, which acknowledges that people are constantly redefining their relationships through interactions with one another. As verbal messages are

exchanged between conversation participants, implicit information is also being conveyed about how each participant regards the other, each participant's understanding of the relationship, and each person's beliefs about his or her own status in regard to the relationship (Rogers & Escudero, 2004).

Coding schemes are often used to measure relational communication, and more specifically, relational control or influence conveyed within verbal interactions. In particular, the Relational Communication Control Coding System (RCCCS; Rogers & Farace, 1975) and Family Relational Communication Control Coding System (FRCCCS; Heatherington & Friedlander, 1987) have been used to better understand control within both dyadic and group situations. In both coding systems, codes are assigned to each message based on the speakers/participants, the grammatical format of the message, and the message's response function based on preceding messages. These codes can then be used to calculate indices of relational control.

The relevance of using a relational communication perspective to understand PIT process is best exemplified by its application to school consultation studies. Indeed, the concept of prereferral interventions and PITs are based on a consultation model of service delivery (Graden et al., 1985). Several studies in school consultation have used the RCCCS and FRCCCS to understand relational dynamics within dyadic and group meetings (e.g., Erchul, 1987; Grissom, Erchul, & Sheridan, 2003). In general, results from those studies have suggested that utilizing a relational communication perspective is a useful way to understand verbal processes within school-based meetings. The purpose of the current

dissertation research was to extend the relational communication perspective to PITs. More specifically, the specific goal of this research was to document and examine the relational patterns that characterize PIT meetings.

In this study, 15 PIT meetings were used as the basis for analyses and, following established practice, each meeting was audiotaped, transcribed, and coded using the FRCCCS. In addition, each coder completed a PIT Meeting Evaluation Coding Sheet that assessed PIT participants' adherence to a general problem-solving model. Intercoder agreement for the FRCCCS, evaluated using Cohen's Kappa on 22% of the data set, averaged .94 across all FRCCCS coding categories. Important results included: (a) relatively consistent domineeringness scores (i.e., attempted influence), with the exception of the referring teacher who exhibited lower domineeringness when compared to other meeting participants; (b) significantly greater ($p < .05$) domineeringness by the school psychologist when compared to the referring teacher; (c) relatively consistent dominance scores (i.e., successful influence) for all PIT participants; (d) no differences between dominance/domineeringness evidenced during the first vs. second half of meetings, despite a change in scripted meeting focus; and (e) school psychologist domineeringness correlating significantly with ratings on the PIT Meeting Evaluation Coding Sheet ($r = .54$), though this effect disappeared when accounting for instances where the school psychologist took on the role of meeting facilitator. Taken together, this study represents an important first step in understanding relational communication within school-based decision-making groups.

CHAPTER 1

Overview of Literature Review

The purpose of this literature review is to introduce the concepts of prereferral intervention teams and the relational communication perspective that will form the bases for this dissertation. This review will begin by broadly defining prereferral interventions as a context for understanding prereferral intervention teams. The definition and history of prereferral interventions and, more specifically, prereferral intervention teams, will be described. Within this review, prereferral intervention teams will be viewed as a precursor to certain aspects of response-to-intervention, suggesting that investigations of prereferral intervention teams help to inform modern educational practices. Research on various outcomes related to prereferral interventions will be presented, with several studies indicating that prereferral intervention teams do not function as they were originally intended. Given the variability in the implementation of prereferral intervention teams, several process studies will be explored, including several related to verbal processes. One way to better understand the group process and, more specifically, verbal processes, of prereferral intervention teams is to apply a relational communication perspective. This perspective has been utilized in many school consultation studies and applying this perspective to prereferral intervention teams is a logical extension of earlier research. Relational communication theory is described along with several studies that have utilized relational coding schemes within dyadic and group settings. The logic of using a relational scheme in studies of prereferral intervention teams subsequently will be discussed.

Description of Prereferral Intervention

In recent years, there has been an increasing focus on how to best serve the multitude of diverse learners within the educational system. In particular, educators are concerned with providing appropriate services to students who are struggling within the regular education setting. This challenge has led educators to contemplate the best ways to meet the needs of these students. Since the 1980s, implementing prereferral interventions has been a widely accepted way of providing services to students who are experiencing academic or behavioral difficulties within the regular education classroom (Bahr, Whitten, Dieker, Kocarek, & Manson, 1999; Buck, Polloway, Smith-Thomas, & Cook, 2003; Burns & Symington, 2002).

Prereferral interventions are initial strategies or supports that are indirectly delivered to a student within a regular education setting. They are often delivered prior to the student being referred for more intensive services (i.e., special education), if the intervention is deemed to be unsuccessful. In essence, the interventions are enacted to help a child who is experiencing academic and/or behavioral problems in the regular education classroom (Graden et al., 1985).

There are two key components that embody most prereferral intervention models. First, most prereferral intervention models include some type of consultation that is delivered to the teacher by another professional (e.g., school psychologist, special education teacher, other regular education teacher, administrator). It is in this respect that prereferral interventions are indirectly delivered. Instead of professionals directly working one-on-one with a student who is experiencing difficulties, they pass on knowledge, ideas, and new skills

to the teacher. The teacher then becomes responsible for directly delivering the intervention to the student. A second key component to most prereferral intervention models is the provision of preventative services. In essence, the prereferral intervention is being enacted not only to lessen current problems within the regular education classroom, but also to prevent problems from worsening. As in many consultation models, prereferral intervention models also aspire to increase the knowledge and skill of the teacher so that similar difficulties with other students are prevented (Graden et al., 1985).

In sum, prereferral interventions represent a way to provide services to struggling students in the regular education classroom in an attempt to improve behavior or academic performance. These interventions are preventative in that they aim to decrease problems prior to the delivery of more formal services. Most often, prereferral interventions are developed through the process of consultation whereby interventions are generated by teachers consulting with other professionals. Prereferral interventions have been a common mode of service delivery since the 1980s (Carter & Sugai, 1989; Truscott et al., 2005). The following section will review the historical events that led to the development of prereferral interventions as a method of service delivery.

Historical Background

Dissatisfaction with Special Education Services

As a starting point, it is useful to note that prereferral interventions arose in part due to dissatisfaction with special education services. With the passage of P.L. 94-142, The Education for All Handicapped Children Act (1975), educators were required to provide a

free and appropriate education to all students with disabilities within the least restrictive environment. Although this law represented a major victory for children with disabilities, the process by which students were determined eligible for special education became a source of concern for educators, researchers, and other professionals (Fagan & Wise, 2007; Graden et al., 1985). Generally, a teacher would refer a student for assessment, a multidisciplinary team would determine the need for an assessment, the student would be assessed, and then the multidisciplinary team would make placement decisions regarding the need for special education for that student. The underlying assumption was that this process would help to determine which students truly needed special education services and which students did not and who were best served in the regular education classroom (Carter & Sugai, 1989).

Although this idea appeared acceptable in theory, research on special education referral and placement decisions raised some serious concerns. In particular, eligibility determination and decision-making practices were called into question for several reasons. First, many researchers noted that a teacher's referral too easily led to special education placement. For example, Algozzine et al. (1982) documented that teacher referral resulted in nearly 92% of students being tested. Further, nearly three-fourths of these referrals resulted in special education placement. Second, results of research addressing the accuracy of decision making were troubling. In one study, Algozzine and Ysseldyke (1981) reported that 51% of those involved in placement decisions declared a student with relatively minor difficulties as eligible for special education services. Others suggested that there was no relationship between the assessment data that were presented at eligibility meetings and the

eventual decision made (Ysseldyke, Algozzine, Richey, & Graden, 1982). Third, concerns were raised over teachers' reasons for referral and their desired outcome. Researchers noted that many reasons for referrals lacked specificity and objectivity. Additionally, the desired outcome for many referrals was the provision of special education services, which may be interpreted as wanting the student out of the classroom (Ysseldyke, Christenson, Pianta, & Algozzine, 1983).

Other concerns during the 1980s centered on the resource strain created by the refer-test-place process. Algozzine, Ysseldyke, and Christenson (1983) reported that an average of 5% of students within a school's population was being referred annually. The researchers reasoned that with this high a referral rate, it was likely that the population of students receiving special education services would continue to grow. The high referral rate along with the large number of students eventually placed in special education services led some to question whether special education could realistically accommodate all these students. Additionally, the refer-test-place sequence often put a high demand on many professionals' time and on the financial resources of the school. With so many students ending up in special education services, educators began to doubt if the process was really worth all the effort (Carter & Sugai, 1989; Graden et al., 1985).

The Rise of Prereferral Interventions

With numerous problems identified with the special education referral process and decision-making practices, many professionals began to wonder if there were a better way to serve students with academic and/or behavioral difficulties. Prereferral interventions

represented one possible remedy to the multitude of concerns with the refer-test-place model, and Graden et al. (1985) are credited with first developing the concept of prereferral interventions. At the time, prereferral interventions were conceptualized as a way of delivering important resources to a child before referral for possible special education services. According to Graden and colleagues, the major goal of prereferral interventions is to, “identify successful interventions to help students remain in the least restrictive environment, the regular education classroom” (p. 378). Other important goals of prereferral interventions include decreasing inappropriate referrals and unneeded special education placements. Interestingly, Graden (1989) later lamented using the term “prereferral” when referring to her model, as she felt that this term was misleading and led people to assume that ultimately the child would be referred to special education. Although Graden tried to use other labels, the term prereferral interventions has been widely used within the literature.

Graden et al. (1985) based their idea of prereferral intervention on other important models and theories. First, the prereferral interventions are most often delivered through consultation. For this reason, Graden and colleagues noted the importance of incorporating a consultation model within the prereferral model. In a school consultation model of service delivery, school resource personnel (e.g., school psychologists, special education teachers) problem solve with teachers to develop interventions for students who are struggling within the regular education classroom. Graden et al. noted that in order for prereferral interventions to be successful, consultants must possess interpersonal skills, problem-solving skills, and expertise in pertinent areas (e.g., behavior modification, reading instruction).

Additionally, to ensure effective delivery of prereferral interventions, a consultant must also possess an understanding of the larger systemic factors (e.g., past referral outcomes, a school's receptivity to change) that may affect the delivery of prereferral interventions. Related to this concept is the idea that those involved in consultation must incorporate an ecological framework when making decisions about prereferral interventions. Graden and colleagues noted that the prereferral intervention model would work best when interventions are focused not only on the child but also on the classroom context (e.g., classroom climate, teacher, instructional variables).

In sum, the concept of prereferral interventions developed in part as a reaction to the perceived problems associated with the refer-test-place model that guided special education decisions during the 1970s and 1980s. Problems such as increasing numbers of referrals and the high rate of placements in special education led educators to search for a better way to meet the needs of students experiencing academic and behavioral challenges within the classroom. Graden et al. (1985) are credited with first proposing the idea of prereferral interventions within the special education literature. The major goals of prereferral interventions are to: (a) decrease the number of inappropriate referrals and placements in special education, and (b) better serve students with mild difficulties within the regular education classroom. Additionally, Graden and colleagues based their model of prereferral intervention on models of consultation whereby students are helped through adult-to-adult interactions. Taken together, prereferral interventions have represented an important bridge between special education and regular education.

Prereferral Intervention Teams

Following Graden and colleagues' (1985) definition of a prereferral intervention model, the research literature became plentiful with studies investigating both the process and implementation of prereferral interventions. Most often, prereferral interventions were carried out through teams of educational professionals that came together (i.e., consulted with the teacher) to systematically offer teachers assistance with students who were considered difficult to teach (Truscott et al., 2005). In other words, professional school-based teams became the vehicle through which many prereferral interventions were delivered.

During the late 1970s and 1980s, various models of these multidisciplinary teams were created and outlined in the literature. These models were often differentiated by team membership and the models that guided them. For instance, Teacher Assistance Teams (TATs) were mainly composed of teachers from various grade-levels who came together to offer assistance for students who were considered difficult to teach. Unlike other intervention teams, TATs were teacher-focused as opposed to child-focused (Chalfant & Pysh, 1989). Mainstream Assistance Teams (MATs; Fuchs & Fuchs, 1990) used consultants who were specially trained in behavioral consultation to assist teachers in developing potentially successful interventions. An important component to this model was the use of scripts to guide interpersonal interactions. Other models were founded on the idea that shared power and collaboration are important cornerstones to successful multidisciplinary teams (Graden et al., 1985).

Although various models and terms have been used to describe school-based prereferral intervention teams, several commonalities exist. Generally, each model tends to involve a conference among educational professionals to address teacher concerns, share important and pertinent knowledge, gather feedback, create intervention plans, and make decisions about implementing interventions or referral for psychoeducational testing. Additionally, the ultimate goals of these teams are to provide effective strategies and interventions for students within the regular education classroom, to reduce inappropriate referrals, and to avoid placing students with mild academic or behavioral difficulties in special education services when they do not truly need these services (Slonski-Fowler & Truscott, 2004).

For the sake of simplicity, the term *prereferral intervention team* (PIT) will be used throughout the remainder of this document to refer to a team of educational professionals (including the referring teacher) that comes together to discuss strategies and supports that can be used within the regular education setting to assist a student experiencing academic or behavioral difficulties within the classroom.

In sum, multidisciplinary teams are often used as the medium by which prereferral interventions are developed. Although various PIT models have been developed (e.g., MAT, TAT), the major goal of each is to generate intervention ideas that can be used in the regular education classroom to help support students who may be struggling academically or behaviorally. In PITs, various school-based professionals come together to assist a teacher in addressing the concerns of a particular student in the classroom. Within PITs, knowledge

is shared and feedback is gathered in order to develop initial strategies that can be used by the teacher to address the student's problems. Additionally, PITs often make decisions about the necessity of special education evaluation. In the next section, research reviewing the use of prereferral interventions and PITs will be reviewed. In particular, this research will suggest that PITs are common practice in most states.

Increased Use of Prereferral Intervention Practices

The Individuals with Disabilities Act of 1997 (IDEA) emphasized the greater need to integrate special education with regular education. For instance, this law allowed special education staff to work with regular education students when needed. Under this law, schools could use up to 5% of their special education funds to develop a system to help students and their families. This allowed for the provision of assistance to children who were not currently classified as disabled (Telzrow, 1999). Schools districts saw the implementation of a prereferral intervention process as one way of joining special education services with regular education.

Although the 1997 reauthorization of IDEA represented the first time that special education funds were allowed to be used toward regular education students, many states were already using some type of prereferral intervention process. In an early study of prereferral intervention practices, Carter and Sugai (1989) surveyed all 50 state departments of education and the District of Columbia. At that time, 23 states required that some type of prereferral intervention before referral for special education services, and 11 states recommended this practice. Most often, prereferral interventions included instructional

modifications, counseling, and behavior management strategies, with regular education teachers being the most likely to implement these intervention. Although Carter and Sugai were looking at the implementation of prereferral interventions generally, results indicated that teams of professionals were the most likely candidates to design prereferral interventions. These facts taken together, Carter and Sugai's study demonstrated that although federal legislation did not require such practices, prereferral interventions were either required or recommended by most states. Further, multidisciplinary teams were most likely to be responsible for determining what intervention would be used in the regular education classroom.

In order to provide an update on prereferral intervention processes, Buck and colleagues (2003) again surveyed state departments of education using a questionnaire similar to that used by Carter and Sugai (1989). Results from this study showed that 22 states required prereferral interventions and 15 recommended them. Similar to Carter and Sugai, instructional modifications, behavior management, and curricular modification topped the list of prereferral strategies most often used. In Buck et al.'s study, it was assumed that the prereferral intervention process included some type of multidisciplinary team and survey results indicated that states had a variety of terms to denote these teams (e.g., support team, child study team, prereferral intervention team, teacher assistance team, teacher intervention team). Also, most state departments of education indicated that some form of training was provided to members of the prereferral team, conducted primarily by the local school districts. Finally, most state departments of education rated the prereferral intervention

process within their state as “successful.” Based on the results of this study, it is clear that prereferral interventions, most often created through PITs, are widely used.

A third study of prereferral intervention use was conducted by Truscott and colleagues (2005). Unlike the previous two studies that concentrated on prereferral interventions in general, this study was more specific to PITs. In addition to surveying state departments of education, the authors gave a survey to four randomly selected schools from each state to better understand the nature of PITs. Results showed that 86% of states either required or recommended PITs. The average PIT had 9 members, most often including the referring teacher (92%), administrators (75%), school counselors (64%), other classroom teachers (55%), special educators (51%), and school psychologists (46%). Interestingly, parents were members in only 28% of the PITs surveyed. Other interesting findings were that most state departments did not provide any guidance on the implementation of PITs in schools. Additionally, the schools surveyed varied widely on the goals they described and specific interventions they most often used. These findings taken together, this research indicated that although PITs are frequently utilized as the vehicle for delivering prereferral interventions, team goals and procedures may lack consistency between schools.

In sum, prereferral interventions are widely used within schools today. Earlier studies of state practices found that prereferral interventions were either required or recommended by most states (Carter & Sugai, 1989). Further, prereferral interventions are most often carried out through PITs composed of teachers, administrators, and specialists. Recent research has suggested that PITs receive little guidance from state departments of education

on how to implement PITs within schools. Additionally, schools differ in the goals that they cite and interventions that they eventually choose to implement (Truscott et al., 2005).

The PIT as a Precursor to the Response-to-Intervention Process

In the past decade, federal legislation has tried to further integrate special and regular education. In particular, the reauthorization of IDEA in 2004 allowed schools to use a response-to-intervention model (RTI) when determining if a student is eligible for special education under the category of specific learning disability. More recently, RTI models have been extended to students who are at risk for other academic or behavioral difficulties as well (e.g., ADHD; Gresham, 2007b; Tobin, Schneider, Reck, & Landau, 2008). In the RTI model, schools identify students who are experiencing difficulties within the regular education classroom, implement evidenced-based interventions, monitor the student's progress or responsiveness to the intervention, and then if needed, identify students with possible disabilities. Decisions about a student's placement or level of services are based on how well or poorly the student responds to a research-based intervention. Thus, within RTI, the assumption is that it is important to establish that difficulties are not due to an inadequate instruction or interventions being in place (Gresham, 2007a; Kovalski, 2007, McMaster & Wagner, 2007)

Though different approaches to RTI exist (e.g., standard protocol approach and problem-solving approach), the interventions themselves are typically delivered through some type of multi-tiered model (typically 3 to 4 tiers). Throughout each tier, evidence-based interventions and/or instruction are delivered to students. Typically, these

interventions/instruction are delivered first to all students in the general education setting at the lower tiers and then more intensive interventions are delivered to students who are at risk within the higher tiers. An important component to RTI models is the provision of data to guide decision making at all tiers. Thus, decisions about intervention intensity, level of need, and responsiveness to intervention are based on objective outcome data that are being collected continuously in each tier (Gresham, 2007a; Kovaleski, 2007).

Multidisciplinary teams are often an integral component to many RTI models within schools. These multidisciplinary teams are often referred to as problem-solving teams (PSTs). Burns et al. (2008) stated that, “the origins of PSTs can be traced to the Prereferral Intervention Team (PIT) model presented by Graden and colleagues” (p. 1633). Similar to PITs, PSTs utilize a team of multidisciplinary professionals that come together to assist a teacher in developing interventions that can be used in the classroom to address academic and/or behavioral difficulties. Likewise, both are based on a consultation model, in that a student’s needs are addressed indirectly (i.e., the team of consultants assists the teacher who then is responsible for overseeing the intervention). Finally, both team-based approaches operate within the regular education setting. More precisely, the teams are responsible for developing interventions that will be carried out within the regular education classroom.

There are, however, two major differences between these approaches. First, PSTs use a well-defined and systematic problem-solving approach during team meetings. Specifically, most PSTs follow the behavioral consultation approach outlined by Bergan and Kratochwill (1990). In essence, PSTs follow a series of important stages when addressing students’

academic and/or behavioral difficulties. These stages involve defining the students' problems objectively, analyzing possible contributing variables (e.g., setting), developing and implementing research-based interventions with integrity, and evaluating the effectiveness of the interventions. With the exception of intervention implementation and intervention evaluation, these stages are usually conducted within one PST meeting. A separate team meeting is conducted to evaluate the data and develop additional (if needed) evidence-based interventions. An important component of this problem-solving process is that data are used during each stage to help team members better understand the student's difficulty (Burns et al., 2008).

The second major difference between PSTs and PITs involves the goals of each. As mentioned earlier, a major goal of PITs is to decrease inappropriate referrals. According to some researchers, PITs represent a "screener" for special education eligibility (Burns et al., 2008). This aspect is perhaps best exemplified by a widely used term to denote this team and its interventions (i.e., prereferral). In contrast, the goal of PSTs is not to become a stepping stone to eventual special education services. The most important goal of PSTs is to identify interventions that will be the most successful for students. An additional important goal is to evaluate the effectiveness of particular interventions for a specific student. Special education eligibility is only considered by the PST if the student has failed to respond to evidence-based interventions that were implemented with integrity.

In sum, PSTs represent an important component of many RTI models. These models are becoming more and more prevalent in schools, seemingly as a consequence of federal

legislation and perceived inadequacies with current identification practices. As PSTs become more common in schools, it will be important to better understand what makes them effective. Additionally, it will be important to understand the processes that characterize problem-solving teams that operate within RTI models. As mentioned earlier, PSTs evolved from PITs. Although important differences between PSTs and PITs exist, it is clear that there are important commonalities as well. Understanding the processes and outcomes that characterize PITs may represent an important first step in understanding PSTs.

