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The Prereferral Intervention Process in Pennsylvania Following the Removal Of the Instructional Support Team Mandate: A Follow-Up Study

Lori Neal Fernald
Indiana University of Pennsylvania

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THE PREREFERRAL INTERVENTION PROCESS IN PENNSYLVANIA

FOLLOWING THE REMOVAL OF

THE INSTRUCTIONAL SUPPORT TEAM MANDATE:

A FOLLOW-UP STUDY

A Dissertation

Submitted to the School of Graduate Studies and Research

in Partial Fulfillment of the

Requirements for the Degree

Doctor of Education

Lori Neal Fernald

Indiana University of Pennsylvania

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Title: The Prereferral Intervention Process in Pennsylvania Following the Removal Of
the Instructional Support Team Mandate: A Follow-Up Study

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The recent focus on Response to Intervention (RTI) has heightened the need for information regarding characteristics of prereferral intervention teams (PITs) that lead to successful outcomes. Though many researchers have theorized about important features of PITs, few studies have examined the factors that lead to high-functioning teams.

Elementary principals in Pennsylvania (N = 440) were surveyed regarding prereferral intervention practices. Schools that continued to employ instructional support teachers demonstrated higher Level of Implementation (LOI) and lower rates of students identified with specific learning disabilities (SLD). However, neither participation in the initial IST training, nor ratio of student to instructional support teacher was related to LOI or rates of SLD.

Only one variable related to administrative support—implementation of a policy encouraging parents to refer for prereferral intervention before referral for a multidisciplinary evaluation—was related to higher LOI, but not to rate of SLD. Implementing a policy requiring teachers to refer students for prereferral intervention, scheduling meetings during contracted hours, and percent of meetings attended by principals were not related to LOI or reduced numbers of students identified with SLD.

Training in curriculum-based assessment/measurement (CBA/CBM) and differentiated instruction were related to higher LOI. A multiple regression analysis found that a model including training in CBA/CBM, training in differentiated instruction, participation in guided practice or supervision, and number of trainings attended was significantly related to higher LOI. This same model was not related to reduced rates of SLD identification.

Systematic data collection was significantly correlated with LOI. However, use of prereferral intervention data to decide on referrals for multidisciplinary evaluations and use of group achievement data to design interventions were not correlated with LOI. Almost every respondent indicated that they used CBA/CBM to design interventions; therefore, results were inconclusive. Systematic data collection was not significantly correlated with SLD rates.

LOI was significantly correlated with lower rates of students identified with SLD. A regression analysis indicated that LOI accounted for approximately 3.5% of the variance in numbers of students identified with SLD, which was statistically significant.

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CHAPTER I

INTRODUCTION

The reauthorization of the Individual with Disabilities Act (IDEA) has brought increased attention to Response to Intervention (RTI) models as tools for delivering appropriate interventions to struggling students and reducing numbers of students receiving special education services. Numerous recent articles have been devoted to the debate regarding RTI and its role in identification of children with disabilities, particularly Specific Learning Disability (SLD) (Burns, Appleton, & Stehouwer, 2005; Case, Speece, & Molloy, 2003; Dombrowski, Kamphaus, & Reynolds, 2004; Fuchs, Mock, Morgan, & Young, 2003; Scruggs & Mastropieri, 2002). Prereferral intervention teams (PITs) utilizing a problem-solving model have been examined as examples of existing structures that fit within the RTI paradigm (Burns, Vanderwood, & Ruby, 2005). A number of prereferral intervention models exist, including Teacher Assistance Teams, Intervention Assistance Teams, Instructional Consultation Teams, and Instructional Support Teams (Burns, Vanderwood, et al.). The various models share many characteristics, but differ substantially in factors such as team membership, administrative involvement, structure and format, and use of assessment and data collection procedures (Bahr & Kovaleski, 2006).