Research on PIT Outcomes

Efficacy of Prereferral Intervention Processes

As more emphasis has been placed on accountability and evidence-based practice, the need to show that PITs produce positive outcomes has become increasingly important. As mentioned earlier, PITs are considered the precursor to PSTs that are utilized in RTI models. By understanding the research on PITs and, more generally, research on prereferral interventions, educators may be able to better implement similar services when using an RTI approach. Before considering this literature, it is important to note that most studies on the outcomes of PITs are difficult to discern because of the complexities of PIT service delivery. These difficulties are similar to those described in the school consultation literature (Erchul & Martens, 2002): because of the indirect nature of service delivery in consultation, it is difficult to determine direct effects. Similarly, the PIT process inherently involves some type of an embedded intervention component; therefore, it is difficult to determine whether the effects of the treatment are due to the prereferral team itself or other variables. Because of

these issues, this section will first consider research on prereferral intervention approaches more generally, and then those related to PITs specifically.

Nelson, Smith, Taylor, Dodd, and Reavis (1991) conducted an empirical review of the literature on prereferral intervention approaches. These approaches included: teacher assistance teams, school consultation committees, prereferral intervention teams, teacher resource teams, mainstream assistance teams, and collaborative peer problem solving. Outcomes reviewed included those pertaining to student performance, teacher abilities and attitudes, and special education delivery. The researchers stated that most of the studies on prereferral intervention approaches included in this review suggested that the following favorable outcomes were obtained: (a) special education referrals were reduced, (b) positive student outcomes were achieved, (c) teachers' abilities to educate students with similar academic/behavioral problems were improved, and (d) teachers' attitudes toward students with similar academic/behavioral problems were more positive. Although the authors noted that there were methodological problems with much of the prereferral intervention research reviewed (e.g., lack of experimental designs, failure to assess treatment integrity, need to better define interventions and other key terms), the results of this review suggest that prereferral intervention approaches can be a useful way of delivering psychological services to students within schools.

In a second meta-analytic review, Burns and Symington (2002) analyzed the findings from research studies specifically analyzing PIT outcomes. Although these authors initially found 72 studies pertaining to PITs, only 9 were included in their analyses because of

stringent inclusion criteria (e.g., between or within group design, usage of quantitative data). Both student and system outcomes were analyzed. Student outcomes included data such as observations of time on task and/or target behaviors, student task completion, and scores on behavior rating scales. System outcomes included data such as referrals to special education. The meta-analysis yielded a total of 57 outcomes that were averaged to produce an overall mean *ES* of 1.10 for PITs. Additionally, the average *ES* was 1.15 for student outcomes and .90 for system outcomes. An important caveat to these findings was that PITs implemented by a university research team resulted in a mean *ES* of 1.32, while those implemented by educators within school-settings had a mean *ES* of only .54. Taken together, Burns and Symington suggested that PITs generally produce positive outcomes; however, this appears to be much more pronounced when PITs are implemented by a university team as opposed to those implemented by solely by practitioners.

Inconsistencies in Implementation of PITs

Burns and Symington (2002) suggested that the inconsistencies in the implementation of PITs within schools may be one reason why positive outcomes are more prevalent in university-led PITs as opposed to field-based PITs. This point was also emphasized by Safran and Safran (1996), who noted that university-implemented prereferral intervention programs (e.g., Mainstream Assistance Teams; Fuchs & Fuchs, 1990) resulted in greater reductions in special education placement than those implemented by school-based professionals. As mentioned above, prereferral interventions, most often delivered through PITs, are recommended or required by most states; however, many states do not provide

recommendations on team membership or provide guidance on team procedures (Truscott et al., 2005).

In addition to lacking consistency in team procedures, researchers have also suggested that PITs do not function as intended. For instance, Graden et al. (1985) identified decreasing referrals for special education placement as one of the major goals of the prereferral intervention process; however, this goal may not be shared among members of PITs. Eidle, Truscott, Meyers, and Boyd (1998) surveyed members of a PIT and found that nearly half identified referral to special education an important PIT intervention. In addition, many of the interventions that are typically used by the PITs were targeted at treating a specific disorder (e.g., counseling) as opposed to being focused on prevention (e.g., consulting with specialists). In addition, Truscott et al. (2005) found that only 15% of PIT members identified decreasing special education referrals as a goal within the PIT process. Other concerns about PITs center on data-gathering strategies. Specifically, intervention effectiveness is often assessed via teacher report. Thus, decisions are often based on subjective teacher opinion as opposed to objective data (Bahr et al., 1999). Given that the reliability of teacher judgments is questionable, it raises questions about the consistency and accuracy of decision making by PITs (Witt, Gresham, & Noell, 1996).

In sum, research has suggested that PITs and, more generally, the prereferral intervention process, is an effective way to serve the needs of students within regular educational settings. These results are qualified by findings that university-based PITs tend to produce more favorable outcomes than field-based PITs. Additionally, researchers have

also suggested that PITs lack consistency in team members, goals, and procedures. Given these findings, it is clear that research is needed to better understand the various process variables that affect the outcomes of PITs.

Research on the Process of Prereferral Intervention Teams

Introduction

Though PITs have become more prevalent in the last few decades, it appears that there is variability in how they are implemented and the process by which they are carried out. For this reason, it is important to better understand various components of PITs. In particular, understanding how the various team members, particularly the referring teacher, view the PIT process is important to understanding PIT functioning. Considering that PITs are by nature interpersonal interactions between and among many professionals, an awareness of the factors that influence the interpersonal dynamics of PITs is important to gaining greater insight into the PIT process. Related to this, examining the verbal processes of PITs will allow for a better understanding about how PITs work, providing assistance to teachers who have a student experiencing academic or behavioral difficulties within the classroom. The following sections will consider three aspects of the PIT process including: team member perspective, interpersonal dynamics, and verbal processes.

Team Member Perspectives

Understanding the perspectives of those directly involved in the PIT process is an important component to understanding the functioning of PITs. Buck et al. (2003) called for more PIT process research to capture “the perspectives of individuals (e.g., teachers and

administrators) responsible for conducting prereferral intervention processes in the schools. In addition, direct observation of the dynamics of team meetings...would enhance our understanding of this process” (p. 358). The following section will discuss the perspectives of school psychologists, general education teachers, special education administrators, and other PIT members.

General team member perspectives. To better understand consumer satisfaction with PITs, Bahr and colleagues (1999) surveyed 680 professionals from 121 schools about PIT practices. Participants surveyed included PIT members, most notably school support staff (e.g., school psychologists, special education teachers, social workers), school administrators, and general education teachers (including referring teachers). Overall, survey results showed that most professionals view their teams as functioning in a positive manner and believe that PITs represent an effective delivery model. Additionally, team members appeared satisfied with follow-up procedures (most often verbal report or visit from a PIT member) that were implemented by PITs.

School psychologists. Traditionally, school psychologists have been an important part of the decision-making process when discussing provisions of services for students who are experiencing academic and/or behavioral difficulties. Given that school psychologists are often given extensive training in consultation, problem solving, and effective interventions, it stands to reason that they possess specialized knowledge that makes them important parts of multidisciplinary teams (Fagan & Wise, 2007). Though not specific to PITs, Huebner and Gould (1991) surveyed 177 school psychologists to understand their perceptions about

multidisciplinary teams making educational placement decisions. Overall, survey results indicated an “average” level of satisfaction with multidisciplinary team meetings and procedures that they had experienced. In general, school psychologists seemed content with PIT decision making and the extent of interdisciplinary collaboration and trust. Though many school psychologists’ ratings of PITs were positive, there were some areas where school psychologists saw a need for improvement. For instance, school psychologists felt that more time should be devoted to discussing interventions and that parents and referring teachers needed to participate more in meetings. Additionally, school psychologists felt there needed to be better procedures for follow-up. In sum, school psychologists were generally satisfied with multidisciplinary meetings, but clearly saw areas where improvements were needed (e.g., parent and teacher involvement, follow-up procedures, time devoted to discussing interventions).

Special education administrators. Considering that special educators are frequently part of PITs, it is important to gauge their perceptions of the prereferral intervention process. Nelson, Smith, Taylor, and Dodd (1992) surveyed 36 special education administrators to better understand their opinions about the prereferral intervention process within their schools. Most often these special education administrators participated in the prereferral intervention process by being part of some type of multidisciplinary team, though the terms to denote those teams vary (e.g., system-wide assistance team, teacher assistance team, peer problem solving, mainstream assistance team). Results from the survey indicated that special education administrators did not strongly believe that the process helped general education

teachers and were unsure whether the process was really just a “bureaucratic hurdle.”

Several positive findings were also noted. Overall, special educators believed that teachers did a good job at following through with the interventions and fewer referrals were made as a result of the prereferral process. Taken together, Nelson et al.’s results suggest that special education administrators have mixed feelings about the prereferral intervention process.

General education teachers. The perceptions of general education teachers about the prereferral intervention process and, more specifically, PITs, are particularly important. Given that regular education teachers are most often responsible for implementing prereferral interventions, it is crucial to understand their opinions and views. Additionally, intervention effectiveness is often judged via teacher report, and thus it is likely that their overall opinions about the prereferral process may influence their ratings (Bahr et al., 1999). Although there is little research on this seemingly critical issue, there are some studies that tend to suggest that general education teachers have mixed opinions about the process.

In an early study of teachers’ perceptions of PITs (then called “preassessment procedures”), Harrington and Gibson (1986) gave teachers a 25-item questionnaire about their perceptions of the team, process, and recommended interventions. Although teachers felt that the interventions recommended by the team were appropriate and clearly defined, they had doubts as to whether they were really “new” intervention ideas. Additionally, 34% of the respondents believed that these interventions were not successful at remediating the referral concern and many teachers ended up going back to the team after trying the interventions in the classroom. Despite these issues, 60% of teachers reported feeling

satisfied with the team and believed that it adequately met their needs. Similarly, 70% of respondents reported that the team was sensitive to their feelings and felt that their opinions and input were respected by the team. In sum, this study demonstrated that although general education teachers reported being satisfied with the team itself, concerns existed regarding the interventions that were generated by the PIT.

Chalfant and Pysh (1989) described teachers' perceptions of teacher assistance teams (TATs). As mentioned earlier, TATs differ from PITs in that they tend to be more teacher-focused as opposed to student-focused. In essence, the concentration is not only on developing interventions, but also on providing emotional and instrumental support for teachers. Although these differences exist, they are still very similar to PITs in that they are often composed of multidisciplinary professionals, though mostly teachers in the case of TATs, that come together to develop interventions that will be utilized within the general education classroom. Chalfant and Pysh's results indicated that general education teachers were mostly positive toward TATs. Teachers reported that the group problem-solving process was effective, they were supported by team members, and students' performance tended to improve as a result of the intervention plans developed. Although teachers generally felt positive about TATs, they also reported that there were areas that could be improved. In general, teachers thought that more time could be devoted to meetings, there was too much paperwork, and the interventions generated were not always useful. Taken together, the authors concluded that although teachers are generally satisfied with TATs, they see the need for some changes to make the process more beneficial.

More recent studies show similar patterns of results. Slonski-Fowler and Truscott (2004) conducted an ethnographic study to better understand teachers' perceptions of the PIT process. In particular, the authors were interested in why teachers disengage from PIT meetings. After extensively interviewing 12 teachers and observing many PIT meetings in two elementary schools, the authors described three consistent themes that permeated teachers' perceptions of PITs. First, many teachers felt as if their opinions were devalued by team members. Observations of the PIT meetings confirmed that teacher input regarding both problem identification and intervention development was often ignored. Second, teachers felt that the interventions that were developed by the PIT were unclear, redundant, or not individualized to meet the needs of the referred student. Finally, teachers were frustrated that the PIT did not feel responsible for implementation of interventions or demonstrate any accountability for the outcomes achieved. In essence, teachers felt as if the PIT assumed no responsibility after intervention generation. The authors noted that when teachers felt that their opinions were devalued, the interventions generated were not useful and/or that the team gave the teacher all the responsibility for implementation and outcomes, teachers often disengaged from the PIT process.

Papalia-Berardi and Hall (2007) conducted an extensive review of the literature to better understand teacher satisfaction with PIT purposes, processes, and outcomes. To better appreciate how teachers felt about the purposes of PITs, the authors looked at teacher satisfaction pertaining to three goals: reducing special education referrals, providing assistance and support to teachers, and maintaining students with mild difficulties in the

general education classroom. Process indicators included satisfaction with the overall PIT process, quality of assistance provided by PIT members, and the nature of interventions generated in PIT meetings. Finally, teacher satisfaction with outcomes was measured by focusing on teachers' ratings of referred students' general functioning in the classroom and progress relating to the referral concern. Overall, the authors characterized teacher's ratings of the PIT as mediocre. Although teachers appeared satisfied with the goals of PIT and the quality of assistance they received from team members, they remained dissatisfied with the overall PIT process, particularly the interventions generated, and outcomes that were achieved as a result of the process. The authors extrapolated several themes from the pattern of results. In general, teachers desired more direct support; felt dissatisfied with the time required, resources needed, and redundancy of the TAT process; and thought that the process may be an ineffective way of meeting the needs of students.

In sum, the perceptions of those involved in the PITs are important to understanding how PITs work. Research investigating the perceptions of PIT members and, more specifically, the perceptions of school psychologists, special education administrators, and general education teachers, shows a mixed pattern of results. Generally, PIT members seem satisfied with the intent and goals of PITs but are dissatisfied with how the prereferral intervention process is carried out. Given these areas of concern, it is important to better understand what occurs during the PIT process. More specifically, a better understanding of the interpersonal dynamics and verbal processes that characterize PIT meetings may help to clarify the nature of these concerns.

Group Processes

Very little research has been conducted on the problem-solving process that occurs in prereferral intervention teams. Research in social psychology has clearly suggested that group processes variables (e.g., power of majority, value of dissent, shared norms, groupthink) are important to understanding the quality of group decision making; however, this is an under-researched area in the literature on prereferral intervention teams (Gutkin & Nemeth, 1997). To address these gaps in the research, Gutkin and Nemeth (1997) stated that researchers need to, “evaluate the quality of group decision-making indirectly by examining the processes that were employed by group members” (p. 198). The following sections will explore the few studies that have researched group process variables in prereferral intervention teams. More specifically, research addressing the interpersonal dynamics and verbal processes will be explained in order to create a better awareness of what occurs during PIT meetings.

Interpersonal dynamics. In order to better understand what occurs during PIT meetings, Etscheidt and Knesting (2007) conducted a qualitative case study on a PIT that was nominated as exemplary for its model problem-solving process. The team chosen was considered exemplary based on the: (a) number of trainings attended by school personnel, including administrators; (b) considerable financial resources allocated to the team; and (c) fact that other school districts subsequently adopted the teams’ problem-solving model. Etscheidt and Knesting were interested in the factors that influenced the interpersonal dynamics of these team meetings and their decision-making process. Primary sources of data

included several rounds of semi-structured interviews with members of the team and observations of 17 initial PIT meetings.

Important results pertaining to the interpersonal dynamics of the team were described by the authors, including several major themes. The first three themes pertained to the team's *composition* (i.e., membership, parent involvement, and administrative support). The first theme, team membership, clearly underscored the importance of the individuals who attended group meetings. Most members valued the multidisciplinary nature of transactions. In addition, many of the members were very experienced (e.g., had been at the school for many years) and held expertise in a number of different areas (e.g., special education, school psychology, reading). Similarly, team members were consistently present at all meetings, which facilitated continuity in discussion and decision making. Their attendance had the additional impact of fostering commitment to the problem-solving process. The second theme, parent involvement was reported as integral to an effective problem-solving process. In general, team members felt that meetings were more successful if a parent attended. Observations of meetings suggested that members were in fact more active (e.g., volunteering ideas, listening to others' opinions) when parents were present. The third theme, administrator support and involvement, was important in establishing positive interpersonal dynamics within the team. Team members stated that administrator logistic support (e.g., arranging for substitute teachers to be present while teachers were in meetings) and active participation by the administrators were important in creating an atmosphere that was conducive to effective decision-making (Etscheidt & Knesting, 2007).

The second group of themes relate to the nature of the team members' *interactions*. First, group members felt that discussion was greatly facilitated by the presence of data and focus on a single problem. Observations of team meetings and interviews with team members led to the idea that data provided a foundation for discussion. If data were not present, team members tended to feel less confident in the process and resulting decisions. Similarly, targeting one area of concern appeared to assist in group dialogue. Although many team members noted the difficulty in choosing one area of concern, it was also viewed as an effective way to structure the group's conversation. The second theme related to team members' interactions and included members' exploration of multiple intervention options. Members felt that challenging each other with alternative interventions led to a solution that was best for both the referring teacher and student. Additionally, referral for special education evaluation was only posited as an option if no other alternatives were deemed feasible. The researchers cited professionalism in the face of dissent as a third important theme related to team interactions. More specifically, the team felt that the group climate was conducive to disagreement. Observations seemed to support the idea that professional disagreements improved the problem-solving process (Etscheidt & Knesting, 2007).

The third group of themes relate to *outcomes* of the process. Teacher buy-in and continuing efforts to improve the team's problem-solving process influenced the interpersonal dynamics of the team. Members felt that the team was effective because teachers were very accepting of the process, which led to better meetings. In addition, observations indicated that teachers took ownership in the process, volunteered ideas, and

were accepting of others' ideas. A second theme related to outcomes was the constant and continuing efforts to improve the prereferral intervention team process. Although members and teachers were very satisfied with the process, they also were constantly searching for ways to improve the team. The team members' efforts to improve problem-solving appeared to impact the effectiveness of the process (Etscheidt & Knesting, 2007).

In conclusion, the above research suggests that several themes influence the interpersonal dynamics of PITs. Although Etscheidt and Knesting's (2007) study has clear limitations (e.g., studying one team considered exemplary), it does represent an initial step in understanding group process in PITs. More specifically, their results indicate that the members who comprise a team, parent participation, administrator support, dialogue based on data and focused on a single concern, exploration of multiple intervention ideas, professionalism during conflict, teacher buy-in, and constant efforts to improve multidisciplinary teams are important to understand the group process. More research into process variables such as these can help to uncover the necessary ingredients needed in effective school-based problem-solving teams.

Verbal process studies. Verbal interactions are clearly important to understanding the PIT process, and several studies have investigated the nature of verbal communication during PIT meetings. Knotek (2003), for example, was interested in better understanding how language influences the problem-solving process. Using a qualitative methodology that utilized field notes, audiotaped meetings, individual interviews, and a variety of documents pertinent to team meetings, Knotek investigated how certain forms of language, most notably

jargon and slang, can influence group problem-solving processes in two elementary schools. In addition, he was interested in how verbal processes of team meetings could be changed by the introduction of a consultee who sought to clarify unclear verbalizations. Prior to the introduction of this consultee, Knotek noted that many team meetings were characterized by verbalizations laden with jargon (i.e., language that was specific to a professional role) and slang (i.e., informal terms used to describe a professional issue). These verbalizations hindered the problem-solving process because team members began to conceptualize and represent problems differently. In order to facilitate the problem-solving process, a consultee was introduced to the team whose major purpose was to use clarifying statements to ensure that conceptual congruence was occurring. More generally, Knotek's study underscores the importance of verbalizations in the problem-solving process. Clearly, what is said during team meetings has the potential of influencing both the process and outcomes of PITs.

In a second study on verbal processes, Lee and Jamison (2003) conducted an exploratory investigation to better understand the types of verbalizations and communication patterns that occur in PIT meetings. Four individual cases were used in this research, and for each of these cases, three team meetings were conducted that focused on problem identification, problem analysis, and problem evaluation. To obtain information on verbalizations during these meetings, the researchers coded team members statements used the Consultation Analysis Record (CAR; Bergan & Tombari, 1976). This coding scheme has been commonly used in the consultation literature to describe message content, process, and control.

In general, Lee and Jamison (2003) found that PIT meetings were characterized by more emitters (i.e., providing information) than elicitors (i.e., asking for information), though elicitors were more prevalent in meetings that focused on problem identification as opposed to those focusing more on analyzing the problem or evaluating the intervention that was put in place. In general, messages tended to focus more on the setting (e.g., what is occurring before or after the behavior occurs) as opposed to background environment statements (e.g., what is occurring in the home environment). In terms of codes related to message function, the authors noted that specification messages (i.e., messages that supply or call for information about topics under discussion) were more prevalent than messages related to evaluation, validation, or inference. Although the generalizability of this study is limited, it provides an initial understanding of the types of verbal statements that may be used in PIT meetings.

With particular relevance to the current research, Young (2005) conducted a study to evaluate both the process and outcomes of PITs. This research occurred as part of a multi-year training grant used to develop effective problem-solving teams in a rural school district. As part of this grant, trainees (i.e., graduate students) were educated in effective problem-solving processes. Additionally, trainees were required to implement these practices and participate in PITs in four local schools. Throughout the course of this grant, 78 PIT meetings were taped and transcribed. These transcriptions along with data from prereferral records and teacher satisfaction surveys became the primary source of data for Young's study.

As part of the study, Young (2005) used a qualitative methodology to better understand the types of verbalizations that occurred in PITs. More specifically, Young was interested in what types of messages were conveyed during the problem-solving process. To better study this issue, Young devised a coding scheme based on prior research (e.g., Truscott, Cosgrove, Meyers, & Eidle-Barkman, 2000). Codes were then modified based on necessity (e.g., certain messages could not be reliably coded), other theories, and continuing discussions among coding participants about the relevancy and validity of each category. The final coding scheme reflected six categories based on the problem-solving process (i.e., problem identification, data collection, problem-analysis, redefinition of the problem, intervention development, evaluation/follow-up, irrelevant remarks). Additionally, categories were also developed to reflect the ecological focus of each message (e.g., child-centered, child-family interaction, child-instruction interaction, child-classroom interaction, child-community interaction, general school systemic issues).

Results from Young's (2005) study indicated that PITs engaged in every step of the problem-solving process. Statements that related to problem identification were the most prevalent type of statement (63.2% of all statements) followed by statements on intervention development (16.8% of all statements), evaluation/follow-up (7.2% of all statements), data collection (4.8% of time), problem analysis (4.0%), problem redefinition (2.4%), and off-task (1.6%). Young noted that variability existed across the four schools, but most followed the general pattern of using problem identification statements most often. Although Young stated that the number of problem identification statements made may seem excessive,

correctly identifying the problem has been viewed as critical and thus, the disproportionality may be justified.

In terms of the ecological focus of verbalizations during the PIT process, statements were most often categorized as child-centered (58.6% of all statements). These statements reflected variables that were intrinsic to the child (e.g., medication, diagnosis, classification, academic performance). Statements that reflected how the instructional variables may interact with the individual child (e.g., curriculum issues, modifying assignments) were the second most common (14.6%). The third most common statements were those that considered how family variables may interact with the child (e.g., structure of home life, parenting practices; 13.9%). This was followed by statements relating to child by classroom interaction (e.g., seating, peer interaction; 8.4%), child by community interaction (e.g., community resources) statements (2.3%), and general school issues (e.g., special education laws; 2.2%). Taken together, these results suggest that although teams discuss a variety of ecological variables during meetings, discussions about factors that are intrinsic to the child tend to be the most prevalent during the problem-solving process (Young, 2005).

In sum, studies of verbal processes have helped to clarify the ways in which communication can impact the problem-solving process. What is said during PIT meetings is certainly critical to how PITs are implemented and the outcomes that are achieved. Studies on verbal processes have looked at the content of specific statements in order to better understand communication during PITs (Lee & Jamison, 2003; Young, 2005). Additionally, research has suggested that specific verbalizations can negatively impact the problem-solving

process (Knotek, 2003). Most studies of communication during PITs have exclusively focused on message content, and little research has looked at the process of message exchange as a way of understanding the interpersonal dynamics of PITs. One way to explore this issue is to apply a relational communication perspective. In the following section, the relational communication perspective will be defined and several studies that have utilized this perspective to better understand interpersonal dynamics will be presented.

The Relational Communication Perspective

Background

Prereferral intervention teams are clearly representative of interpersonal interactions between and among people. In order to better understand the process by which PITs accomplish goals and make decisions, it is therefore important to study the nature of these interactions. Kelley and Thibaut (1954) argued that the interpersonal interactions that occur within a group provide the context by which social influence occurs. In this respect, communication, both verbal and nonverbal, provides the medium by which individuals present ideas or discuss courses of action that ultimately help groups to accomplish their tasks.

One way to understand interpersonal interaction and social influence is by applying a relational communication perspective. This perspective focuses on the communication episodes that unfold as a way of understanding the relationships between and among individuals (Rogers & Escudero, 2004). Burgoon and Hale (1984) stated that, “as communication episodes are enacted, the nature of the relationship between participants is

defined” (p. 193). In other words, as messages are exchanged, ideas about how people regard one another and the nature of their relationship are also transmitted. Because of the changing nature of messages throughout the course of a discussion, it is assumed that the relationship between individuals is constantly being redefined, altered, or renegotiated.

Relational communication researchers emphasize that the form of the message and the process of message exchange, as opposed to the message content, dictate the nature of the relationship between individuals. The view from this perspective is that it is “not what we say, but how we say it” that influences our perceptions of others and their perceptions of us. In addition, the relational communication perspective focuses on dyadic or triadic exchange as opposed to individual messages. In turn, when analyzing messages, the focus is placed on paired message sequences instead of single, isolated messages (Rogers & Escudero, 2004). As Rogers and Farace (1975) wrote, “relational variables do not lie within individual interactions, but rather exist between them” (p. 306).

Today’s ideas about relational communication are clearly linked to the anthropological writings of Gregory Bateson. While studying the Iatmul tribe of New Guinea, Bateson theorized that communication was best understood by studying the transactions between individuals as opposed to solely focusing on single messages. In addition, Bateson believed that there were different levels of message meaning. On one level, information is conveyed. This level is known as the “report” level and is best understood as the content or what is said in a message. A second level of meaning is known as the “command” level. At this level, the focus is on the process of message exchange and

the relational meanings that are transmitted in the delivery of the message. It is through this level that the relationship between the communicators is defined (Erchul, Grissom, & Getty, 2008; Rogers & Escudero, 2004).

In addition to proposing different levels of message meaning, Gregory Bateson also developed the theory of *schismogenesis* as a way of describing social interactions among individuals. This theory is based on the ideas of symmetry and complementarity. In interpersonal interactions, *symmetry* exists when communicators use similar styles of communication. An example is when one person transmits assertive message and the other person responds with an assertive message. Bateson proposed that a pattern of competition or rivalry is evident in symmetrical communication transactions. *Complementarity* exists when communicators use very different interactional styles in communicating with one another. An example would consist of a communicator responding submissively to an assertive command by another. Too much complementarity or symmetry in interpersonal interactions can lead to the eventual breakdown of the relationship (i.e., schismogenesis). Combining the communication patterns of symmetry and complementarity is likely to lead to a better outcome for the relationship. In Bateson's terms, this is known as *reciprocity* (Rogers & Escudero, 2004).

Bateson's ideas came to the attention of communication researchers in the 1950s while he was working with researchers at Palo Alto's Mental Research Institute. It was during this time that Watzlawick, Beavin, and Jackson (1967) wrote *The Pragmatics of Human Communication*. This text shifted the beliefs about the function of communication in

establishing and sustaining relationships. Prior to this book, many researchers focused on the intrapsychic aspects of the individual as the crucial variables to understanding social behavior. Conversely, the authors of *Pragmatics* emphasized observing communication transactions in order to understand social relationships.

Watzlawick et al. (1967) proposed five axioms that have become the basis of the relational communication perspective. The first is that each message influences the next message and is influenced by the previous message. Thus, communication is best understood through interpersonal transactions (as opposed to single messages). The second axiom distinguishes between the report and command levels of message meaning. The third axiom suggests that a message's meaning is influenced by the way that it is structured or organized. In a similar sense, messages can be conveyed both digitally (i.e., in syntax) and analogically (i.e., through nonverbal behavior and semantics). The final axiom states that interactions can be classified as being symmetrical or complementary. These axioms form the foundations of current relational communication thinking (Rogers & Escudero, 2004).

Early Relational Coding Schemes

Although the advent of relational communication theory provided a better understanding of human interaction, researchers struggled with ways to observe and objectively analyze communicative behavior. Verbal coding schemes became a popular way to measure relational communication constructs. Sluzki and Beavin (1965) were the first to propose a coding scheme that was based on Bateson's ideas of symmetry and complementarity. In this system, messages are given one of two positions. A *one-up*

position occurs when a speaker tries to control the conversation through messages. In contrast, a *one-down* position occurs when a speaker conveys submission. In addition, messages are coded based on their grammatical form (e.g., question, command) and its metacommunicative or relational properties (e.g., affirmations, agreement, disagreement, acceptance). In the Sluzki and Beavin coding scheme, a message cannot be given a position on the basis of itself alone. On the contrary, a message can only acquire a position or be given meaning based upon the immediately preceding message. Therefore, dyadic analysis as opposed to monadic analysis is the focus of this system (Rogers & Escudero, 2004).

The Sluzki and Beavin system was further refined and elaborated by Mark (1971). He used a three-digit code to provide information about the metacommunicative function (i.e., what the message conveys about the relationship between the speakers) of a statement. The first digit identifies the speaker. The second digit identifies the grammatical form of the message (e.g., question, assertion, instruction). Similar to the Sluzki and Beavin (1965) system, the third digit identifies the relational aspects of the message as a response to the previous message (e.g., agreement, disagreement, extension, disconfirmation). Different combinations of these three-digit codes lead to three possible individual message positions. A message can be considered *one-up*, *one-down*, or *symmetrical*. Although this coding system significantly contributed to the development of a psychometrically sound relational coding scheme, it had several definitional problems and was considered confusing by many researchers (Rogers & Escudero, 2004; Rogers & Farace, 1975).

The Relational Communication Control Coding System

Building upon the Sluzki and Beavin (1965) and Mark (1971) coding schemes, Rogers (1972) developed the relational communication control coding system (RCCCS). The RCCCS has been used in dyadic communication analyses such as in individual therapy and marriage counseling. Because this coding system forms a primary basis for this dissertation research, it will be described in detail below.

The RCCCS was designed so that the unit of analysis is the transaction between individuals. Thus, paired message sequences as opposed to single messages are the focus. In this system, each message is assigned a three digit code, where the first digit identifies the speaker, the second digit identifies the grammatical format of the message (i.e., assertion, question, talk-over, noncomplete, other), and the third digit identifies the response mode or the function of the message in relation to the prior message (i.e., support, non-support, extension, answer, instruction, order, disconfirmation, topic change, self-instruction, other). Based on the three digit codes that are assigned to a message, the message is then assigned a *control code*. A message is considered *one-up* (\uparrow) if it represents an attempt to control the conversation and define the relationship between the speakers. In contrast, a message is considered to be *one-down* (\downarrow) if the speaker submits to the other's attempts to control the conversation. Finally, a message is considered *one-across* (\rightarrow) if it represents no controlling maneuver or an attempt to balance the relationship (Rogers & Farace, 1975).

Following control code assignment, paired message sequences can be analyzed and placed into one of three transactional categories: symmetrical, complementary, or transitory.

Symmetrical transactions occur when each message is within the same control direction. Competitive symmetry occurs when each person displays a one-up message ($\uparrow\uparrow$), submissive symmetry occurs when each person states a one-down message ($\downarrow\downarrow$), and neutralized symmetry takes place when each message is designated a one-across ($\rightarrow\rightarrow$). *Complementary transactions* occur when messages are dissimilar in direction such as when one participant attempts to control the conversation and the other speaker acquiesces or when one provides a submissive message and the other attempts to assert control. Thus, complementarity occurs when the control codes are opposite ($\uparrow\downarrow, \downarrow\uparrow$). Finally, *transitory transactions* occur when at least one of the messages in the paired message sequence is designated a one-across ($\uparrow\rightarrow, \downarrow\rightarrow, \rightarrow\uparrow, \rightarrow\downarrow$). These three transactional categories provide a way of describing and characterizing dyadic interpersonal interactions (Rogers & Escudero, 2004; Rogers & Farace, 1975).

Relational communication research has typically focused on understanding the control differences between two people engaged in a communication exchange. Two indices of control can be derived from the RCCCS to better understand these differences. The first index, called *domineeringness*, is the number of one-up messages displayed by one person without regard to the second speaker's responses to them. It is calculated simply by dividing the number of the speaker's one-up messages by his or her total number of messages. Because relational communication research is typically interested in paired message sequences, however, the RCCCS provides a second index that takes into account the other person's responses to the first speaker's one-up messages. *Dominance* is the frequency that a

speaker's one-up messages are responded to by one-down messages by the other speaker. In other words, dominance is characterized by the number of times that one speaker's attempts to control the conversation are accepted by the other person (Erchul et al., 2008, Rogers & Escudero, 2004).

The Family Relational Communication Control Coding System

As mentioned earlier, the RCCCS has been used to better understand interpersonal interactions in different dyadic situations (e.g., individual psychotherapy, marital communication, physician-patient relationships). To better understand the relational dynamics that unfold in groups of three or more people, Heatherington and Friedlander (1987, 1989) adapted the RCCCS to create the Family Relational Communication Control Coding System (FRCCCS). In essence, the RCCCS was modified to address communication complexities that arise during group conversations. The FRCCCS preserves many of the features (e.g., coding categories) of the RCCCS; however, several modifications were made. First, the first digit code was revised to not only identify the speaker, but also the targets of the message. Targets can be direct (i.e., whom the speaker is directly addressing) and/or indirect (i.e., targets who are present and addressed in the message). Second, the second digit category in the RCCCS was modified to incorporate an additional category (i.e., intercept). The intercept was designed to capture an instance where one speaker interrupts a conversation between two other speakers. Specifically, an intercept occurs when the dialogue between two speakers has been ongoing for at least four speaking turns and a third speaker interjects. Third, the third digit category (i.e., response mode) was

modified to include the disconfirmation of a previous speaker by instead speaking to another individual within the room. In effect, the disconfirmation includes instances of ignoring a previous speaker's statement by engaging in a conversation with another individual. The FRCCCS will be described in more detail in the methodology section of this document (Heatherington & Friedlander, 1987).

Initial Studies Using the FRCCCS

Although its authors note that the FRCCCS can be used in group situations in which there are three or more members, the coding system has been primarily used as a tool to better understand the nature of familial interactions. There is an underlying assumption that family dysfunction is often maintained by maladaptive relational communication patterns and a better understanding of the relational communication in families can lead to innovative therapeutic approaches (Heatherington & Friedlander, 2004). To better understand this phenomenon, several descriptive studies were initially undertaken to identify the relational communication patterns that typify different forms of family therapy (i.e., structural and system). Because of the relevance of the FRCCCS to the current study, three studies will be described below.

In the first family study conducted by Heatherington and Friedlander (1990), the FRCCCS was used to better understand relational communication patterns in marital and family therapy. In addition to understanding communication differences between therapy sessions that involve couples or families, the researchers were also interested in understanding whether male or female family members exhibited different relational

communication patterns. A final hypothesis suggested that patterns of symmetry would be negatively related to a family members' perceptions of the therapeutic alliance. The therapeutic alliance refers to the relationship between the therapist and his or her clients.

In this study, 29 family sessions (16 couples, 13 families) were transcribed and coded using the FRCCCS. In addition, family members over the age of 10 completed a self-report measure of their perceptions of the therapeutic alliance. Descriptive analyses from these sessions showed that overall therapy sessions were most often characterized by a complementarity control pattern with therapists typically using one-ups and family members using one-downs. This pattern characterized both family therapy sessions and couples therapy sessions. Interestingly, therapists of both genders were more likely to engage in this pattern with female clients as opposed to male clients. Although neither complementarity nor symmetry was predictive of therapeutic alliance, the authors suggested that there was a statistical trend that when a family member exhibited more one-ups and the therapist exhibited more one-downs, ratings on a therapeutic alliance scale were less favorable. Taken together, this study suggested that adopting a relational communication perspective is a useful way of understanding family dynamics within therapeutic situations (Heatherington & Friedlander, 1990).

In a second study, the FRCCCS was used to compare the relational patterns between therapists who used structural family therapy approaches and systemic family therapy approaches (Friedlander, Wildman, & Heatherington, 1991). Overall, the authors hypothesized that in both approaches, the sessions would be characterized by complementary

relational control patterns with therapists taking the one-up position and family members taking the one-down position. In addition, the authors speculated that there would be differences in the relational patterns between the two models. More specifically, because systemic therapists were more likely to use question-answer sequences, these sessions would be characterized by more complementarity than in structural family therapy. Likewise, because of the reliance on joining, unbalancing, and restructuring in structural family therapy, the authors hypothesized that structural family therapy would be characterized by more competitive symmetry (i.e., two speakers taking the one-up position) when compared to systemic family therapy (Friedlander et al.).

Overall, the results supported the authors' hypotheses. In both therapeutic approaches, complementary relational control patterns were the most prominent type of pattern, with therapists most often exhibiting one-ups and family members using one-downs. In systemic family therapy, the therapists engaged in more complementarity than structural family therapists. Likewise, structural family therapists were more likely to engage in competitive symmetry with family members. Taken together, the authors concluded that results from this study provide support for using the FRCCCS to better understand theoretical differences between different therapeutic approaches (Friedlander et al., 1991).

In a third study, a case study methodology was employed to better understand relational control patterns in a family undergoing structural family therapy to address anorexia in their daughter (Raymond, Friedlander, Heatherington, Ellis, & Sargent, 1993). Fifteen family sessions that occurred across a three week time period were recorded,

transcribed, and coded using the FRCCCS. Consistent with previous research, the sessions were most often characterized by complementarity, with therapists most often assuming a one-up position and family members assuming a one-down position. Over time, the patterns between the daughter and parents were less likely to be characterized by competitive symmetry. That is, as therapy progressed, there were fewer attempts by the daughter to exert control over her parents and fewer attempts by parents to exert control over the daughter. Interestingly, the authors found an increase in parental patterns of competitive symmetry. The authors reasoned that this finding suggests that parents were struggling for control throughout the therapy sessions. Although the authors noted that the single-case design limits generalizability, this study did suggest that relational patterns may change throughout the course of therapy.

Taken together, these studies illustrate the usefulness of taking a relational perspective to better understand the interpersonal interactions, particularly as they relate to relational control, that occur within family therapy. More specifically, these studies suggest that family therapy is most often characterized by patterns of complementarity, with therapists more often using one-up statements and family members assuming one-down positions. In addition, the RCCCS may be able to be used to distinguish between different therapeutic approaches. Finally, the RCCCS may be a tool that can be used to better understand changing verbal processes across sessions. In the next section, research utilizing the FRCCCS and RCCCS in studies of school consultation will be examined.

Application of the RCCCS and FRCCCS to Studies of School Consultation

RCCCS. As mentioned earlier, most prereferral intervention models are based on some form of consultation whereby a client's needs are addressed indirectly by the interactions between a teacher and other professionals (e.g., school psychologist, special education teacher). In the past two decades, school consultation researchers have applied a relational framework to understand relational control in consultant/consultee interactions. Typically within these studies, the consultant refers to the school psychologist; the consultee, teacher; and the client, student. Much of the research on relational communication in school consultation has utilized verbal coding systems such as the *RCCCS* and *FRCCCS* as a method of understanding consultant interactions, interpersonal influence, and relational dynamics (see Erchul et al., 2008, for a full review of consultation studies that have used verbal coding systems). Although several consultation studies have used verbal coding systems, the Erchul (1987), Erchul et al. (2007), and Erchul et al. (2009) studies will be described below because of their exclusive use of the *RCCCS*. In the following section, research in school-based consultation utilizing the *FRCCCS* will be reviewed.

In the first published study using the *RCCCS* in school-based consultation, Erchul (1987) examined relational control within eight dyads engaged in behavioral consultation (Bergan, 1977, Bergan & Kratochwill, 1990). During behavioral consultation, consultant and consultee progress through four stages, three of which involve face-to-face interviews between the consultant and consultee. During the first interview, called the Problem Identification Interview (PII), the problem is defined and goals are set. In the second

interview (i.e., Problem Analysis Interview or PAI) a plan is developed. Finally, in the final interview, called the Problem Evaluation Interview (PEI), the effectiveness of the treatment plan is evaluated. In the Erchul study, all three behavioral consultation interviews (i.e., PII, PAI, PEI) were coded according to the procedures specified by the RCCCS. Various outcome measures were utilized, including consultee perceptions of consultant effectiveness and consultant perceptions of teacher's willingness to participate in various parts of consultation (e.g., collect baseline data, intervention implementation).

Results from RCCCS analysis indicated that consultants' domineeringness (i.e., attempts to influence) and dominance (i.e., successful influence) scores were significantly higher than those of consultees in all stages of behavioral consultation. In addition, greater teacher domineeringness was associated with consultant perceptions of teachers being less willing to participate in baseline data collection ($r = -.81, p < .02$). Finally, consultant dominance was correlated with higher evaluations from consultees of consultant effectiveness. Although this last finding was not significant at the .05 level, the relationship did approach significance ($r = .65, p < .08$). Erchul concluded that results suggested that behavioral consultants were in control of in all consultant/consultee interactions, teachers with a high level of domineeringness were perceived by consultants as less likely to participate in baseline data collection, and higher consultant dominance was associated with consultee perceptions of greater consultant effectiveness (Erchul, 1987).

In a similar study, conducted by Erchul and colleagues (2007), the RCCCS was used to examine how relational control relates to various consultation outcomes such as treatment

acceptability, treatment effectiveness, treatment integrity, and ratings of student progress-to-target behavior. More specifically, the purpose of the Erchul et al. study was to examine the interpersonal interactions between the consultant and consultee during the PII. The PII was the sole interview used, based on its reliability as a sample of consultant/consultee relational communication behavior (Erchul & Schulte, 1990) and the fact that successful problem identification has been linked to problem solution (Bergan & Tombari, 1976).

In that Erchul (1987) showed that consultant dominance is related to positive outcomes and teacher domineeringness is related to negative outcomes, Erchul et al. (2007) proposed two hypotheses: (a) consultant dominance would be positively related to consultation outcomes, and (b) teacher dominance would be negatively related to consultation outcomes. In order to test these hypotheses, 42 IAI PIIs were transcribed and independently coded by two individuals using the RCCCS. Inter-coder reliability (assessed by using Cohen's kappa) was calculated to be .96 for the second-digit codes (i.e., grammatical form) and .91 for the third-digit code (i.e., response mode) (Erchul, et al.).

Results showed that consultants and teachers displayed about equal amounts of dominance, but almost twice as much domineeringness was exhibited by consultants. A second interesting finding was that the consultant/teacher dominance scores were inversely related. That is, as Person A's successful influence over Person B increased, Person B's successful influence over the Person A decreased. This finding suggests that consultation is best characterized as a leader-follower relationship where one person assumes control of the communication process while the other plays a more subservient follower role. Findings

from analyzing process-outcome data were also discussed. Results showed that teacher dominance during the PII was positively correlated with (a) teacher ratings of treatment effectiveness ($r = .48, p < .02$) and (b) student progress toward targeted outcome ($r = .33, p < .05$), but negatively correlated with consultant observations of treatment integrity ($r = -.32, p < .054$). The authors noted the oddity that high teacher dominance was associated with consultee perceived effectiveness and student progress, but also with consultant observations of low treatment integrity. Therefore, support was not found for the first hypothesis that consultant dominance would be positively related to consultation outcomes. The second hypothesis, that consultee dominance would be negatively related to outcomes, was only partially supported. Although teacher dominance was associated with lower ratings of treatment integrity, it was also associated with higher effectiveness and student progress teacher ratings (Erchul et al., 2007).