Although prereferral intervention teams have been operating in schools for many years, there have been relatively few studies examining their effectiveness, and many studies have been methodologically flawed (Burns, Vanderwood et al., 2005). Existing models have also been criticized for unreliability in implementation. More specifically,

researchers "have generally failed to produce persuasive evidence that classroom-based interventions (1) are implemented with fidelity and (2) strengthen students' academic achievement or improve classroom behavior" (Fuchs et al., 2003). Nevertheless, a number of studies have indicated positive outcomes resulting from problem-solving team models including reduction of special education referrals and placements (Gravois & Rosenfield, 2002), reduction of disproportionate referral and placement of minority students in special education (Gravois & Rosenfield, 2006), provision of instructional support to teachers (Chalfant & Pysh, 1989), and change of procedures for assessing students to enhance academic outcomes (Telzrow, McNamara, & Hollinger, 2000). While outcomes are generally positive, little research exists regarding the specific team factors that lead to these outcomes.

In spite of a lack of definitive studies, researchers have identified a number of factors believed to influence the effectiveness of prereferral intervention teams practicing in schools. In a survey of Instructional Support Teams in Pennsylvania, Bickel et al. (1999) identified several characteristics believed to be important in ensuring successful implementation. They included close involvement of administrative personnel, use of multidimensional assessment methods, use of data to monitor progress, use of data to design intervention plans, team composition, skill of the Instructional Support Teacher, collaborative work with the referring teacher, and active engagement in a problem-solving process built on trust and shared responsibility. Kovaleski (2002) identified a number of factors considered critical to the successful implementation of problem solving teams. Important system factors described were: building level administrative support, use of a team format for problem-solving, and assignment of specific tasks to team

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members. Process factors identified included: use of curriculum based assessment to measure student progress, use of research based intervention practices, use of support teachers to facilitate successful implementation of interventions, work with teachers to facilitate intervention incorporation and fidelity, active involvement of parents, and use of data to make informed decisions about referral for special education evaluations. Although these factors are considered critical to the successful implementation of prereferral intervention teams, according to Kovaleski and Glew (2006), "there is still no empirical evidence regarding which of these many system or process factors of problem-solving teams are causative in mediating successful outcomes" (p. 21). Therefore, research is needed to study how these individual system and process factors influence variables including student outcomes, consumer satisfaction, and school wide measures of success.

One model that has received substantial attention in the literature on prereferral intervention teams is the Instructional Support Team (IST) model in Pennsylvania (Kovaleski & Glew, 2006). The Instructional Support Team (IST) model grew out of earlier pilot programs in Pennsylvania, Teacher Assistance Teams (Chalfant & Pysh, 1989) and Instructional Consultation Teams (Rosenfield, 1985). The primary goals of the IST model are to guarantee an effective continuum of services in every school, to provide collaborative support to teachers working with students who need extra assistance, to screen students who may be in need of special education services, and to assist general education teachers in provision of services to special education students in the classrooms (Kovaleski & Glew). In 1990, the Pennsylvania special education regulations were revised to include the requirement that Instructional Support Teams be implemented in at

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least one elementary school in each of the 501 school districts in Pennsylvania (Kovaleski & Glew). Each school district was required to hire an Instructional Support Teacher, whose responsibilities included assessment, intervention assistance, and facilitation of the process. Mandated team members included the referring teacher, principal, instructional support teacher, and other appropriate members. School districts were provided with stipends for two years, after which expenses were to be covered by each school system's budget. Extensive training was provided to all school teams, and principals and IST teachers were required to attend. Training was based upon a peer coaching model including workshops, onsite demonstrations, and guided practice. Seventy-five state consultants were each assigned ten new schools per year (Kovaleski & Glew). In 1997, the state legislature removed the requirement that schools districts use an IST model, thereby making them optional (Kovaleski & Glew). School districts were required to continue a screening process, but were permitted to use other models, if they chose. All models were required to include components of IST such as assessment of academic levels, development of appropriate interventions, and progress monitoring.