Erchul et al. (2007) suggested several possible explanations for the unexpected findings. First, the consultations under examination were academically oriented as opposed to behaviorally oriented, as were many of the cases in the Erchul (1987) study. Second, several teachers involved wanted assistance in behavioral concerns as well as academic concerns. This may have led to consultants' compliance (and consequently higher teacher dominance ratings) with the teacher's requests to address the behavioral problems of the ADHD students. Third, consultants involved in the project were graduate students with somewhat limited professional experience, while the teachers generally had more professional experience. Because prior research had demonstrated that certain characteristics

such as age and experience influence receptivity to consultation (Martin & Curtis, 1980), the authors suggested that it is reasonable that these variables influenced results.

In order to further explore the relationship between consultation processes and outcomes, Erchul et al. (2009) conducted a second study utilizing the problem analysis interviews (PAIs) from the same cases reported in Erchul et al. (2007). This interview was chosen for analyses because of the content that is typically discussed. That is, during the PAI, the consultant must guide the consultee into further analyzing a problem and selecting an intervention that is both feasible and specific for the target problem. The authors noted that a better understanding of interaction during this stage could have implications for improving classroom interventions and addressing treatment integrity. Two hypotheses were proposed based on prior relational communication research. First, it was hypothesized that consultant dominance/domineeringness would be positively related to consultation outcomes. Second, teacher domineeringness/dominance would be negatively related to consultation outcomes. In order to test these hypotheses, 31 PAIs were transcribed and independently coded by two individuals using the RCCCS. Inter-coder reliability (assessed by simple percent agreement) was calculated to be 99.3% for the second-digit codes (i.e., grammatical form) and 94.1% for the third-digit code (i.e., response mode) (Erchul et al.).

Unlike the results from the Erchul et al. (2007) study, results from the follow-up study supported both hypotheses and were consistent with much previous research. More specifically, significant results indicated that during the PAI: (a) teacher domineeringness was negatively correlated with consultant observations of treatment integrity ($r = -.66, p <$

.02), (b) teacher dominance was negatively correlated with teachers' ratings of treatment acceptability ($r = -.63, p < .02$), (c) teacher dominance was negatively correlated with teachers' ratings of intervention effectiveness ($r = -.61, p < .02$), (d) consultant dominance was positively correlated with teacher consultant observations of treatment integrity ($r = .59, p < .02$). Additionally, both dominance and domineeringness were higher for consultants than for teachers (Erchul et al., 2009).

Erchul et al. (2009) suggested two possible explanations for the contradictory findings between the study just described and the Erchul et al. (2007) study. First, given that the interview objectives differ substantially from one another, it is likely that consultant and consultee communication also differs. Second, the structure of the PAI in the current study was protocol-driven and consultants proposed several scientifically based intervention ideas that were either accepted or rejected by consultees. This situation differs from more traditional behavioral consultation approaches that emphasize the joint effort of consultants and consultees in generating intervention ideas. In general, the results from both recent Erchul studies point to the importance of a relational communication perspective and the need to better understand process variables in consultation situations.

FRCCCS. Two consultation studies have also used the FRCCCS to better understand the nature of communication in consultation sessions involving three or more people. In these studies, interviews from conjoint behavioral consultation (CBC) are the primary focus. Based on both behavioral consultation and ecological-systems theory, CBC refers to consultation situations in which parents, teachers, and consultants join together to

address academic and/or behavioral difficulties that a child is experiencing within the classroom and/or in the home setting. According to Sheridan, Clarke, and Burt (2008), “CBC is an indirect method of service delivery that facilitates a collaborative working relationship among the key individuals in a child’s life by establishing linkages between the home and school systems” (p. 171).

Like behavioral consultation, CBC progresses through a series of four problem-solving stages. The first stage, called the Conjoint Needs Identification Interview (CNII), consists of an initial meeting where the consultant works with consultees to identify a target area of concern across both settings. Throughout this interview, the consultant encourages both parties to take equal responsibility in setting the goals and cooperating through the consultation process. In the second interview, the Conjoint Needs Analysis Interview (CNAI), the consultant helps the consultees identify the factors that maintain the problem behavior and generate intervention ideas that can be used across both settings. In the third stage, called plan implementation (PI), the consultees implement the intervention in the home and school settings. Finally, in the fourth stage, a third interview (i.e., Conjoint Plan Evaluation Interview or CPEI) is conducted to determine whether consultation goals were achieved in both home and school settings (Sheridan et al., 2008).

Two published studies have applied the FRCCCS to CBC. In the first, Erchul et al. (1999) examined the relational patterns present in four CBC cases. The purpose of the study was to provide an initial understanding of relational communication, and more specifically, relational control in CBC. Based on prior research, it was hypothesized that (a) consultants

would exhibit higher levels of domineeringness than consultees (i.e., teachers and parents), and (b) consultants would exhibit higher levels of dominance than consultees. For each case, the FRCCCS was used to code messages across all three CBC interviews.

Results indicated that consultants and consultees were similar in their average domineeringness scores across interviews (i.e., $M = .33$ for consultants, $M = .27$ for teachers, $M = .24$ for parents). In other words, attempts to influence the process of consultation were fairly equal among all participants. Further analyses of dyadic interactions revealed that consultants were somewhat higher in their domineeringness scores toward teachers and parents than parents and teachers were toward consultants. Overall, parents were most likely to be the receivers of one-up messages. In comparison to domineeringness scores, consultants tended to be slightly less dominant than consultees (i.e., $M = .35$ for consultants, $M = .41$ for teachers, $M = .41$ for parents), though the dominance scores themselves were restricted in range and suggested that no one person was highly in control of the interview direction. Analyses of dyadic interactions showed that both parents and teachers tended to exhibit more dominance with consultants than consultants did with parents and teachers. Overall, domineeringness patterns tended to be stable across the three interviews, while dominance scores were somewhat more variable, particularly as they related to teacher-to-consultant interactions (Erchul et al., 1999).

In sum, Erchul et al. (1999) concluded that there was some support to suggest that consultants were more directive (i.e., domineering) during the consultation, but little to no support for the notion that consultants were more successful at influencing consultees (i.e.,

dominant) during CBC. In comparison to other studies that focused exclusively on dyadic behavioral consultation between a consultant and teacher, verbal communication in CBC tends to be more symmetrical in nature. Although BC consultants tended to exert similar levels of domineeringness, CBC consultants exerted less relational control when compared to other BC cases. In general, the complexity of the triadic nature of the relationship in CBC may lead to the sharing of influence in the consultation process.

In a second study applying the FRCCCS to CBC, Grissom, Erchul, and Sheridan (2003) examined the relationship between relational communication variables (i.e., dominance and domineeringness) to consultation outcomes. In this study, 20 CBC CNIIs (then called Consultant Problem Identification Interviews or CPIIs) were coded using the FRCCCS. In addition, three outcome measures were utilized. The three outcomes included: (a) consultee perceptions of the acceptability/effectiveness of CBC, (b) consultee perceptions of the effectiveness of CBC consultants, (c) and consultee perceptions of client's goal attainment. The authors hypothesized that there would be: (a) positive relationships between outcome measures and consultant domineeringness/dominance, (b) negative relationships between outcomes and teacher domineeringness/dominance, and (c) negative relationships between outcomes and parent domineeringness/dominance.

Results from analyses failed to produce any significant correlations between consultant domineeringness/dominance and any of the three outcomes. Likewise, no significant relationship was found between teacher dominance/domineeringness and any of the three outcomes. Although no significant relationship was found between parent

domineeringness and any of the outcomes, there was a significant relationship between parent dominance and two outcomes. More specifically, parent-to-consultant dominance was negatively related to teachers' perceptions of acceptability/effectiveness of CBC as an intervention ($r = -.49, p = .01$). In other words, as parents were more successful at influencing consultants, teachers tended to view CBC as less acceptable and effective. In addition, parent dominance toward both consultants and teachers was negatively related to parents' perceptions of goal attainment ($r = -.61, p = .01$ for parent-to-consultant dominance and $r = -.58, p = .01$ for parent-to-teacher dominance) (Grissom et al., 2003).

In sum, several important points may be concluded from this study. First, results did not support the idea that teacher or consultant attempts to influence or the display of successful influence was related to any of the outcome measures. Second, although parental attempts to influence were not related to any outcomes, there was some support for the idea that parental successful influence does affect consultation outcomes. Interestingly, teachers viewed CBC more negatively as parents were more influential in their interactions with consultants. This finding suggests that teachers expect consultants to be more successful at influencing parents during CBC. When this expectation is not met, teachers view the process less favorably. Additionally, when parents were more successful at influencing both teachers and consultants, they perceived goal attainment less favorably. The authors postulated that this pattern may exist because parents view the consultation process as a means of gaining social support from the consultant and consultee as opposed to being a problem-solving process. An additional explanation is that parental dominance may interfere with identifying

the problem. Considering that problem identification has been cited as a critical variable to successful consultation (Bergan & Tombari, 1976), parental dominance may interfere with meeting the needs of consultees and clients (Grissom et al., 2003).

Conclusions from examining consultation from a relational perspective. Several implications may be drawn from examining verbal processes studies of school consultation. First, results from these studies lend support to the idea that consultation can be conceived of as an interpersonal influence process. Although the results presented above are mixed, some of these studies have demonstrated that consultant control over the consultation can lead to positive outcomes and consultee control can lead to negative ones (e.g., Erchul, 1987; Erchul et al., 2009; Grissom et al., 2003). In regard to results pertaining to consultant/consultee domineeringness and dominance, researchers have also suggested that behavioral consultation can be characterized by a “complementary, leader-follower, cooperative relationship” (Erchul et al., 2007, p. 14). Overall, research on verbal processes in school consultation has demonstrated the importance of communication in consultation. Relational communication studies in particular suggest that consultants should pay attention not only to what they say (i.e., report/content), but also to how (i.e., command/process) they communicate their knowledge and beliefs to consultees in both dyadic and group situations.

CHAPTER 2

Statement of the Problem

The term *prereferral intervention* refers to strategies or supports that are delivered to a student experiencing academic and/or behavioral difficulties in the regular education classroom. These interventions are often delivered prior to the student receiving more formal intensive services through special education if it is determined that the strategies used in the regular education classroom were unsuccessful. Prereferral interventions are frequently developed by prereferral intervention teams (PITs). PITs represent an indirect mode of service delivery whereby a group of multidisciplinary professionals (e.g., school psychologists, special education teachers, regular education teachers, administrators) engage in face-to-face interactions to help teachers develop interventions. Today, PITs are widely used by schools as a way to meet the needs of students in the regular education classroom (e.g., Truscott et al., 2005).

Initially developed in the 1980s, PITs are often viewed as the precursor to some modern day educational practices. In particular, PITs are seen as the predecessor of problem-solving teams that are used in many response-to-intervention (RTI) models. Given that PITs are either recommended or required by most states and that similar teams are currently used in RTI models, it is important to understand PIT outcomes and processes. In essence, an understanding of both may help to clarify both “if” and “why” team-based models work or do not work.

In general, research has demonstrated positive outcomes for PITs related to schools (e.g., decrease in special education referral rates), students, and teachers (e.g., Burns & Symington, 2002). Although positive outcomes have been reported, several researchers have suggested that PITs do not always function as intended. In particular, inconsistencies have been noted in the goals cited by PIT members, procedures implemented, and evaluation methods used to determine the effectiveness of the interventions (e.g., Truscott et al., 2005).

To understand more about the implementation of PITs, several studies have investigated PIT process variables. In particular, research has examined the interpersonal dynamics and verbal processes that characterize PIT meetings. This research has generally suggested that team dynamics are enhanced by having: team member diversity, parent participation, administrator support, dialogue based on data and focused on a single concern, exploration of multiple intervention ideas, professionalism during conflict, teacher buy-in, and constant efforts to improve multidisciplinary teams (Etscheidt & Kneisting, 2007). In addition, verbal processes studies have suggested that the content discussed and language used can influence the problem-solving process (e.g., Knotek, 2003).

Although research on the PIT process has helped to clarify the nature of verbal communication and interpersonal dynamics, little research has explored the interaction between the two. One way of investigating this interaction is by applying a relational communication perspective. This perspective emphasizes that people define their relationships with others through interpersonal transactions. Emphasis is placed on the

interactional nature of the message exchange process as opposed to simple message content (Millar & Rogers, 1976).

Relational communication researchers have strived to develop ways to quantify the construct of relational communication. For example, Rogers and Farace (1975) developed the relational communication control coding system (RCCCS), which examines paired message sequences as a means of understanding interactions between individuals. Within this system, emphasis is placed upon understanding interpersonal transactions by assigning three-digit codes to individual messages. These codes can then be utilized to make inferences about relational control in conversations. A modified version of the RCCCS, called the Family Relational Communication Control Coding System (FRCCCS; Heatherington & Friedlander, 1987), allows for the coding of interactions involving three or more people.

The RCCCS and FRCCCS have been extensively used to code both dyadic and group interactions. In particular, these coding systems have been applied to studies of school consultation to better understand relational control between consultants and consultees. Considering that PITs are based on a consultation model, the application of the FRCCCS is a logical extension of this research. Further, a better understanding of the verbal processes that characterize PIT meeting may shed light on the interpersonal dynamics that occur during school-based multidisciplinary team meetings.

The purpose of this research is to examine the relational patterns that characterize PIT meetings. The hypotheses (Hs) and research questions (RQs) of the current study are as follows:

- H1. When compared to the referring teacher, school psychologist(s) will display higher domineeringness across PIT initial meetings.
- H2. When compared to the referring teacher, school psychologist(s) will display higher dominance across PIT initial meetings

Rationale for hypotheses. *Prior research in school consultation has indicated that school psychologists exert more attempts to influence (i.e., domineeringness) and/or successful influence (i.e., dominance) when engaging in dyadic interactions with teachers (Erchul, 1987; Erchul et al., 2007; Erchul et al., 2009).*

- RQ1. What relational patterns (i.e., domineeringness and dominance) will characterize PIT initial meetings for specialists (i.e., reading teachers, speech pathologists, English as a Second Language teachers)?
- RQ2. What relational patterns (i.e., domineeringness and dominance) will characterize initial meetings for regular education teachers?
- RQ3. What relational patterns (i.e., domineeringness and dominance) will characterize initial meetings for special education teachers?

RQ4. Will relational patterns of school psychologists and referring teachers change across meetings such that there is more or less dominance/domineeringness expressed at the first half or second half of each initial PIT?

CHAPTER 3

Method

The data for this study were drawn from a research project at Alfred University in Alfred, New York conducted from fall of 2000 through spring of 2003. For this reason, the methodology chapter is divided into two sections. First, the data collection procedures and sample characteristics from the study at Alfred University will be described. In the second section, the methodology for the current study will be presented.

Alfred University Methodology

General description of study. Beginning in 2000, Alfred University partnered with four rural elementary schools in a multi-year project aimed at training school psychology graduate students to become leaders in coordinating efforts to integrate special education and regular education services. As part of this effort, graduate students were required to take a series of courses aimed at fostering the skills needed to collaborate with multidisciplinary professionals and bring about organizational change. Following this coursework, graduate students participated in a year-long internship at one of the four participating schools. At each of the schools, interns were responsible for implementing practices to either improve existing PITs or develop a new team that followed a problem-solving model. As part of this project, interns participated in all PIT meetings. During the three years of implementation, interns used feedback from previous interns, teacher satisfactions surveys, and other available data to identify areas of need and create action plans to improve each school's PIT.

Setting and participants. The current study utilized data from only two of the four schools (an explanation for this decision is described in the next section). Consequently, only data on these two schools are described here. Those data were collected during the 2002-2003 academic year at school 1 and during the 2001-2002 and 2002-2003 academic years at school 2. School 1 had approximately 580 students enrolled in grades K-6 during the 2002-2003 academic year. School 2, which served students K-5, had approximately 558 students in 2001-2002 and 545 students in 2002-2003. The socioeconomic characteristics of the student population can be inferred by rates of free or reduced lunch. At school 1, 62.8% of students received either free or reduced lunch during the 2002-2003 year. School 2 reported having 40.1% of students receiving either free or reduced lunch during 2001-2002 and 44.7% during 2002-2003. The racial/ethnic origin of most of the students was predominantly White (not Hispanic). At both schools, 98% of the population was White (not Hispanic) (New York State Comprehensive Report Card, 2003).

The PITs at each school served all students within the school's population. Teams at both schools met approximately once a week at which time one or two referrals were discussed. Both behavioral and academic referrals were considered. The PIT compositions tended to vary both between and within schools, but typically included regular education teachers, special education teachers, and specialists (e.g., counselors, school psychologists, reading teachers). At both schools, parents were intermittently invited and rarely attended. At school 1, administrators were not present at meetings while at school 2 the vice principal

regularly attended meetings. PIT meetings were also categorized as either initial (i.e., new referral) or follow-up (i.e., prior referral meeting held) meetings.

Data collection procedures. Each intern was responsible for overseeing the PIT data collection at each school. In general, data regarding students' referral problems, student outcomes, and teacher satisfaction were collected. Relevant to the current research, PIT meetings during the second half of 2001-2002 and throughout the 2002-2003 year were audiotaped and transcribed. Prior to audiotaping meetings, a consent form that detailed how the researcher would use the information was distributed, signed, and collected from each PIT member. Teams were told that participation was voluntary and information would be kept confidential. Team members were also told that they would be allowed to discontinue audiotaping at any time. After PIT meetings were taped, they were transcribed verbatim by school psychology graduate students.

Current Research Study Methodology

Stimulus material. This research utilized 15 PIT initial meetings from two schools. Only meetings from two of the four schools were used in the current study because of the transcript availability, audio tape quality, and accurate PIT member identification. Additionally, only data from initial meetings were considered in this research project. Tapes from initial meetings were chosen because of the likelihood of including more stages of the problem-solving process. For example, in most of these initial meetings, participants were likely to spend time identifying and analyzing the problem and developing interventions to be implemented in the regular education classroom. In contrast, during follow-up meetings,

participants were more likely to spend the majority of time evaluating the outcomes of previously determined interventions and/or making decisions regarding referral for special education testing. Each initial PIT meeting was approximately 30 minutes in length. Information on PIT participants are discussed in more detail in the Results section and in Table C1.

Process variables. The Family Relational Control Coding System (FRCCCS; Heatherington & Friedlander, 1987) was used to obtain measures of relational control for PIT meetings. The FRCCCS can be applied to any interpersonal interaction involving three or more people, and represents a modified version of the RCCCS, which has been used to study relational control in individual therapy, marital therapy, physician-patient interactions, and school consultation. The RCCCS was modified to create the FRCCCS to allow for the coding of group interactions. Thus, the FRCCCS can be used to better understand relational patterns within a group system and among members of various dyads within the group. Since its development, the FRCCCS has been applied to studies of familial interactions during therapy and to studies of consultation involving consultants, parents, and teachers (Erchul et al., 1999; Friedlander et al., 1991; Grissom et al., 2003; Heatherington & Friedlander, 1990; Raymond et. al., 1993).

Within the FRCCCS (Heatherington & Friedlander, 1987), a message (i.e., most often defined as a speaking turn) is initially used as the unit of analysis and receives a three digit code. The first digit (although it may technically be composed of multiple digits) refers to both the speaker and the target of the speaker's communication. Speakers are usually easily

identified. Targets can be either direct and/or indirect. Direct targets are those participants to whom the message is addressed. In other words, this is the person whom the speaker is addressing. Indirect targets are indicated when a speaker attempts to indirectly address other speakers who are physically present during the interaction. Although the speaker may not be engaged in a verbal exchange with that person, the indirect target is clearly referred to in the course of the message. The physical presence of the indirect target is critical because it is only in this situation that the speaker can exert some type of control over the indirect target. In other words, no relational control can be extended over someone who is absent, even if he or she is indirectly mentioned within a message (Heatherington & Friedlander).

The second digit code specifies the grammatical or structural format of the message (e.g., assertion, talkover, question). Thus, this code represents the type of message that is being expressed by the speaker to another participant or participants. Finally, the third digit code refers to the response mode (e.g., support, nonsupport, disconfirmation). This code defines the interpersonal nature of the coding system. That is, the third digit code takes into account the previous message and the response to this message. For this reason, response modes are coded separately for each direct and/or indirect target. Further descriptions of the coding categories are provided in Table 1 (Heatherington & Friedlander, 1987).

Once three digit codes are assigned to individual messages, control codes are determined. Control codes are designated based on the combination of second and third digit codes. Based on a set of rules, messages are considered one-up, one-down, or one-across (see Figure 1). One-up messages indicate an attempt to control, one-down messages indicate

Table 1

Description of Coding Categories from Heatherington and Friedlander's (1987) FRCCCS

Coding Category	Definition
<i>First Digit: Speaker</i>	
Direct Target	Specifies whom the speaker is directly addressing
Indirect Target	Specifies a physically present participant who is referred to within the message
<i>Second Digit: Message Format</i>	
Assertion	A declarative or imperative statement
Open Question	A statement in the interrogative form
Talkover	Any interruption while another person is talking
Noncomplete	A phrase or incomplete statement
Closed Question	A direct question that calls for a specific response (e.g., yes/no)
Intercept	An interruption of a dyadic conversation by a third person
Indistinguishable	Messages that are inaudible or unintelligible
<i>Third Digit: Metacommunicational</i>	
Function/Response Mode	
Support	A message that offers or seeks agreement, acceptance, or approval

Table 1 (continued).