Evaluation of the IST implementation suggested a number of outcomes. Positive outcomes included increase in number of students referred for IST assistance, fewer students referred for special education evaluations in IST schools, and lowered rate of classification of students placed in special education in the category of SLD (Hartman & Fay, 1996). Positive outcomes related to student performance were also observed, but only when their schools implemented the IST process to a high degree (Kovaleski, Gickling, Morrow, & Swank, 1999). It remains unclear what specific factors lead to a high level of implementation and positive student outcomes.

In a recent study conducted for her dissertation, Laverty (2007) used survey methodology to examine the specific prereferral team characteristics that led to improved Level of Implementation (LOI) and reduced numbers of students identified as SLD. The specific characteristics examined included: the funding of trained staff members with responsibility for coordinating the prereferral intervention team process, administrative support, training of team members, and the use of systematic data collection procedures to guide intervention. She utilized a researcher-designed 29-item survey (described below) which was sent to elementary principals in Pennsylvania. The purpose of the current study is a follow-up to Laverty's research to replicate her study with another sample and to further examine team characteristics that lead to successful implementation.

Researchers have long recognized the importance of replication studies (Rosenthal & Rosnow, 1984; Gay, 1996). Studies are susceptible to random error, procedural errors, and recording and computation errors. Likewise, individual differences among participants and potential systematic experimenter effects may influence results (Rosenthal & Rosnow, 1984). Replication research may also be conducted for other reasons, such as addressing shortcomings of previous studies, investigating generalizability of results, examining inconsistencies with prior research, and further testing of the theoretical underpinnings of prior research (Reese, 1999). In short, research replication serves to improve confidence in results. As Gay noted, "The more results are replicated, the more confidence we have in the procedures that produced those results" (Gay, 1996, p. 388).

Results of Laverty's study found that a number of factors were related to higher levels of implementation of the prereferral intervention process. Employment of an instructional support teacher was found to be related to higher LOI. Administrative support in the form of meeting time during school hours and a parent policy encouraging prereferral interventions prior to referral for multidisciplinary evaluation was found to be related to higher LOI. Training was also related to LOI. More specifically, participation in initial IST training and training in differentiated instruction were found to be related to higher LOI. Also, systematic data collection was found to be related to LOI. More specifically, use of CBA and use of data to make decisions about referrals for multidisciplinary evaluations were related to higher LOI. No variables were found to be related to reduced rates of SLD. However, district special education numbers were used in the analysis, which may not have accurately represented the numbers in the individual schools surveyed.

Statement of the Problem

Consistent with Laverty (2007), the purpose of this study was to examine specific variables that are considered to contribute to the effectiveness of IST and other prereferral intervention teams (Bahr & Kovaleski, 2006; Bickel et al., 1999). As previously noted, replication research is considered vital to increasing confidence in results of prior research and expanding upon the current knowledge base. The current study was intended as a replication and extension of the work of Laverty (2007) in her doctoral dissertation. More specifically, the study utilized survey methodology to investigate team processes in Pennsylvania elementary schools following the removal of the IST mandate and replicated Laverty's study with changes in the research questions

based upon her findings. This study sought to determine if Laverty's results could be independently validated utilizing another sample from the same larger population (i.e., public elementary schools in Pennsylvania). The following independent variables were investigated: (1) the role of the instructional support teacher or team facilitator, (2) support from the school administrator, (3) the availability of training for the instructional support teacher or team facilitator, and (4) the use of systematic data collection procedures. The level of implementation of the prereferral intervention process and the number of students receiving special education services for specific learning disabilities were the dependent variables.

Pennsylvania provides a unique example of a state where a specific model of PIT was mandated and implemented throughout the entire state. The subsequent removal of the mandate provided an opportunity to examine the variables that contribute to the IST model being successfully sustained in some districts, despite no longer being required. It also allowed for comparisons between those schools that have continued to use IST and those who have chosen to use other prereferral intervention models. Given the limited research on the specific factors that contribute to PIT effectiveness, the current study may contribute to a better understanding of those factors. More specifically, facilitator skill, administrative support, team training, and systematic data collection were examined as specific variables that are considered important to team success.

<center>Research Questions and Hypotheses</center>

The following research questions and hypotheses were developed to parallel those developed by Laverty (2007). As the purpose of this study is to replicate Laverty's research, it is important that the research questions and hypotheses mirror those presented

by Laverty. In some cases, research questions were modified in response to preliminary results obtained by Laverty.

Research Question 1. Is there a relationship between specific characteristics of the instructional support teacher and level of implementation of the prereferral intervention process?

Hypothesis 1. Schools that continue to employ an instructional support teacher will demonstrate higher level of implementation than schools that do not employ an instructional support teacher.

a. There is a positive relationship between the presence of a full-time instructional support teacher and the level of implementation of the prereferral intervention process.

b. There is a positive relationship between continued staffing of an instructional support teacher who participated in the initial IST trainings and the level of implementation of the prereferral intervention process.

c. There is a positive relationship between the ratio of instructional support teacher/prereferral intervention coordinator and the number of students in the elementary school and the level of implementation of the prereferral intervention process.

Research Question 2. Is there a relationship between specific characteristics of the instructional support teacher and the number of students found eligible for special education services with specific learning disabilities?

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Hypothesis 2. Schools that employ an instructional support teacher will find fewer students eligible for special education services for specific learning disabilities than schools that do not employ an instructional support teacher.

a. There is an inverse relationship between the presence of a full-time instructional support teacher and the number of students with specific learning disabilities placed in special education.

b. There is an inverse relationship between continued staffing of an instructional support teacher who participated in the initial IST trainings and the number of students with specific learning disabilities placed in special education.

c. There is an inverse relationship between the ratio of the instructional support teacher/prereferral intervention coordinator and the number of students in the elementary school and the number of students with specific learning disabilities placed in special education.

Research Question 3. What is the relationship between administrative support of the prereferral intervention process (i.e., written policy and/or procedure requiring prereferral interventions, attendance at prereferral intervention meetings, and scheduling meetings during teacher contracted time) and level of implementation of the prereferral intervention process?

Hypothesis 3. Schools with higher levels of administrative support will demonstrate higher levels of implementation of the prereferral intervention process than schools with lower levels of administrative support.

a. There is a positive relationship between the administrative requirement that students participate in an IST/prereferral intervention team process and the level of implementation of the prereferral intervention process.

b. There is a positive relationship between the percentage of time principals attend the IST/prereferral intervention team meetings and the level of implementation of the prereferral intervention process.

c. There is a positive relationship between the administrative decision to schedule IST/prereferral intervention team meetings during regular teacher-contracted hours and the level of implementation of the prereferral intervention process.

d. There is a positive relationship between the presence of a written policy or procedure that strongly encourages parents to refer students for prereferral interventions before being referred for a multidisciplinary evaluation and the level of implementation of the prereferral intervention process.

Research Question 4. What is the relationship between administrative support of the prereferral intervention process (i.e., written policy and/or procedure requiring prereferral interventions, attendance at prereferral intervention meetings, and scheduling meetings during teacher contracted time) and the number of students found eligible for special education services with specific learning disabilities?

Hypothesis 4. Schools with high levels of administrative support will find fewer students eligible for special education services for specific learning disabilities than schools with lower administrative support.

a. There an inverse relationship between the administrative requirement that students participate in an IST/prereferral intervention team process and the number of students with specific learning disabilities placed in special education.

b. There is an inverse relationship between the percentage of time principals attend the IST/prereferral intervention team meetings and the number of students with specific learning disabilities placed in special education.

c. There is an inverse relationship between the administrative decision to schedule IST/prereferral intervention team meetings during regular teacher-contracted hours and the number of students with specific learning disabilities placed in special education.

d. There is a positive relationship between the presence of a written policy or procedure that strongly encourages parents to refer students for prereferral interventions before being referred for a multidisciplinary evaluation and the number of students with specific learning disabilities placed in special education.

Research Question 5. What is the relationship between team training and level of implementation of the prereferral intervention process?