Nonsupport	A message that conveys disagreement, resistance, or rejection
Extension	A message that continues the flow or theme of a prior message
Answer to an Open Question	A reply to an open question that conveys knowledge, firmness, opinion, or substance
Instruction	A qualified suggestion (i.e., a softened order)
Order	A statement of command usually in the imperative form
Disconfirmation	A response that disregards previous requests
Topic Change	A message that lacks continuity with previous messages
Answer to a Closed Question	An straightforward answer to a closed question
Indistinguishable	Messages that are inaudible or unintelligible

Response Mode	Format					
	Assertion	Closed Question	Open Question	Talkover	Incomplete	Intercept
Support	↓	↓	↓	↓	↓	↓
Nonsupport	↑	↑	↑	↑	↑	↑
Extension	→	↑	↑ ^a	↑	→	↑
Answer to Open Question	↑	↑	↑	↑	↑	↑
Answer to Closed Question	↓	↑	↑	↑	↓	↑
Instruction	↑	↑	↑	↑	↑	↑
Order	↑	NA	NA	↑	↑	↑
Disconfirmation	↑	↑	↑	↑	↑	NA
Topic Change	↑	↑	↑	↑	↑	↑

Note. Table was adapted from Heatherington & Friedlander (1987). NA = not applicable because this is not a possible combination.

^a Modified from original coding system in current research study

Figure 1. Message Types and Control Codes Assignments of Heatherington and Friedlander (1987) Family Relational Communication Control Coding System.

the acceptance of another's control, and one-across messages are considered neutral. Messages are then paired to create transactional patterns. Three types of patterns categorize transactions: symmetrical (i.e., where messages have directionally matching codes), complementary (i.e., where they have directionally opposite codes), or transitory (where at least one code is one-across) (Heatherington & Friedlander, 1987).

Following the assignment of three digit codes, control codes, and transactional patterns, two measures of relational control can be calculated. The first relational control variable, *domineeringness*, is operationally defined as the number of a given speaker's one-up messages. Thus, it is calculated by dividing the number of one-up messages by a given speaker by the total number of the speaker's messages. The second relational control variable, *dominance*, is operationally defined as the frequency that a speaker's one-up messages are responded to by one-down messages by the other speaker. Therefore, it is calculated as a proportion of the total number of one-up messages by speaker A directly followed by one-down messages by speaker B. Dominance and domineeringness scores can range from 0 to 1 with lower numbers indicating lower dominance or domineeringness (Heatherington & Friedlander, 1987).

Reliability and validity of the FRCCCS. The reliability and validity of the FRCCCS has been documented in earlier studies of family therapy. Across these studies, Cohen's kappa coefficient (1960) has been used to assess intercoder reliability. In the research using the FRCCCS in family therapy, Cohen's kappa has ranged from .93 to .96 for first digit codes, .84 for second digit codes and .66-.78 for third digit codes (Friedlander et al., 1991;

Heatherington & Friedlander, 1990; Raymond et al., 1993). Further, more recent studies utilizing the FRCCCS in conjoint behavioral consultation have demonstrated slightly higher intercoder reliability with kappa ranging from .92-.94 ($M = .93$) for second digit codes and .84-.91 ($M = .88$) for third digit codes (Erchul et al., 1999; Grissom et al., 2003)

Although multiple studies have provided evidence for the validity of the original RCCCS (e.g., Ayers & Miura, 1981; Bohn & Bock, 1980; Heatherington, 1988; O'Donnell-Trujillo, 1981, Tracy & Miars, 1986), Heatherington and Friedlander (1987) understandably thought that the revisions to the coding system led to a need to provide evidence for the validity of the FRCCCS. Gaul, Simon, Friedlander, Heatherington, and Cutler (1991) assessed the validity of the FRCCCS by comparing therapists' perceptions of control dynamics within family therapy sessions with FRCCCS codes. Thirty-five trained therapists viewed videotapes of simulated therapy sessions. The participants were instructed to code verbal statements as one-up, one-down, and one-across. The ratings from the participants were compared to FRCCCS codes and results indicated correspondence between therapists' perceptions and FRCCCS codes. More specifically, therapists' codes and actual codes matched 72.5% of the time, providing some evidence for the criterion-related validity of the coding system.

PIT Meeting Evaluation Coding Sheet. A coding sheet (see Appendix A) was developed to evaluate the fidelity of the problem-solving process used within each PIT. This outcome sheet is similar to one developed by Telzrow, McNamara, and Hollinger (2000), but was developed independently and is better suited to the needs of the present study.

Particularly similar to Telzrow et al.'s instrument was the inclusion of items measuring the following: behavioral definition of target behavior, systematic step-by-step intervention plan, and data to show the student's response to intervention. The items created reflect the basic requirements of problem solving as outlined by Bergan and Kratochwill (1990). The items included ratings of: (a) whether the problem was identified, (b) whether ideas of intervention were brainstormed, (c) whether a plan was generated, (d) how many intervention ideas were generated, (e) the quality of the plan, and (f) whether data collection procedures were discussed. Additionally, information on the type of problem behavior (i.e., academic or behavioral) was collected for descriptive purposes. Based on these items, a total score was calculated with higher ratings indicating better adherence to the problem-solving process. More information on the coding of these variables will be presented in the Results section.

Procedure. Prior to coding, the study's transcripts were prepared according to the guidelines set by Heatherington and Friedlander (1987) so that the coding system could be effectively utilized. To achieve this goal, all participants in PIT meetings were identified by both name and role (e.g., school psychologist, administrator, special education teacher). Second, two graduate-level coders were trained in the development and application of the RCCCS (Rogers & Farace, 1975) and FRCCCS (Heatherington & Friedlander). This training included readings pertaining to both the theoretical and application aspects of the coding system, practice coding, and coding discussions. Approximately 30 hours were devoted to coder training. Practice coding occurred both independently and during group meetings. These practice coding sessions occurred until a pre-determined acceptable levels

of reliability for both the second and third digit codes were achieved. Based on prior research utilizing the FRCCCS in CBC studies, percent agreement levels needed to begin actual coding was set at 85% for the second digit code and 75% for the third digit code (Grissom et al., 2003). Percent agreement was set lower for the third digit code because there were nine possible codes (as opposed to six for the second digit code), and thus high percent agreement is more difficult to obtain. In total, four practice transcripts were coded and percent agreement was calculated on the final three independently coded practice transcripts. Based on coding discussions, several decision rules were developed and are listed in Appendix B.

Prior to coding actual PIT meetings, the transcripts were prepared by the principal investigator and included identifying the speakers, direct targets, indirect targets, and talkovers, following procedures specified by Heatherington and Friedlander (1987). As described in more detail below, these codes were assigned a priori to enhance reliability. Each coder was instructed to code approximately 61% of the total messages (i.e., 8-10 meetings) and completed the PIT Meeting Evaluation Coding Sheet for all 15 meetings. Once coding began, coders assigned codes to each message within the PIT meetings. The coding proceeded by following four steps. First, coders listened to meetings and followed along with transcripts to assign each message a second and third digit code based on the coding manual and additional decision rules developed during practice coding. Second, following the assignment of a three digit code to each message, control codes were assigned by referring to the matrix presented in Figure 1. Third, messages were linked following a

series of rules specified by the coding manual and several modifications (described below and listed in Appendix B). Fourth, dominance and domineeringness scores were calculated. Standardized forms and spreadsheets were developed to facilitate steps two, three, and four. Finally, coders independently evaluated the meeting utilizing the PIT Meeting Evaluation Coding Sheet.

In the current study, four modifications were made to the FRCCCS based on prior research utilizing the FRCCCS in school consultation situations (Erchul et al., 1999; Grissom et al., 2003). First, direct/indirect targets were specified prior to coding. This action was taken because of the difficulty in recognizing voices within meetings and to ensure adequate reliability due to the large number of PIT meeting participants. Second, the FRCCCS category of “unsuccessful talkover” was not used. This category was not specified in the original RCCCS coding system (Rogers & Farace, 1975) and the quality of audio recordings made it hard to determine whether a talkover was successful. A third change was to assign an open question-extension a one-up code rather than one-down code. Prior research indicated the use of questions to control conversations and thus, assigning a one-up code was thought to clarify the nature of interpersonal control in PIT meetings (Bergan & Kratochwill, 1990; Hughes, Erchul, Yoon, Jackson, & Hennington, 1997; Martens, Erchul, & Witt., 1992). Finally, when calculating dominance scores, no more than four prior messages were considered. This limit was not imposed on the original FRCCCS, but was believed to be a necessary step when considering the coding of the complex dynamics of a group situation.

Additionally, this procedure was used when pairing messages in earlier FRCCCS consultation studies involving complex group interaction (Erchul et al.; Grissom et al.).

Several other modifications, not used in prior research studies, were made because of the complexity of coding verbal interactions in larger groups. Messages were linked contiguously as specified by the FRCCCS manual, and according to the manual specifications, only those messages that involve the same speaker/direct targets are to be linked. Three exceptions were made to this rule in this study because of the relatively large groups involved. First, speaker messages that were directed to the group were linked with the message that directly followed. Thus, in some cases, messages directed toward the group were paired with the first responder's message (e.g., if a speaker addressed a question to the entire group and one person responded). Second, a talkover was always paired with the message that preceded it regardless of the direct target of the talkover message. For example, if the school psychologist was interrupted by the special education teacher who was talking to the referring teacher, the school psychologist's and special education teacher's messages would be linked. This decision was based on the knowledge that interruptions/talkovers carry relational meaning, particularly to the speaker who was interrupted/talked-over. Third, messages that are minimal encouragers (e.g., "umm-hmm, yeah") are considered messages of support by the FRCCCS. These messages were always linked with the preceding message regardless of direct targets because they convey support to the speaker. Thus, even if the speaker was not directing the message to the person encouraging the speaker, these messages were linked. For example, if the referring teacher was talking to the special education

teacher and the specialist interjected a message of support, the specialist's message would be linked with the referring teacher's message.

CHAPTER 4

Results

Overview

The Results chapter is organized into five sections. First, intercoder reliability for FRCCCS codes and the PIT Meeting Evaluation Coding Sheet will be discussed. Second, a general description of meetings and meeting participants (e.g., professional roles present, school level PIT characteristics) will be described. Third, Research Questions 1, 2, and 3 will be addressed by looking at analyses conducted at the individual (e.g., special education teacher), dyadic (e.g., special education teacher to specialist), and group levels (e.g., symmetrical, complementary, transitory transactions). Fourth, Hypotheses 1 and 2 and Research Question 4 will be addressed by presenting the results of several inferential statistical analyses. Finally, supplementary correlational analyses will be presented to investigate the relationship between dominance/domineeringness and ratings on the PIT Meeting Evaluation Coding Sheet.

Reliability

FRCCCS. Intercoder reliability was calculated for second digit and third digit codes from study transcripts using Cohen's kappa (1960). Kappa is chance corrected and is therefore considered a conservative measure of intercoder agreement. Kappa corrects for chance agreement by taking into account the base rate of each coding category and thus the propensity of coders to agree at random. Kappa was calculated on three randomly chosen transcripts, approximately 22% of the total coded messages. This procedure has been used in

prior research to determine intercoder reliability when using the RCCCS and FRCCCS (Erchul et al., 2007; Heatherington & Friedlander, 1990). Kappa coefficients ranged from .959 - .964 ($M = .96$) for message format categories (i.e., second digit) and .89 to .95 ($M = .92$) for response mode (i.e., third digit) categories. The relatively few coding discrepancies were generally resolved through discussions, a list of rules generated during practice coding (see Appendix B), and decision trees available in the FRCCCS manual.

PIT Meeting Evaluation Coding Sheet. In order to assess intercoder reliability for the PIT Meeting Evaluation Coding Sheet (completed for each coder across all 15 interviews) simple percent agreement was used for each of the 7 questions found on the form. Simple percent agreement ranged from 80% to 100% ($M = 91.16$, $SD = 7.63$; see Table 2 for intercoder agreement for each question). The relatively few discrepancies were resolved by an alternation procedure where either coder 1's or coder 2's rating was used on a question and then the other coder's rating was selected to resolve the next coding disagreement. This procedure continued until all discrepancies were resolved.

General Description of Meetings and Meeting Participants

Fifteen PIT meetings, 11 from School A and 4 from School B, were coded using the FRCCCS and PIT Meeting Evaluation Coding Sheet. To facilitate FRCCCS coding and data analysis procedures, PIT participants were categorized into specific roles based on profession. These roles included: school psychologist (including school psychologist

Table 2

Intercoder Agreement for the PIT Meeting Evaluation Coding Sheet by Question (N=15)

Question	Intercoder Percent Agreement
1. Was one target problem behavior identified and described in specific, objective terms?	80.00
2. What was the type of problem behavior identified?	93.33
3. Were ideas about possible interventions brainstormed?	93.33
4. Was a plan (i.e., at least one intervention idea) generated?	100.00
5. How many intervention ideas were brainstormed?	85.71
6. Rate the quality of the plan (1 = very general, 4 = very specific).	85.71
7. Did the team discuss data collection procedures?	100.00

interns), referring teacher, special education teacher, specialist (i.e., reading teacher, counselor, speech pathologists), regular education teacher, administrator, and parents. Additionally, a code was devised for “group” to represent messages that were sent to the group as a whole.

At times, there were more than 2 school psychologists (13/15 meetings), referring teachers (2/15 meetings), special education teachers (1/15 meetings), specialists (2/15

meetings), and regular education teachers (12/15 meetings). In each meeting, either the special education teacher or the school psychologist assumed the role of meeting facilitator. The special education teacher was the meeting facilitator in 12/15 meetings, while the school psychologist was the facilitator in 3/15 meetings. The role of meeting facilitator varied across and within schools such that a school psychologist and special education teacher were facilitators at both school A and school B. Appendix C, Table C1 contains a more detailed description of the members present at each PIT meeting included in the study.

To facilitate further data interpretation, two sets of tables are presented, one located within the narrative text and a second, parallel set located in Appendix C. The first set categorizes the various speakers into the seven roles described above without regard to the meeting facilitator role. Thus, the school psychologist who also assumed the role of meeting facilitator would be categorized into the single role of school psychologist. In the second set of tables, found in Appendix C, the role of meeting facilitator is also included. In the above example, the school psychologist would be categorized as the meeting facilitator. The first set is considered to be the primary set of analyses because: (a) it involves more cases from which to draw conclusions for certain professional roles (i.e., 15 versus 12 school psychologists because for 3 meetings the school psychologist assumed the role of meeting facilitator, and 14 versus 2 special education teachers because the special education teacher was the meeting facilitator in 12 meetings and was not present for 1 meeting); and (b) the data are somewhat similar, as will be seen later, across the primary variables

dominance/domineeringness regardless of whether the special education teacher or school psychologist assumed the role of meeting facilitator.

PIT Meeting Relational Characteristics to Address Research Questions 1, 2, and 3

Overview. Because of the type of data collected and the exploratory nature of the study, the analyses for Research Questions 1 through 3 were primarily descriptive in nature. Heatherington and Friedlander (1989) noted that analyses of the data obtained from the FRCCCS can occur at a variety of different levels, most notably at the individual, dyadic, and group level. The following analyses were conducted to better understand relational communication characteristics of regular education teachers (Research Question 1), specialists (Research Question 2), and special education teachers (Research Question 3). This discussion will begin by presenting general characteristics and conclude by addressing domineeringness/dominance at the individual and dyadic level.

Talk time. First, the number of messages spoken by each role was determined. This number was also divided by the total number of messages across all meetings to obtain a relative measure of talk time in relation to other speakers within the group. Means and standard deviations were also obtained to understand the relative time of talk of each role across all meetings. These results are presented in Table 3 (omitting the meeting facilitator role, as previously explained). As seen in that table, school psychologists, referring teachers, special education teachers, specialists, and regular education teachers were active participants across the various meetings. Each of these professional's messages comprised over 10% of the overall messages.

Table 3

*Number of Direct Messages Spoken by Each Role Relative to Total Direct Messages
Delivered across Meetings, Not Separating out Meeting Facilitator*

Speaker Role	Total Number of Direct Messages	Percent of Overall Total Messages	<i>M</i>	<i>SD</i>
School Psychologist	1316	22.59	87.73	32.51
Referring Teacher	1645	28.24	109.67	51.03
Special Education Teacher	1158	19.88	77.20	44.30
Specialist	802	13.77	53.47	39.47
Regular Education Teacher	659	11.31	43.93	25.87
Administrator	57	0.98	3.80	8.67
Parent	189	3.24	12.60	35.45

N = 5826 Messages

Results were somewhat different when accounting for meeting facilitator, presented in Table C2, because of the lowered total number of professionals comprising the role (i.e., within a meeting the school psychologist was categorized as the meeting facilitator as opposed to the school psychologist and thus no school psychologist was considered “present” at that meeting). The professional roles overall talk times were as follows (presented in rank order): the referring teacher, special education teacher as the meeting facilitator, school psychologist, specialist, and regular education teacher. Each of these professional’s messages comprised

over 10% of the overall messages. Because parents and administrators were rarely present in the PIT meetings and thus had a low base rate of behavior (i.e., messages), they are omitted from most analyses that follow.

Grammatical format and response mode. Second, analyses were conducted to better understand the types of messages spoken by professional role. Proportions for both second (i.e., grammatical format) and third digit (i.e., response mode) codes were obtained in relation to total messages emitted by the role. Means and standard deviations were also calculated. The results of these analyses are presented in Tables 4 through 7. As seen in Tables 4 and 5, the grammatical format that characterized most messages was assertion, followed by closed question, talkover, and open question. This pattern also appeared to be consistent regardless of meeting facilitator role. As can be seen in Tables C3 and C4, assertions were most characteristic, followed by closed question, talkover, and open question. For response mode, in Tables C5 and C6, similar patterns were also found (i.e., extensions were most frequent, followed by support, topic change, and answer to open/closed question). As may be expected, the rate of topic changes (11% of third digit codes for school psychologists as meeting facilitators, 18% of third digit codes for special education teachers) was relatively high for meeting facilitators compared to other roles.

Control codes. Control codes were tabulated to describe the number of one-up, one-down, and one-across messages that were sent and received by each person within each role. A control code matrix is presented in Table 8, which represents all messages sent and

Table 4

Proportion of Each 2nd Digit Code (i.e., Grammatical Format) Spoken by Each Role across All PIT Meetings in Relation to Total Direct Messages Emitted by that Role, Not Separating out Meeting Facilitator

Speaker Role ^a	Assertion	Open Question	Talkover	Incomplete	Closed Question	<i>N</i>
SP	.74	.03	.08	.01	.14	1316
RT	.86	.00	.08	.01	.05	1645
Special Ed	.64	.04	.09	.00	.22	1158
Specialist	.76	.01	.11	.00	.11	802
Reg Ed	.69	.01	.13	.00	.17	659
Admin	.77	.00	.05	.00	.18	57
Parent	.90	.01	.07	.01	.02	189

^aSP = School Psychologist; RT = Referring Teacher; Special Ed = Special Education

Teacher; Reg Ed= Regular Education Teacher; Admin = Administrator.

Table 5

Means and Standard Deviations of 2nd Digit Codes (i.e., Grammatical Format) Spoken by Each Role Across All Meetings, Not Separating Out Meeting Facilitator

Speaker	Assertion	Open	Talkover	Incomplete	Closed
Role ^a		Question			Question
SP	65.13 (27.32)	2.67 (2.89)	6.93 (4.64)	0.67 (0.90)	12.33 (8.30)
RT	94.60 (44.87)	0.13 (0.35)	9.00 (4.83)	0.87 (1.25)	5.07 (3.67)
Special Ed	53.00 (27.43)	3.71 (2.73)	7.50 (5.27)	0.23 (0.61)	18.21 (3.61)
Specialist	47.08 (29.65)	0.85 (1.25)	6.77 (4.32)	0.23 (0.44)	6.69 (3.90)
Reg Ed	30.20 (19.61)	0.60 (0.74)	5.73 (4.04)	0.07 (0.26)	7.33 (3.87)
Admin	14.67 (8.33)	0.00 (0.00)	1.00 (1.00)	0.00 (0.00)	3.33 (2.31)
Parent	85.00 (43.84)	0.50 (0.71)	6.50 (0.71)	0.50 (0.71)	2.00 (2.83)

^aSP = School Psychologist; RT = Referring Teacher; Special Ed = Special Education

Teacher; Reg Ed= Regular Education Teacher; Admin = Administrator.

Table 6

Proportion of Each 3rd Digit Code (i.e., Grammatical Format) Spoken by Each Role Across All PIT Meetings in Relation to Total Direct Messages Emitted by that Role, Not Separating out Meeting Facilitator

Speaker	1 ^b	2	3	4	5	6	7	8	9	0	N
Role ^a											
SP	.23	.01	.54	.01	.03	.00	.00	.09	.08	.01	1316
RT	.21	.01	.54	.02	.01	.00	.00	.03	.18	.01	1645
Special Ed	.30	.01	.44	.00	.03	.00	.00	.17	.06	.01	1158
Specialist	.18	.00	.62	.01	.03	.00	.00	.04	.10	.01	802
Reg Ed	.16	.02	.62	.02	.03	.00	.00	.07	.09	.00	659
Admin	.28	.05	.56	.00	.04	.00	.00	.05	.02	.00	57
Parent	.40	.01	.42	.01	.00	.00	.00	.03	.13	.01	189

^aSP = School Psychologist; RT = Referring Teacher; Special Ed = Special Education

Teacher; Reg Ed= Regular Education Teacher; Admin = Administrator. ^b1=Support;

2=Nonsupport; 3=Extension; 4=Answer to Open Question; 5=Instruction; 6=Order;

7=Disconfirmation; 8=Topic Change; 9=Answer to Closed Question; 0=Indistinguishable.

Table 7

Means and Standard Deviation of Each 3rd Digit Code (i.e., Grammatical Format) Spoken by Each Role across all PIT Meetings in Relation to Total Direct Messages Emitted by that Role, Not Separating out Meeting Facilitator

Speaker Role ^a	1 ^b	2	3	4	5	6	7	8	9	0
SP										
<i>M</i>	20.60	0.87	47.13	0.53	2.53	0.00	0.07	8.20	7.13	0.67
<i>SD</i>	13.37	0.92	18.57	0.74	2.83	0.00	0.26	4.26	3.74	0.90
RT										
<i>M</i>	23.27	0.93	59.07	2.00	0.73	0.00	0.00	3.47	19.33	0.87
<i>SD</i>	14.78	1.53	31.70	2.24	0.80	0.00	0.00	2.36	9.39	1.25
Special Ed										
<i>M</i>	23.00	0.40	33.67	0.13	2.00	0.00	0.00	13.07	4.53	0.40
<i>SD</i>	15.98	0.51	19.42	0.35	1.85	0.00	0.00	8.24	3.50	0.63
Specialist										
<i>M</i>	9.73	0.20	33.13	0.47	1.53	0.00	0.13	2.33	5.60	0.33
<i>SD</i>	10.12	0.41	23.10	0.92	1.60	0.00	0.52	2.94	6.16	0.62
Reg Ed										
<i>M</i>	6.93	0.73	27.13	0.67	1.27	0.13	0.00	3.00	3.93	0.13

Table 7 (continued).

<i>SD</i>	4.82	0.70	16.02	1.11	1.87	0.52	0.00	2.04	3.58	0.35
Admin										
<i>M</i>	1.07	0.20	2.13	0.00	0.13	0.00	0.00	0.20	0.07	0.00
<i>SD</i>	2.49	0.77	4.64	0.00	0.52	0.00	0.00	0.56	0.26	0.00
Parent										
<i>M</i>	5.07	0.07	5.33	0.07	0.00	0.00	0.00	0.40	1.60	0.07
<i>SD</i>	14.12	0.26	16.95	0.26	0.00	0.00	0.00	1.30	4.79	0.26

^aSP = School Psychologist; RT = Referring Teacher; Special Ed = Special Education

Teacher; Reg Ed= Regular Education Teacher; Admin = Administrator. ^b1=Support;

2=Nonsupport; 3=Extension; 4=Answer to Open Question; 5=Instruction; 6=Order;

7=Disconfirmation; 8=Topic Change; 9=Answer to Closed Question; 0=Indistinguishable.

Table 8

Mean Proportion of Messages Sent and Received by Dyad Across PIT Meetings, Not Separating out Meeting Facilitator^a

Speaker Role ^a	Message Recipient Role								Sender Total
	SP	RT	SE	SPT	RE	AD	PT	GP	
School Psychologist									
One-up	.01	.14	.05	.04	.02	.00	.02	.05	.33
One-down	.01	.16	.05	.05	.02	.00	.02	.00	.31
One-across	.01	.15	.05	.04	.03	.00	.04	.04	.36
Referring Teacher									
One-up	.06	.02	.04	.02	.02	.00	.00	.02	.19
One-down	.11	.01	.10	.06	.06	.01	.01	.00	.36
One-across	.15	.01	.10	.04	.05	.01	.01	.08	.45
Special Education Teacher									
One-up	.07	.16	.00	.03	.04	.00	.01	.10	.41
One-down	.10	.14	.00	.05	.06	.00	.00	.01	.35
One-across	.04	.11	.00	.03	.02	.00	.00	.04	.23
Specialist									
One-up	.05	.12	.04	.02	.03	.00	.01	.04	.31

Table 8 (continued).

One-down	.08	.08	.05	.02	.03	.00	.01	.00	.27
One-across	.10	.15	.06	.02	.04	.00	.02	.04	.42
Regular Education Teacher									
One-up	.05	.14	.06	.04	.01	.00	.03	.03	.36
One-down	.05	.09	.04	.03	.01	.00	.01	.00	.24
One-across	.08	.16	.06	.04	.01	.00	.01	.04	.40

Note. Messages sent by the administrator and parent are excluded because of the low base rate of their sent messages.

^a SP = School Psychologist, RT = Referring Teacher, Special Ed = Special Education

Teacher, Reg Ed= Regular Education Teacher, Admin = Administrator, MF=Meeting

Facilitator. ^bExcludes instances of where participant assumed the role of meeting facilitator.

received across all PIT meetings. Along with presenting dyadic information, this matrix also represents the unidirectional flow of relational communication at the individual level (i.e., Sender Total column). Because this information is both dyadic and individual in nature, messages sent to administrators, parents, and the group in general were included to provide a broader picture of the relational behavior within PIT meetings. As seen in the table, 36% of all messages sent by school psychologists to other PIT roles were one-across; 33%, one-up, and 31%, one-down. For referring teachers, 45% were one-across; 36%, one-down; and 19%, one-up. Forty-one percent of special education teachers' messages were one-up, 35%,

one-down; and 23%, one-across. For specialists, 42% were one-across; 31% were one-up; and 27%, one-down. Regular education teachers used one-across messages 40% of the time, 35% of the messages were one-up, and 25% were one-down.

Table C7 accounts for instances when the school psychologist and special education teachers were meeting facilitators. In these instances, the school psychologist (excluding instances where she was the meeting facilitator) had 39% one-across, 34% one-up, and 27% one-down messages. The special education teacher had 36% one-up, 34% one-down, and 30% one-across messages. When the school psychologist assumed the role of meeting facilitator, one-downs occurred most often (42%), followed by one-ups (30%), and one across (28%) messages. Finally, when the special education teacher was the meeting facilitator, one-ups (42%) occurred most often, followed by one-down (35%) and one-across messages (23%).

Group characteristics. Given that PITs represent interactions between and among many people, analyses at the group level are clearly important to understand the various relational patterns that occur within PITs. At this level, the frequency of each relational pattern (i.e., symmetrical, complementary, transitory) was calculated. As mentioned earlier, *symmetrical transactions* consist of paired messages that have the same control direction and can be further classified into competitive symmetry (i.e., message pairs that are both one-up), submissive symmetry (i.e., message pairs that are both one-down), and neutralized symmetry (i.e., message pairs that are both one-across). *Complementary transactions* occur when paired messages are opposite in control codes (e.g., one-up/one-down message pair or one-

down/one-up message pair). Finally, *transitory transactions* occur when at least one of the messages in the paired message sequence is designated a one-across. Although these terms denote classifications at the dyadic level, they can also be extended to describe the general relational patterns of groups (Heatherington & Friedlander, 1990). To obtain this information, the frequency of each type of transaction was calculated for each meeting. As can be seen in Table 9, transitory transactions tended to occur most often (40.97% of interactions). The rates of complementary (21.32% of interactions) and symmetrical (23.62%) interactions were similar. Of the symmetrical interactions, competitive symmetry (7.11%) and neutralized symmetry (7.01%) were approximately equal, while the rates of submissive symmetrical interactions (4.98% of interactions) tended to be somewhat less.

Domineeringness. Overall domineeringness scores were calculated for each role. As mentioned earlier, domineeringness reflects an individual's attempts to structure or define the relationship and is calculated by dividing Role A's total number of one-up messages by Role A's total messages. Means and standard deviations for domineeringness for each role were calculated and examined to explore relational patterns for each role. The results of this analysis are presented in Table 10. The overall average score for school psychologists was .34, .18 for the referring teacher, .43 for the special education teacher, .30 for the specialist, and .39 for the regular education teacher. Overall, most domineeringness scores were fairly consistent, with the exception of the referring teacher being relatively lower when compared to other PIT members. When considering the role of the meeting facilitator,

Table 9

Group-level Relational Characteristics across PIT meetings

Transaction Type	Frequency	<i>M</i>	<i>SD</i>
Symmetrical	897 (23.62%)	59.80	20.17
Competitive Symmetry	334 (7.11%)	22.27	10.40
Submissive Symmetry	234 (4.98%)	15.60	10.87
Neutralized Symmetry	329 (7.01%)	21.93	6.88
Transitory	1900 (40.97%)	126.67	46.68
Complementary	1001 (21.32%)	66.73	22.88

Table 10

Overall Mean Domineeringness for Role across PIT Meetings, Not Separating out Meeting Facilitator

Role	<i>M</i>	<i>SD</i>	<i>N</i> ^a
School Psychologist	.34	.12	15
Referring Teacher	.18	.07	15
Special Education Teacher	.43	.06	14
Specialist	.30	.11	13
Regular Education Teacher	.39	.08	15

^a Number of Meetings.

domineeringness scores were fairly similar (see Table C8). When omitting instances where a specific professional role was categorized as meeting facilitator, the school psychologists' domineeringness was .35 and the special education teachers' domineeringness was .37. Additionally, the school psychologists' domineeringness as the meeting facilitator was .28 while the special education teachers' domineeringness as the meeting facilitator was .44. Though only based on three meetings, the school psychologist as the meeting facilitators' domineeringness tended to be somewhat lower than the special education teacher as the meeting facilitator, though the meaningfulness of these differences is unknown.

Domineeringness scores for dyadic interactions among the major roles were also calculated. These results can be found in Table 11. One trend apparent in the data was the high rate of domineeringness directed toward the referring teacher. In most cases, dyadic domineeringness was highest when a professional was interacting with the referring teacher. Additionally, the referring teacher tended to have relatively lower rates of domineeringness when compared to other roles. In this respect, attempts to direct the conversation tended to be highest in interactions with the referring teacher and the referring teacher was relatively less directive in dyadic interactions with PIT members when compared to other roles. It should also be noted that there was some variability in PIT dyadic interactions across meetings as evidenced by the standard deviations in Table 11. These patterns were consistent when considering the role of meeting facilitator. The results from dyadic domineeringness analyses including the role of meeting facilitator are presented in Table C9. A similar pattern of high domineeringness when interacting with the referring teacher was found, though this did not hold true for the school psychologist as the meeting facilitator. Again, the generalizability of the latter pattern is difficult to discern because it is based on only three meetings where the school psychologist assumed the role of the meeting facilitator.

Table 11

Mean Domineeringness Score by Dyad across PIT Meetings, Not Separating out Meeting

Facilitator

Speaker Role ^a	Message Recipient Role				
	SP	RT	SE	SPT	RE
School Psychologist					
<i>M (SD)</i>	—	.36 (.13)	.34 (.17)	.31 (.25)	0.24 (.20)
<i>N</i>	—	15	14	13	15
Referring Teacher					
<i>M (SD)</i>	.16 (.09)	—	.20 (.15)	.16 (.10)	.13 (.12)
<i>N</i>	15	—	14	13	15
Special Education Teacher					
<i>M (SD)</i>	.40 (.21)	.45 (.14)	—	.28 (.15)	.23 (.19)
<i>N</i>	14	14	—	12	13
Specialist					
<i>M (SD)</i>	.19 (.20)	.35 (.10)	.25 (.22)	—	.23 (.21)
<i>N</i>	13	13	13	—	12
Regular Education Teacher					
<i>M (SD)</i>	.27 (.20)	.39 (.12)	.37 (.26)	.30 (.27)	—
<i>N</i>	15	15	14	13	—

Table 11 (continued).

SP = School Psychologist; RT = Referring Teacher; SE = Special Education Teacher; SPT = Specialist; RE = Regular Education Teacher.

Dominance. As mentioned earlier, dominance is defined as an individual's success in influencing another and is calculated by dividing the total number of one-up messages by Role A followed by one-downs from Role B by the total number of one-up messages emitted by Role A. Overall dominance scores were calculated for each role. Means and standard deviations for dominance were also calculated to explore relational patterns for each role. These results are presented in Table 12. The overall average score for school psychologists was .48, .46 for the referring teacher, .53 for the special education teacher, .47 for the specialist, and .51 for the regular education teacher. Overall, most dominance scores were fairly consistent across the various PIT roles (i.e., range .47-.51).

When considering the role of the meeting facilitator, dominance scores were somewhat similar (see Table C10). When omitting instances where a specific professional role assumed the role of meeting facilitator, the school psychologist's dominance score was .49 and the special education teacher's dominance score was .74, though the special

Table 12

Overall Mean Dominance for PIT Role, Not Separating out Meeting Facilitator

Role	<i>M</i>	<i>SD</i>	<i>N^a</i>
School Psychologist	.48	.16	15
Referring Teacher	.46	.11	15
Special Education Teacher	.53	.17	14
Specialist	.47	.17	13
Regular Education Teacher	.51	.19	15

^aNumber of Meetings.

education teacher's score was based on only two meetings. Meeting facilitators had dominance scores that were fairly consistent with other roles. Dominance for the school psychologist as meeting facilitator was .47 and dominance for the special education teacher as meeting facilitator was .50.

Dominance scores for dyadic interactions among the major roles were also calculated. These results can be found in Table 13. Unlike domineeringness, no clear trends are present. Dominance scores ranged from .15 – .61 within the various dyads. One pattern that was apparent, however, was the likelihood of PIT participants to be most dominant in interactions with the referring teacher. The dominance mean scores for school psychologist-referring teacher (.54), special education teacher-referring teacher (.61), specialist-referring teacher

Table 13

Mean Dominance by Dyad across PIT Meetings, Not Separating out Meeting Facilitator

Speaker Role ^a	Message Received Role				
	SP	RT	SE	SPT	RE
School Psychologist					
<i>M (SD)</i>	—	.54 (.24)	.47 (.30)	.53 (.28)	.34 (.36)
<i>N^b</i>	—	15	14	12	11
Referring Teacher					
<i>M (SD)</i>	.43 (.22)	—	.31 (.20)	.40 (.28)	.41 (.29)
<i>N^b</i>	14	—	13	11	13
Special Education Teacher					
<i>M (SD)</i>	.44 (.30)	.61 (.27)	—	.49 (.32)	.47 (.31)
<i>N^b</i>	14	14	—	11	12
Specialist					
<i>M (SD)</i>	.33 (.31)	.44 (.35)	.43 (.28)	—	.15 (.23)
<i>N^b</i>	10	13	9	—	9
Regular Education Teacher					
<i>M (SD)</i>	.21 (.21)	.53 (.25)	.61 (.35)	.33 (.35)	—
<i>N^b</i>	12	15	13	10	—

Table 13 (continued).

^aSP = School Psychologist; RT = Referring Teacher; SE = Special Education Teacher; SPT = Specialist; RE= Regular Education Teacher. ^b N refers to the number of meetings where the dyad interacted.

(.44) all ranked as the highest dyadic dominance scores for the speaker when not considering the role of meeting facilitator. Although not the highest, the regular education teacher-referring teacher dominance mean score (.53) was the second highest for the referring teacher. Although the meaningfulness of these differences is unknown, it is similar to what was seen with domineeringness where PIT participants were most likely to be directive with the referring teacher.

Dyadic dominance patterns when including the meeting facilitator role are even more difficult to discern (see Table C11). Dyadic dominance ranged from 0.00 to 1.00, in part due to the low number of interactions between roles when including the meeting facilitator. For instance, the special education teacher role was only present at two meetings because in the other PIT meetings, she assumed the role of meeting facilitator (i.e., 12 instances) or was not present (i.e., 1 instance). Additionally, the variability in dominance was greater than seen when excluding instances of meeting facilitator, evidenced by the high standard deviations seen in Table C11.

Hypothesis 1 and Hypothesis 2

Recall that Hypotheses 1 and 2 stated that when compared to referring teachers, the school psychologist would display higher domineeringness (Hypothesis 1) and dominance (Hypothesis 2) across PIT initial meetings. To examine the difference between mean domineeringness and dominance scores, two paired samples *t*-tests were performed (i.e., one *t*-test for domineeringness and one for dominance). To examine these differences, dominance scores from the original data set (that does not exclude instances of the school psychologist as meeting facilitator) were used. This decision was based on the relatively small difference (i.e., .01 for both dominance and domineeringness) between school psychologists' dominance and domineeringness scores when including versus not including the meeting facilitator role. Additionally, using the original data set allowed for a larger sample of school psychologists being included in the analyses (i.e., 15 vs. 12). The results of that *t*-test demonstrated a significant difference for domineeringness, $t(14) = 4.88, p < .001$, with school psychologists displaying higher rates of domineeringness ($M = .34, SD = .12$) than referring teachers ($M = .17, SD = .18$). Thus, school psychologists were significantly more directive during PIT meetings when compared to referring teachers. In contrast, there was not a significant difference between school psychologists and referring teacher's dominance scores, $t(14) = .65, p > .05$.

Research Question 4

Recall that Research Question 4 asked if relational patterns of school psychologists and teachers would change across meetings such that there would be more or less

dominance/domineeringness expressed during the first half versus second half of each initial PIT. In order to explore this question, meetings were divided into two separate halves. Based on the different patterns of relational communication documented by Erchul et al. (2007) and Erchul et al. (2009), demonstrating differences in various outcomes based on whether a meeting was a PII or PAI, the halfway point was determined in each meeting when the conversation turned to discussing interventions. It was reasoned that the first half of the meeting was most congruent with the PII where the focus was on identifying the problem, and the second half was most congruent with the PAI where the focus was on identifying interventions to address the problem.

To examine differences between mean dominance scores for the first half (i.e., identifying the problem) and second half (i.e., discussing interventions) of each meeting for school psychologists, two paired samples *t*-tests were performed (i.e., one for domineeringness and one for dominance). Results of these analyses were not significant for domineeringness, $t(14) = .48, p > .05$, or dominance, $t(14) = .49, p > .05$. Thus, no differences were found for school psychologists' domineeringness during the first half ($M = .34, SD = .14$) versus second half ($M = .37, SD = .17$) of PIT meetings. Likewise, no differences were found for school psychologists' dominance during the first half ($M = .54, SD = .22$) versus second half ($M = .49, SD = .21$) of meetings.

The same procedure was used to examine differences between mean dominance scores for the first half (i.e., identifying the problem) versus second half (i.e., discussing interventions) of each PIT meeting for referring teachers. Results of this analyses were not

significant for domineeringness, $t(14) = 1.10, p > .05$, or dominance, $t(14) = -.71, p > .05$. Thus, no differences were found for referring teachers' domineeringness during the first half ($M = .22, SD = .13$) versus second half ($M = .17, SD = .08$) of PIT meetings. Likewise, no differences were found for referring teachers' dominance during the first half ($M = .39, SD = .21$) versus second half ($M = .45, SD = .30$) of meetings.

Correlation with Outcome

Because of the exploratory nature of the study and the relatively large number of consultation studies investigating the relationship between dominance and domineeringness with various outcome measures, an additional exploratory analysis was conducted. Domineeringness and dominance scores of school psychologists, referring teachers, special education teachers, specialists, and regular education teachers were correlated with the total score of the PIT Meeting Evaluation Coding Sheet. Means and standard deviation for the PIT Meeting Evaluation Coding Sheet questions and total score are available in Table 14. Additionally, the results of the correlational analysis are available in Table 15 (i.e., correlations between domineeringness and total score) and Table 16 (i.e., correlations between dominance and total score). As can be seen in Table 15, the relationships between referring teacher's, specialist's, special education teacher's, and regular education teacher's domineeringness and the total outcome score were not significant. The relationship between school psychologist's domineeringness and the total outcome score was significant, $r(14) = .54, p < .05$. However, when excluding cases when the school psychologist was the meeting facilitator, this relationship was no longer significant, $r(11) = .57, p = .15$. Thus, the

Table 14

Means and Standard Deviations for PIT Meeting Evaluation Coding Sheet by Question

Question	<i>M</i>	<i>SD</i>	<i>N</i>
1. Was one target problem behavior identified and described in specific, objective terms? (1 = No, 2 = Yes)	1.67	0.49	15
2. What was the type of problem behavior identified?	NA	NA	15
3. Were ideas about possible interventions brainstormed? (1 = No, 2= Yes)	2.00	0.00	15
4. Was a plan (i.e., at least one intervention idea) generated? (1 = No, 2= Yes)	2.00	0.00	14
5. How many intervention ideas were brainstormed? (1= less than 5; 2 = 6-7; 3 = 8-9; 4 = 10+)	2.21	1.12	14
6. Rate the quality of the plan (1 = very general, 2 = general, 3 = specific, 4 = very specific).	2.64	0.84	14
7. Did the team discuss data collection procedures? (1 = No, 2 = Yes)	1.50	0.52	14
Total Outcome Score	12.00	1.80	14

NA = Not Applicable because it is a nominal variable

Table 15

Correlations between Domineeringness by Role and Meeting Evaluation Total Outcome Score

Roles	<i>R</i>	<i>N</i> ^a
School Psychologist Domineeringness	.54*	14
Referring Teacher Domineeringness	.10	14
Special Education Teacher Domineeringness	-.07	13
Specialist Domineeringness	.23	13
Regular Education Teacher Domineeringness	-.27	14
Meeting Facilitator Domineeringness ^b	.36	14

^a Number of PIT Meeting Evaluation Coding Sheet total outcome score included in analysis.

^b Total meeting facilitator; includes overlapping data from instances where the school psychologist or special education teacher also functioned as the meeting facilitator.

* $p < .05$.

instances where the school psychologist was the meeting facilitator may have accounted for the initial significant relationship between problem-solving process adherence and school psychologist domineeringness. Correlations between school psychologist's, referring teacher's, special education teacher's, specialist's, and regular education teacher's dominance and the total outcome score were not found to be significant.

Table 16

Correlations between Dominance by Role and Meeting Evaluation Total Outcome Score

Roles	<i>R</i>	<i>N^a</i>
School Psychologist Dominance	-.02	14
Referring Teacher Dominance	.39	14
Special Education Teacher Dominance	-.13	13
Specialist Dominance	.07	13
Regular Education Teacher Dominance	.31	14
Meeting Facilitator Dominance ^b	-.07	14

^a Number of PIT Meeting Evaluation Coding Sheet total outcome score included in analysis.

^b Total meeting facilitator; includes overlapping data from instances where the school psychologist or special education teacher also functioned as the meeting facilitator.

CHAPTER 5

Discussion

The intent of this exploratory study was to examine and describe relational communication patterns that occur within prereferral intervention teams (PITs; Graden et al., 1985). This research is a logical extension to prior research describing relational communication patterns in dyadic (i.e., behavioral consultation; BC) and small group (i.e., conjoint behavioral consultation; CBC) school-based problem-solving situations. In order to provide an initial description of patterns of relational communication within PITs, 15 PIT meetings were audiotaped, transcribed, and coded using the Family Relational Communication Control Coding System (FRCCCS; Heatherington & Friedlander, 1987). In this section, results are discussed with respect to prior research and theory. Additionally, implications, limitations, and possible future research directions are presented.

Descriptive Results

Much of this research was largely descriptive to provide indications of the general characteristics of PITs. For example, message frequencies were calculated in order to better understand who was speaking during PIT meetings, in that group member participation has been described in the research literature as an important indicator of perceptions of dominance and emergent leadership (Schmid Mast, 2002; Stein & Heller, 1979). Overall, results indicated that most group members were contributing to PIT discussions. Additionally, the referring teacher overall spoke the most messages across the various meetings. This finding suggests that referring teachers are actively participating in most PIT

meetings, though the exact nature of their participation at various points (e.g., describing the problem, offering intervention suggestions) was not determined in this research. Given that Etscheidt and Knesting (2007) suggested that the active participation of teachers is important in building effective PITs, the current research suggests further that referring teachers are significant contributors to the problem-solving process. Interestingly, Etscheidt and Knesting also identified administrator and parent participation in PITs as important for PIT effectiveness. However, data from the current study suggest that administrators and parents were rarely present in the 15 interviews sampled. The absence of parents is consistent with Truscott et al.'s (2005) survey of PITs, which indicated that parents were reported to be members in only 28% of the PITs surveyed, further suggesting that schools may not be substantially valuing parental input in the PIT problem-solving process.

Also documented here were the types of messages emitted by professional roles. Overall, patterns across roles were similar in that assertions were most common, followed by closed questions, talkovers, and open questions. For third digit codes, patterns were consistent among professional roles in that the third digit messages that were most frequent were extensions, followed by messages of support, topic changes, and answers to closed questions. The categories of order and disconfirmation were rarely used within PITs in comparison to other categories, a finding that probably relates to group members' avoidance of direct confrontation. Instead, when asking someone to do something, instructions (more subtle and less confrontational in nature) were most likely to be used. Another indication of the neutrality of messages was the large proportion of the overall messages being transitory

transactions (i.e., those that involved a one-across message in a dyadic interaction). This finding is consistent with prior FRCCCS research that has documented large incidences of transitory or neutral interactions among participants (Heatherington & Friedlander, 1990).

Hypotheses 1 and 2

There were two major hypotheses within this study. First, it was proposed that, compared to the referring teacher, the school psychologist would display higher domineeringness across PIT initial meetings. A second hypothesis stated that, compared to the referring teacher, the school psychologist would display higher dominance across PIT initial meetings. These hypotheses were based on past dyadic and small group relational communication consultation studies that demonstrated higher dominance and domineeringness for school psychologists (referred to as consultants in prior studies) when compared to referring teachers (e.g., Erchul, 1987; Erchul et al., 1999). Summarizing results pertaining to these predictions is relatively simple: support was generated for the first hypothesis (i.e., domineeringness) but there was little or no support for the second hypothesis (i.e., dominance).

It may be useful to look at these findings relative to other studies, specifically those focusing on school psychologists and teachers. This comparison allows for an analysis of teacher and school psychologist domineeringness and dominance scores in PITs versus teacher and school psychologist domineeringness and dominance scores during BC and/or CBC. To date, there have been three published studies that have exclusively looked at relational patterns within BC (i.e., Erchul, 1987; Erchul et al., 2007; Erchul et al., 2009)

utilizing the RCCCS and two studies that have looked at relational patterns within CBC using the FRCCCS (Erchul et al., 1999; Grissom et al., 2003). Before beginning this discussion, it is important to acknowledge that any “true” differences/similarities between studies cannot be determined because statistical procedures have not been used to compare the various studies. Instead, results will be looked at qualitatively. Additionally, the “types” of interviews were variable across each study such that some studies were focused on one specific portion of the problem-solving process like problem identification (i.e., Erchul et al., 2007; Grissom et al., 2003) or problem analysis (i.e., Erchul et al., 2009), while others included a mixture of various interviews (e.g., Erchul et al., 1987; Erchul et al., 1999; current study). The intent of this discussion is to simply describe relational patterns observed between studies that have used similar methodology and posed similar questions over the past 25 years.

First, when looking across studies at overall *domineeringness* scores, referring teachers tended to exhibit similar levels of domineeringness across all studies. The domineeringness patterns of teachers were .18 (Erchul, 1987), .27 (Erchul et al., 1999), .29 (Grissom et al., 2003), .11 (Erchul et al., 2007), .15 (Erchul et al., 2009) and .18 (present study). Thus, teachers tend to have consistent, and relatively low, levels of domineeringness regardless of whether they are involved in dyadic BC or group CBC/PIT meetings. Similar domineeringness patterns are seen for school psychologists. The mean domineeringness scores of school psychologists were .39 (Erchul, 1987), .33 (Erchul et al., 1999), .40 (Grissom et al., 2003), .24 (Erchul et al., 2007), .31 (Erchul et al., 2009), and .34 in the

present study. Thus, school psychologists' domineeringness tends to be similar in dyadic BC and group CBC/PIT interactions. In this respect, it appears that attempts to influence others are consistent across various types of meetings. Thus, levels of directiveness may depend more on professional role than the type of interaction or group size, with school psychologists most often taking charge in dyadic and group-based interactions, as compared to teachers.

Second, when looking at dominance scores across studies, the pattern of results is less clear. It appears that school psychologists tend to be less dominant during PIT meetings than during BC, and patterns of dominance within PITs seem to be more similar to what has been observed in studies of CBC. For BC, patterns of dominance appear to be somewhat higher (.73 in Erchul, 1987; .80 in Erchul et al., 2007; .78 in Erchul et al., 2009) than what is observed in CBC (i.e., .35 in Erchul 1999, .49 in Grissom et al., 2003) or within PITs (.48 in the present study), though it is noted again that the true significance of these differences are unknown. Thus, school psychologists tend to be more successful at influencing participants in dyadic as opposed to group situations. This result may also be attributed to the smaller number of interactions that are possible in group versus dyadic situations, which may afford fewer opportunities to be successful at influencing others. The dominance patterns of teachers are less consistent. The type of interaction (i.e., dyadic or group) does not appear to affect dominance scores of teachers (i.e., .51, .74, .61 in BC and .41, .39, .46 in CBC and PITs, respectively). In this respect, the success of teachers in influencing others may depend

less on the type of interaction and more on other factors that have yet to be explored (e.g., type of problem, level of concern for student).

Research Questions 1, 2, and 3

Research Questions 1, 2, and 3 looked more broadly at individual professional roles (i.e., special education teachers, specialists, regular education teachers) and their patterns of domineeringness and dominance. It is useful to look at these findings in conjunction with domineeringness/dominance patterns of school psychologists and teachers as a whole to better understand the nature of PIT interactions. Taken together, with the exception of the referring teacher, patterns of dominance and domineeringness were somewhat similar across roles, suggesting at least some shared directiveness (i.e., domineeringness) and shared influence (i.e., dominance) among PIT group members.

Erchul et al. (2007) wrote that, “school-based dyadic behavioral consultation involves a complementary, leader-follower, cooperative relationship” (p. 124). In contrast, a study of relational communication within CBC found that patterns were more likely to be symmetrical in nature (Erchul et al., 1999). The results of the latter appear to be similar to the current study. Relating these findings back to relational theory and Bateson’s (1958) original terminology (i.e., symmetry, complementary, reciprocity), it appears that interactions within PIT groups are more symmetrical and perhaps even reciprocal in nature. Thus, in group interactions it seems that no one professional role disproportionately influences other group members, even when including the meeting facilitator role. In addition to the overall levels

of dominance, this point is further exemplified by the relatively low levels of domineeringness.

The one exception to this point may be patterns of domineeringness and dominance observed for referring teachers. Although teachers' domineeringness tended to be substantially lower than other group members' domineeringness, it is worth pointing out that referring teachers' dominance levels were fairly similar to those of other professionals. This finding may indicate that there was an attempt on group members' parts to make teachers' feel "heard" within group meetings. As mentioned earlier, Slonski-Fowler and Truscott (2004) found that many teachers felt as if their ideas, opinions, and input were devalued within PIT meetings. Although the methodology of current study differed from that used by Slonski-Fowler and Truscott, the results from this study would indicate the opposite. When teachers were willing to assert themselves (though this appeared to occur less often when compared to other professional roles), they tended to influence PIT members at rates similar to other professional roles.

Research Question 4

Research Question 4 asked if relational patterns of school psychologists and teachers would change across meetings such that there would be more or less dominance/domineeringness expressed during the first half versus second half of each initial PIT. In regard to Research Question 4, the failure to find any differences in dominance/domineeringness scores for school psychologists and teachers may support the idea that relational communication patterns remain relatively stable across the problem

identification and problem analysis stage of PITs. Regardless of whether the group is focused on discovering the nature of the student's problem or trying to brainstorm possible solutions, dominance and domineeringness rates stay somewhat constant. Thus, domineeringness and dominance may be more a function of the professional role than the content or phase of the conversation. These findings are somewhat similar to the Erchul et al. (2007) and Erchul et al. (2009) studies. Although dominance and domineeringness were found to correlate with different outcomes during the PII and PAI, the rates of dominance (i.e., .24 and .31 for school psychologists and .11 and .15 for teachers) and domineeringness (i.e., .80 and .78 for school psychologists and .74 and .71 for teachers) remained relatively stable across the different interviews. Although interesting, caution should clearly be taken in interpreting this null finding. Due to the novelty of this research and its exploratory nature, the null finding is presented here to alert future researchers of potential issues that may require further investigation.

Limitations

The many limitations in the design, methodology, and sample are apparent in this research and thus deserve attention. These limitations are presented here in hopes that future researchers may make other choices that will serve to build upon the results of the current study. First, a major drawback to the research design was the use of only 15 cases that were drawn from only 2 separate schools. Thus, the verbal behavior that was coded was limited, in that the interactions occurred between a small sample of school-based professionals. Although some variability was present among roles (e.g., school psychologists, referring

teachers, special education teachers), which allowed for an initial examination of relational patterns in school-based groups, the number of people who occupied each role was severely restricted and thus it is difficult to generalize these results with confidence to other PIT meetings. Additionally, the small sample size contributed to low statistical power, which may have contributed to the failure to detect significant differences in several instances.

A second, related limitation was possible nesting within the research design. As mentioned earlier, some persons repeatedly occupied various roles (e.g., there were only 4 special education teachers across both schools), while others tended to be more unique (e.g., referring teachers usually differed by PIT meeting for a total of 13 different referring teachers). Scores were analyzed by individual and did not account for instances when the same person occupied various roles. When analyzing data at both the individual and group level, the possible influence of a limited variability or large variability within role was not accounted for. Although this limitation may have led to some difficulties in interpreting data, it was a necessary procedure when analyzing PITs. In PITs across various schools, some group members may have remained constant (e.g., special education teacher, administrator), but others may have consistently changed (e.g., referring teacher, parent). Thus, although interpretation of this data set may be limited, it may also be representative of PIT situations found across various schools.

A third limitation that may have affected results, particularly when examining the relationship between dominance/domineeringness and outcomes (i.e., supplementary analyses), was the limited sampling plan. As mentioned earlier, an outcome measure was

devised to measure adherence to the specific objectives of the PII and PAI. An analysis of the results of these coded measures showed very little variability in PIT meeting adherence (i.e., outcome). This result may have occurred because in more than half of the meetings, PITs were guided by a very specific protocol that outlined the various steps of the PII and PAI in PIT meetings. The little variability observed in the outcome measure may have led to restriction of range and contributed to the small and nonsignificant correlations between dominance/domineeringness scores and PIT meeting adherence.

A fourth limitation, which has tended to be somewhat pervasive in school consultation relational communication process research, was the use of audiotapes as opposed to videotapes. Some inherent meanings in comments may be missed when relying solely on verbal behavior (Ketrow, 1999). Additionally, the use of videotapes may help to provide more insight into the relational meanings that are conveyed in various interactions. This approach would be particularly useful when studying groups such as PITs where the conversational flow is so rapid that at times it can be difficult to reliably discern who is speaking to whom or who is an indirect target. Indeed, the FRCCCS, although it can be, and has been, used with audiotapes, was designed with videotaped interactions in mind. For this reason, relying solely on audiotapes may have limited the interpretation of relational communication patterns in PITs.

A fifth important limitation is the lack of outcome data used in the current study. Although meeting adherence was coded, the current study did not include PIT outcome data that would be important to understanding the usefulness of PITs and has been used in prior

consultation research. Intervention effectiveness, intervention integrity, and intervention acceptability are all outcome variables that have been studied in past BC studies (e.g., Erchul et al., 2007) and CBC studies (e.g., Grissom et al., 2003). Additionally, studies on PIT outcomes have frequently included measures such as referral to special education, PIT member satisfaction, behavior rating scales, and teacher ratings of student progress made toward goals, and various student outcomes (Burns & Symington, 2002). Although the current study did provide some limited information on outcomes with the use of the Meeting Evaluation Form, other important outcome measures were not available and thus statements about dominance/domineeringness being related to better/worse outcomes cannot be made at this time. Furthermore, the psychometric properties of the PIT Meeting Evaluation Form are unknown.

A sixth limitation is the lack of information provided in this study about the triadic level of relational communication. The original FRCCCS allows for documentation of information about individual and dyadic characteristics as well as information about possible triadic relationships. Triadic relationships occur when a dyadic relationship involves a third person as a means of control (Heatherington & Friedlander, 1987). The FRCCCS allows for the identification of three types of conversational moves: parallel moves (i.e., where a speaker defines his or her relationship similarly in a single speaking turn), coalitional moves (i.e., where the speaker defines him/herself differently to two speakers within a single speaking turn) and simple triadic moves (i.e., where a speaker defines him/herself with one speaker but remains neutral with another). Unfortunately, the current study involved a

relatively small number of indirect messages and thus it was not possible to explore triadic relationships. Additionally, research using the RCCCS has utilized sequential analyses and spatial maps to better understand relational patterns (Rogers & Escudero, 2004); however, this methodology was not used in the current study because of the high complexity of large group interactions and low complexity of the audio recordings. These types of analyses may have offered a more in-depth understanding of relational patterns in PITs.

Future Directions

Several future directions follow directly from the described limitations. First, the use of videotapes or direct observations of PIT meetings would greatly increase the reliability of participant identification, detection of indirect targets, and lead to a better understanding of what is being conveyed in each message. Relatively little is known about the role of nonverbal communication (e.g., eye gaze, physical distance, intonation) in dyadic consultation and/or school group-based interactions. In fact, most consultation verbal processes studies have been conducted using audiotaped interviews (e.g., Erchul et al., 1999; Knotek, 2003). In contrast, many relational communication studies in other contexts have relied on both verbal and nonverbal behaviors (e.g., Heatherington & Friedlander, 1990). Given the value of nonverbal communication, it would be important to include these behaviors when studying relational dynamics. Thus, future researchers are encouraged to seek out the use of videotapes when studying the communication patterns of school-based teams.

A second important future research direction would be to use a variety of different types of PIT teams to see whether findings could be generalized to a larger, more diverse sample. As previously noted, a survey by Truscott et al.'s (2005) found that 86% of states either require or recommend the use of PITs. Although states often recommend this practice, little guidance is usually provided, which leads to variability across states in terms of PIT goals, team procedures, and interventions generated. Truscott et al. study also suggested that there was some consistency in the professional roles that typically attend PITs. Thus, future studies could look at a variety of PITs, to better understand relational patterns within school-based groups. Future research should also include parents, often key members of PITs, in order to understand their patterns of relational communication in school-based team situations.

Third, and perhaps most importantly, future research should include various outcome variables in order to link process (e.g., communication behavior) with important results. Outcome variables important to include would be data involving systematic outcomes (e.g., referral rates) and student outcomes (e.g., teacher ratings of student progress towards goals). Another important variable to understand in relationship to group process would be treatment integrity. Several recent studies (i.e., Burns, Peters, & Noell, 2008; Duhon, Mesmer, Gregerson, & Witt, 2009) have looked at how to improve intervention and procedural integrity in school-based teams through performance feedback (i.e., a method of tracking progress and providing information about performance to teachers or school-based teams). Similar research could look at the relationship between dominance/domineeringness in

school-based teams and intervention integrity. Clearly including outcome data would be a logical next step and important extension to the current research.

Another future research direction may be to use other verbal coding schemes to better understand communication behavior in school-based teams. For instance, when studying relational communication in large groups, many communication researchers have used Bales' (1950, 1953) Interaction Process Analysis (IPA), which focuses on distinguishing task-oriented and relational (or socioemotional) communication functions. The IPA codes each message into 12 separate categories that ultimately serve to describe whether a group's patterns are more task-oriented or relationally oriented. According to Bales, successful groups strive to maintain an equilibrium between the two. Communication behavior in PITs could also be studied through the System for the Multiple Level Observation of Groups (SYMLOG; Bales & Cohen, 1979), a participant rating measure that was derived from IPA and is a popular way of studying group-level relational dynamics. Using SYMLOG, PIT meeting professionals could retrospectively rate their own and other professional interactions. SYMLOG often is used to detect aspects of power and relational control in groups, relationship development, and group dynamics. Finally, though nonrelational in nature, the Consultation Analysis Record (CAR; Bergan & Tombari, 1975) has been widely used to understand verbal behavior and consultant effectiveness in dyadic consultation. This coding system allows messages to be coded in terms of content, process, source (i.e., speaker), and control. Using the CAR within prereferral intervention team may provide a more in-depth picture of verbal processes in school-based teams.

Summary and Implications for the Field

The importance of the current research is underscored by results of prior PIT research that have indicated: (a) prereferral intervention teams are recommended or required by most states; (b) a great amount of variability exists in PIT goals, processes, and interventions generated; (c) although some positive outcomes have been reported for PITs, results tend to be more favorable in those that are university-implemented as opposed to those implemented by school-based practitioners; and (d) very little is known about the various processes that characterize practitioner-based PITs, including communication that occurs during these meetings. Given these research findings, it is important to learn more about what is occurring within prereferral intervention teams so that researchers can identify effective versus ineffective procedures.

In addition to these results, PITs are also seen as the “precursor” to modern day problem-solving teams (PSTs), which will continue to be used as the education system transitions into using Response to Intervention (RTI) service delivery models. Burns, Peters, and Noell (2005) noted that, although variability exists in how RTI is implemented between and within states, most RTI models include some form of a multidisciplinary problem-solving team. Thus, PSTs have become the primary vehicle to deliver services to students. A better understanding of the processes that characterize these types of teams may lead to better quality of services within the schools.

The main goal of this study was to understand the relational patterns that characterize verbal interactions during PIT meetings. Additional goals were to look at relational control

as measured by dominance/domineeringness among various school-based multi-disciplinary professionals. The results indicated that when compared to referring teachers, school psychologists display more domineeringness (i.e., directiveness). No differences were observed between teachers and school psychologists with respect to dominance (i.e., successful influence). When looking across the various professional roles, a qualitative examination of the results demonstrated that, with the exception of the referring teacher, domineeringness and dominance rates are relatively stable. Thus, no one person appears to be overly directive or influential during PIT meetings. Additionally, no differences were observed in dominance/domineeringness for teachers or school psychologists in the first half compared to the second half of the meeting. Finally, there was no significant relationship between dominance/domineeringness and adherence to a PIT meeting protocol, with the exception of school psychologists' domineeringness. However, this effect appeared to be lost when excluding cases where the school psychologist was the meeting facilitator.

Although no outcome data were presented in the current study, the results of this study provide *initial* insight into what occurs during PIT meetings and the various relational patterns that characterize specific professional roles. In practice, professionals may use extensions of this research to improve the quality of communication within multidisciplinary teams. In this respect, this research provides a first step in helping others understand how to make PITs more efficient and effective and to best serve the needs of students within schools. For school psychologists, this may mean valuing and understanding group communication in similar way to how communication has traditionally been valued in dyadic consultation (e.g.,

BC). Additionally, this study may help to highlight to importance of relational dimensions in addition to content within group conversation. From this viewpoint, it is important to consider both what we say and how we say it.

Considering that more than $\frac{3}{4}$ of the PIT meetings in this study adhered to a strict problem-solving protocol similar to those that typically characterize PSTs that adhere to an RTI framework (Burns et al., 2008), this research represents an important first step in understanding group communication in school-based decision-making teams, which will continue to be essential within schools. Research, such as the current study, focusing on communicative behavior during multidisciplinary team-based meetings may lead to better training for various professionals (e.g., school psychologists) in how to effectively communicate in team-based situations. For this reason, understanding the verbal processes and relational patterns that characterize multidisciplinary school-based teams will continue to be an important research avenue to pursue in order to avoid many of the pitfalls encountered with traditional PIT models. It is the hope that this research will encourage others to attend to the importance of communication in school-based teams to promote the best models of service delivery for all students within today's schools.

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Appendices

Appendix A: PIT Meeting Evaluation Coding Sheet

Appendix A: PIT Meeting Evaluation Coding Sheet

Coder ID:	
Date Coded:	
Participant ID:	
Date of Meeting:	

1. Was one target problem behavior identified and described in specific, objective terms? (*Note: If more than one problem behavior was identified, participants must establish a priority in order to get a “yes” on this question*)
 - a. No
 - b. Yes
2. What was the type of problem behavior identified?
 - a. Academic
 - b. Behavioral
3. Were ideas about possible interventions brainstormed?
 - a. No
 - b. Yes
4. Was a plan (i.e., at least one intervention idea) generated?
 - a. No
 - b. Yes

5. How many intervention ideas were brainstormed?
 - a. Less than 5
 - b. 6-7
 - c. 8-9
 - d. 10+

6. Please rate the quality of the plan: (*circle one*)
 - a. **Very Specific** – In order to qualify as very specific the plan must include all of the following for *at least one of the interventions* mentioned during the meeting:
name of a specific program or detailed description of intervention, identified person who is responsible for implementation, determined when the program should be implemented (e.g., time of day, day of week), discussion of materials and staff training if needed.
 - b. **Specific** – at least 3 of the above
 - c. **General** – at least 2 of the above
 - d. **Very General** – 1 or none of the above

7. Did the team discuss data collection procedures (i.e., is there a plan for measuring **progress** throughout the intervention phase)? *Note that simply asking for additional assessment measures does not qualify.*
 - a. No
 - b. Yes

Appendix B: Coding Rules/Addendum to FRCCCS

Appendix B: Coding Rules/Addendum to FRCCCS

General Coding Rules

1. Code the first statement as a *topic change*. The last statement is also a topic change.
2. Code questions that ask for 3 or fewer responses as a *closed question*.
3. *Support* can also be conceptualized as compliance with a request or instruction.
4. If a speaker repeats 1-2 words of the previous speaker, it is *topic change* coded as *support*. If more than 2 words are repeated, it is coded as an *extension*.
5. *Instructions* are sometimes subtle in nature (e.g., “suggestions”), but still should be noted.
6. If a statement directly refers to information in a previous message or string of messages, it should be coded as an *extension* rather than a *topic change*.
7. If the second digit is 4 (i.e., *Noncomplete*) then the third digit is 0 (i.e., *Indistinguishable*).
8. A noncommittal response to a question (e.g., “I don’t know”; “I can’t remember”) is coded as an *extension*.
9. If you are unsure if there is a rising inflection in the speaker’s voice, code it as an *assertion* rather than a question.
10. When participants go off track, code it as a *topic change*.
11. If the message is a question calling for a participant to repeat what they have said, code it as a *closed question*.
12. Rhetorical questions are not questions, they are *extensions*.

13. If there is any element of an open question, go with open as opposed to *closed*.
14. Summary statements are *topic changes*.
15. You cannot “instruct” someone who is not present at a meeting.
16. Topic changes can occur during inaudible sections.
17. You cannot ask and answer a question in the same statement. These messages must be double coded.

Message Linkage

1. Talkovers are always linked with the preceding message.
2. Messages directed toward the group are always linked with the following message.
3. Minimal encouragers are always linked with the preceding message.

Appendix C: Secondary Results Tables

Table C1

Individuals Present at Each PIT Meeting by Role

Speaker	Meeting Number														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Special Ed1	X ^a	X ^a	X ^a	X ^a	X	X ^a	X ^a	X ^a	X ^a	X ^a	X ^a				
Special Ed2												X*	X ^a		
Special Ed3															X
Special Ed4															X
SP1	X	X	X	X	X ^a	X	X	X	X	X	X				
SP2	X		X	X		X	X	X	X	X	X				
SP3												X	X	X	X ^a
SP4															
SP5												X	X	X ^a	X
Specialist1	X	X	X	X	X	X	X	X	X	X					
Specialist2			X												
Specialist3				X											
Specialist4												X	X		
Specialist5														X	
Specailist6													X		
Reg Ed1	X		X			X		X	X		X				

Table C1 (continued).

	Meeting Number														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Reg Ed2		X	X	X	X	X	X		X	X	X				
Reg Ed3		X	X	X			X	X	X	X	X				
Reg Ed4												X		X	X
Reg Ed5												X	X	X	
Reg Ed6															X
Reg Ed7														X	
Reg Ed8															X
RT1	X							X							
RT2		X								X					
RT3			X												
RT4				X							X				
RT5					X										
RT6						X			X						
RT7							X	X							
RT8												X			
RT9												X			
RT10													X		

Table C1 (continued).

	Meeting Number														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RT11														X	
RT12															X
RT13															X
Parent			X											X	
Admin												X	X	X	
<i>N</i> =	6	6	10	8	5	7	7	7	8	7	7	9	8	9	9

Note. Special Ed = Special Education Teacher; SP = School Psychologist or School Psychologist Intern; Specialist = Speech Language Teacher, Counselor, or Reading Specialist; Regular Ed = Regular Education Teacher; RT = Referring Teacher; Admin = School Administrator. Schools 1-11 are from School A; Schools 12-15 are from School B.

^a Meeting Facilitator

Table C2

Number of Direct Messages Spoken by Each Role Relative to Total Direct Messages

Delivered across PIT Meetings, Separating out Meeting Facilitator

Speaker Role	Total Number of Direct Messages	Percent of Overall Total Messages	<i>M</i>	<i>SD</i>
School Psychologist ^a	964	16.55	80.33	26.37
Referring Teacher	1645	28.24	109.67	51.03
Special Education Teacher ^a	73	1.25	52.33	21.92
Specialist	802	13.77	77.20	39.47
Regular Education Teacher	659	11.31	53.47	25.87
Administrator	57	0.98	43.93	8.67
Parent	189	3.24	3.80	35.45
School Psychologist as Meeting Facilitator	352	6.04	117.33	43.98
Special Education Teacher as Meeting Facilitator	1085	18.62	90.42	37.69

^aExcludes instances of where participant assumed the role of meeting facilitator.

Table C3

Proportion of Each 2nd Digit Code (i.e., Grammatical Format) Spoken by Each Role across All PIT Meetings in Relation to Total Direct Messages Emitted by Role, Separating out Meeting Facilitator

Speaker Role ^a	Assertion	Open Question	Talkover	Incomplete	Closed Question	<i>N</i>
SP ^b	.72	.02	.09	.01	.16	964
RT	.86	.00	.08	.01	.05	164
Special Ed ^b	.71	.01	.08	.00	.19	73
Specialist	.76	.01	.11	.00	.11	802
Reg Ed	.69	.01	.13	.00	.17	659
Admin	.77	.00	.05	.00	.18	57
Parent	.90	.01	.07	.01	.02	189
SP as MF	.81	.05	.04	.00	.10	352
Special Ed as MF	.64	.05	.09	.00	.22	108

^aSP = School Psychologist; RT = Referring Teacher; Special Ed = Special Education

Teacher; Reg Ed= Regular Education Teacher; Admin = Administrator; MF = Meeting

Facilitator. ^bExcludes instances of where participant assumed the role of meeting facilitator.

Table C4

Means and Standard Deviations of 2nd Digit Codes (i.e., Grammatical Format) Spoken by Each Role across All Meetings, Separating out Meeting Facilitator

Speaker Role ^a	Assertion	Open Question	Talkover	Incomplete	Closed Question
SP ^b	57.75 (22.94)	1.75 (1.42)	7.50 (4.83)	0.83 (0.94)	12.50 (7.69)
RT	94.60 (44.97)	0.13 (0.35)	9.00 (4.83)	0.87 (1.25)	5.07 (3.67)
Special Ed ^b	26.00 (18.38)	0.50 (0.71)	3.00 (1.41)	0.00 (0.00)	7.00 (2.83)
Specialist	47.08 (29.65)	0.85 (1.21)	6.77 (4.32)	0.23 (0.44)	6.69 (3.90)
Reg Ed	30.20 (19.61)	0.60 (0.74)	5.73 (4.04)	0.07 (0.26)	7.33 (3.87)
Admin	14.67 (8.33)	0.00 (0.00)	1.00 (1.00)	0.00 (0.00)	3.33 (2.31)
Parent	85.00 (43.84)	0.50 (0.71)	6.50 (0.71)	0.50 (0.71)	2.00 (2.83)
SP as MF	66.00 (61.80)	6.33 (4.73)	4.33 (4.04)	2.00 (3.46)	41.33 (47.88)
Special Ed as MF	57.50 (26.52)	4.25 (2.56)	8.25 (5.33)	0.33 (0.65)	20.08 (9.04)

^aSP = School Psychologist; RT = Referring Teacher; Special Ed = Special Education

Teacher; Reg Ed= Regular Education Teacher; Admin = Administrator; MF = Meeting

Facilitator. ^bExcludes instances of where participant assumed the role of meeting facilitator.

Table C5

Proportion of Each 3rd Digit Code (i.e., Grammatical Format) Spoken by Each Role across All PIT Meetings in Relation to Total Direct Messages Emitted by that Role, Separating out Meeting Facilitator

Speaker Role ^a	1 ^b	2	3	4	5	6	7	8	9	0	N
SP ^c	.19	.01	.59	.01	.02	.00	.00	.09	.08	.01	964
RT	.21	.01	.54	.02	.01	.00	.00	.03	.18	.01	1645
Special Ed ^c	.26	.01	.55	.01	.00	.00	.00	.05	.11	.00	73
Specialist	.18	.00	.62	.01	.03	.00	.00	.04	.10	.01	802
Reg Ed	.16	.02	.62	.02	.03	.00	.00	.07	.09	.00	659
Admin	.28	.05	.56	.00	.04	.00	.00	.05	.02	.00	57
Parent	.40	.01	.42	.01	.00	.00	.00	.03	.13	.01	189
SP as MF	.35	.01	.41	.00	.04	.00	.00	.11	.07	.00	352
Special Ed as MF	.30	.00	.43	.00	.03	.00	.00	.18	.06	.01	1085

^aSP = School Psychologist; RT = Referring Teacher; Special Ed = Special Education

Teacher; Reg Ed= Regular Education Teacher; Admin = Administrator; MF=Meeting

Facilitator. ^b1=Support; 2=Nonsupport; 3=Extension; 4=Answer to Open Question;

5=Instruction; 6=Order; 7=Disconfirmation; 8=Topic Change; 9=Answer to Closed

Question; 0=Indistinguishable. ^cExcludes instances of where participant assumed the role of meeting facilitator.

Table C6

Means and Standard Deviations of Each 3rd Digit Code (i.e., Grammatical Format) Spoken by Each Role across All PIT Meetings in Relation to Total Direct Messages Emitted by that Role, Separating out Meeting Facilitator

Speaker Role ^a	1 ^b	2	3	4	5	6	7	8	9	0
SP^c										
<i>M</i>	15.00	0.73	48.64	0.64	2.09	0.00	0.09	6.64	7.18	0.82
<i>SD</i>	8.52	0.65	17.79	0.81	2.47	0.00	0.30	2.91	3.19	0.98
RT										
<i>M</i>	23.27	0.93	59.07	2.00	0.73	0.00	0.00	3.47	19.33	0.87
<i>SD</i>	14.78	1.53	31.70	2.24	0.80	0.00	0.00	2.36	9.39	1.25
Special Ed^c										
<i>M</i>	9.50	0.50	20.00	0.50	0.00	0.00	0.00	2.00	4.00	0.00
<i>SD</i>	7.78	0.71	8.49	0.71	0.00	0.00	0.00	1.41	5.66	0.00
Specialist										
<i>M</i>	9.73	0.20	33.13	0.47	1.53	0.00	0.13	2.33	5.60	0.33
<i>SD</i>	10.12	0.41	23.10	0.92	1.60	0.00	0.52	2.94	6.16	0.62
Reg Ed										
<i>M</i>	6.93	0.73	27.13	0.67	1.27	0.13	0.00	3.00	3.93	0.13
<i>SD</i>	4.82	0.70	16.02	1.11	1.87	0.52	0.00	2.04	3.58	0.35

Table C6 (continued).

Admin

<i>M</i>	1.07	0.20	2.13	0.00	0.13	0.00	0.00	0.20	0.07	0.00
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<i>SD</i>	2.49	0.77	4.64	0.00	0.52	0.00	0.00	0.56	0.26	0.00
-----------	------	------	------	------	------	------	------	------	------	------

Parent

<i>M</i>	5.07	0.07	5.33	0.07	0.00	0.00	0.00	0.40	1.60	0.07
----------	------	------	------	------	------	------	------	------	------	------

<i>SD</i>	14.12	0.26	16.95	0.26	0.00	0.00	0.00	1.30	4.79	0.26
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SP as MF

<i>M</i>	41.33	1.00	47.67	0.33	5.00	0.00	0.00	13.33	8.67	0.00
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<i>SD</i>	8.39	1.73	25.54	0.58	3.46	0.00	0.00	5.51	5.51	0.00
-----------	------	------	-------	------	------	------	------	------	------	------

Special Ed as MF

<i>M</i>	29.27	0.36	41.36	0.09	2.73	0.00	0.00	17.18	5.27	0.55
----------	-------	------	-------	------	------	------	------	-------	------	------

<i>SD</i>	13.51	0.50	15.78	0.30	1.62	0.00	0.00	4.96	3.26	0.69
-----------	-------	------	-------	------	------	------	------	------	------	------

^aSP = School Psychologist; RT = Referring Teacher; Special Ed = Special Education

Teacher; Reg Ed= Regular Education Teacher; Admin = Administrator; MF=Meeting

Facilitator. ^b1=Support; 2=Nonsupport; 3=Extension; 4=Answer to Open Question;

5=Instruction; 6=Order, 7=Disconfirmation; 8=Topic Change; 9=Answer to Closed

Question; 0=Indistinguishable.

^cExcludes instances of where participant assumed the role of meeting facilitator.

Table C7

Mean Proportion of Messages Sent and Received by Dyad Across PIT Meetings, Separating Out Meeting Facilitator

Speaker Role ^a	Message Recipient Role								Sender Total
	SP	RT	SE	SPT	RE	AD	PT	GP	
School Psychologist^b									
One-up	.01	.14	.07	.04	.03	.01	.01	.04	.34
One-down	.01	.12	.06	.05	.02	.00	.00	.00	.27
One-across	.01	.17	.07	.05	.04	.00	.02	.04	.39
Referring Teacher									
One-up	.07	.00	.04	.02	.02	.00	.00	.02	.18
One-down	.11	.01	.10	.06	.06	.01	.01	.00	.37
One-across	.15	.01	.10	.05	.05	.01	.01	.08	.46
Special Education Teacher^b									
One-up	.07	.22	.00	.03	.00	.00	.00	.03	.34
One-down	.15	.08	.00	.12	.00	.00	.00	.01	.36
One-across	.01	.23	.00	.01	.00	.00	.00	.04	.30
Specialist									
One-up	.04	.12	.04	.02	.03	.00	.01	.02	.28

Table C7 (continued).

One-down	.08	.08	.05	.02	.03	.00	.01	.00	.28
One-across	.10	.16	.06	.02	.04	.00	.02	.04	.44
Reg Ed									
One-up	.05	.15	.06	.04	.01	.00	.03	.03	.38
One-down	.05	.10	.04	.03	.01	.00	.01	.00	.24
One-across	.08	.16	.05	.04	.01	.00	.01	.04	.38
School Psychologist as Meeting Facilitator									
One-up	.00	.15	.03	.02	.00	.00	.02	.08	.30
One-down	.00	.25	.02	.05	.03	.00	.06	.00	.42
One-across	.00	.11	.01	.02	.01	.00	.10	.04	.28
Special Education Teacher as Meeting Facilitator									
One-up	.07	.15	.00	.03	.04	.00	.01	.11	.42
One-down	.10	.14	.00	.04	.06	.00	.00	.01	.35
One-across	.04	.10	.00	.03	.02	.00	.00	.04	.23

Note. Messages sent by the administrator and parent are excluded because of the low base rate of their messages sent.

^aSP = School Psychologist; RT = Referring Teacher; Special Ed = Special Education Teacher; Reg Ed= Regular Education Teacher; Admin = Administrator; MF=Meeting Facilitator.

Table C8

Overall Mean Domineeringness for PIT Role, Separating out Meeting Facilitator

Role	<i>M</i>	<i>SD</i>	<i>N</i> ^a
School Psychologist ^b	.35	.12	12
Referring Teacher	.18	.07	15
Special Education Teacher ^b	.37	.09	2
Specialist	.30	.11	12
Regular Education Teacher	.39	.08	15
School Psychologist as Meeting Facilitator	.28	.12	3
Special Education Teacher as Meeting Facilitator	.44	.05	12

^aNumber of Meetings. ^bExcludes instances of where participant assumed the role of meeting facilitator.

Table C9

Mean Domineeringness Score by Dyad across PIT Meetings, Separating out Meeting Facilitator

Speaker Role ^a	Message Recipient Role						
	SP	RT	SE	SPT	RE	SP as MF	SE as MF
School Psychologist							
<i>M (SD)</i>	—	.39 (.13)	—	.32 (.27)	.28 (.19)	—	.31 (.17)
<i>N</i>	—	12	—	12	12	—	12
Referring Teacher							
<i>M (SD)</i>	.14 (.06)	—	.10 (.04)	.16 (.10)	.13 (.12)	.25 (.13)	.22 (.16)
<i>N</i>	12	—	2	13	15	3	12
Special Education Teacher							
<i>M (SD)</i>	—	.41 (.00)	—	.17 (NA)	.00 (.00)	.63 (.53)	—
<i>N</i>	—	2	—	1	2	2	—

Table C9 (continued).

Specialist

<i>M (SD)</i>	.21 (.21)	.36 (0.09)	.38 (NA)	—	.23 (.21)	.07 (.10)	.24 (.22)
<i>N</i>	12	13	1	—	13	2	11

Regular Education Teacher

<i>M (SD)</i>	.29 (.21)	.39 (.12)	.50 (.71)	.30 (.27)	—	.19 (.17)	.35 (.18)
<i>N</i>	12	15	2	13	—	13	15

School Psychologist as Meeting Facilitator

<i>M (SD)</i>	—	.25 (.10)	.52 (.02)	.27 (.08)	.06 (.10)	—	—
<i>N</i>	—	3	2	2	3	—	—

Special Ed as Meeting Facilitator

<i>M (SD)</i>	.36 (.12)	.45 (0.15)	—	.29 (.15)	.27 (.17)	—	—
<i>N</i>	12	12	—	11	12	—	—

Table C9 (continued).

^aSP = School Psychologist; RT = Referring Teacher; SE = Special Education Teacher; SPT = Specialist; RE= Regular Education Teacher.

Table C10

Overall Mean Dominance for PIT Role, Separating out Meeting Facilitator

Role	<i>M</i>	<i>SD</i>	<i>N^a</i>
School Psychologist ^b	.49	.13	12
Referring Teacher	.46	.11	15
Special Education Teacher ^b	.74	.19	2
Specialist	.47	.17	12
Regular Education Teacher	.51	.19	15
School Psychologist as Meeting Facilitator	.47	.29	3
Special Education Teacher as Meeting Facilitator	.50	.14	12

^aNumber of Meetings. ^bExcludes instances of where participant assumed the role of meeting facilitator.

Table C11

Mean Dominance Score by Dyad Across PIT Meetings, Separating Out Meeting Facilitator

Speaker Role ^a	Message Recipient Role						
	SP	RT	SE	SPT	RE	SP as MF	SE as MF
School Psychologist ^b							
<i>M (SD)</i>	—	.56 (.22)	—	.54 (.30)	.33 (.35)	—	.49 (.29)
<i>N^c</i>	—	12	—	10	9	—	12
Referring Teacher							
<i>M (SD)</i>	.49 (.21)	—	.25 (.35)	.40 (.28)	.41 (.29)	.59 (.08)	.32 (.19)
<i>N^c</i>	11	—	2	12	13	3	11
Special Education Teacher ^b							
<i>M (SD)</i>	—	.38 (.53)	—	.71 (.21)	.50 (NA)	.38 (.53)	—
<i>N^c</i>	—	2	—	2	1	2	—

Table C11 (continued).

Specialist

<i>M (SD)</i>	.32 (.33)	.45 (.36)	1.00 (NA)	—	.15 (.23)	.40 (NA)	.36 (.19)
<i>N^c</i>	9	13	1	—	9	1	8

Regular Education Teacher

<i>M (SD)</i>	.16 (.22)	.53 (.25)	.00 (.00)	.33 (.35)	—	.50 (.24)	.72 (.25)
<i>N^c</i>	10	15	2	10	—	2	11

School Psychologist as Meeting Facilitator

<i>M (SD)</i>	—	.43 (.35)	.41 (.58)	.75 (.35)	.00 (NA)	—	—
<i>N^c</i>	—	3	2	2	1	—	—

Special Ed as Meeting Facilitator

<i>M (SD)</i>	.45 (.28)	.59 (.28)	—	.49 (.33)	.47 (.31)	—	—
<i>N^c</i>	12	12	—	10	11	—	—

Table C11 (continued).

^a SP = School Psychologist; RT = Referring Teacher; SE = Special Education Teacher; SPT = Specialist; RE= Regular Education Teacher. ^b Excludes instances of where participant assumed the role of meeting facilitator. ^c N refers to the Number of meetings where the dyad interacted.