Hypothesis 5. Elementary school teams that access training in the prereferral intervention process will demonstrate higher levels of implementation of the prereferral intervention process than schools that do not access training.

a. There is a positive relationship between number of trainings related to the prereferral intervention process and the level of implementation of the prereferral intervention team process.

b. There is a positive relationship between the types of trainings related to the prereferral intervention process and the level of implementation of the prereferral intervention process.

Research Question 6. What is the relationship between team training and the number of students found eligible for special education services with specific learning disabilities?

Hypothesis 6. Elementary school teams that access training in the prereferral intervention process find fewer students eligible for special education services for specific learning disabilities than schools that do not access training.

a. There is an inverse relationship between number of trainings related to the prereferral intervention process and the number of students with specific learning disabilities placed in special education.

b. There is an inverse relationship between the types of trainings related to the prereferral intervention process and the number of students with specific learning disabilities placed in special education.

Research Question 7. What is the relationship between the use of systematic data collection and the level of implementation of the prereferral intervention process?

Hypothesis 7. Elementary schools that utilize systematic data collection procedures for decision-making will demonstrate higher levels of implementation of the

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prereferral intervention process than schools that do not utilize systematic data collection procedures.

Research Question 8. What is the relationship between the use of systematic data collection and the number of students found eligible for special education services with specific learning disabilities?

Hypothesis 8. Elementary schools that utilize systematic data collection procedures for decision-making have fewer students with specific learning disabilities placed in special education than schools that do not utilize systematic data collection procedures.

Research Question 9. Is there a relationship between level of implementation of the prereferral intervention process and the identification and placement of students with specific learning disabilities?

Hypothesis 9. There is an inverse relationship between the level of implementation of the prereferral intervention process and the number of students with specific learning disabilities placed in special education.

Research Question 10. Is there a relationship between high levels of administrative support and levels of systematic data collection, use of instructional support teachers, and training of team members?

Hypothesis 10. Elementary schools with high levels of administrative support will have higher levels of systematic data collection, use of instructional support teachers, and training of team members.

Figure 1 illustrates the hypothesized relationships between the independent and dependent variables.

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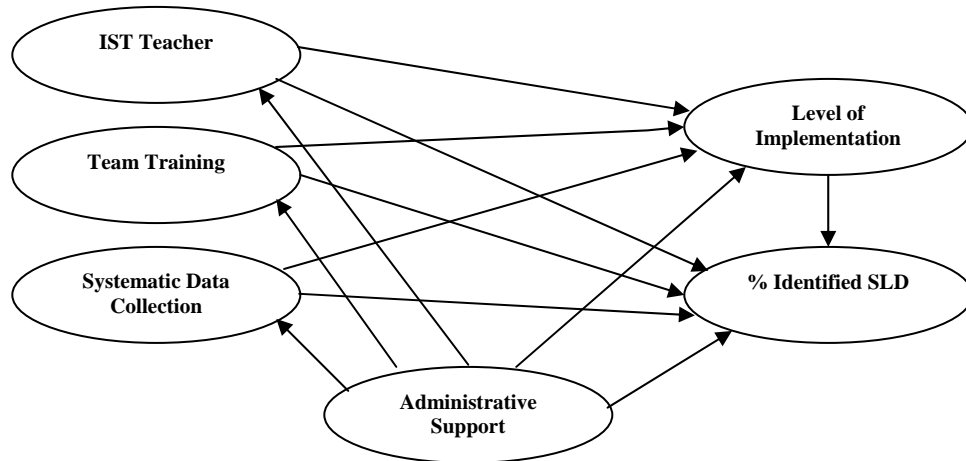
Figure 1. Research path diagram of the latent variables.

Problem Significance

Educators and lawmakers have focused more intently on prereferral interventions

with the advent of the RTI model and federal legislation (e.g., No Child Left Behind,

IDEA 2004). With increased focus on student achievement, educators are charged with

the challenge of educating students with special needs in regular education classrooms.

One of the provisions of IDEA 2004 is the requirement that children receive research-

based interventions prior to being found eligible for special education services.

Prereferral intervention team models, including the IST model, provide a means for

determining if appropriate instruction has been provided prior to referral for special

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education evaluation. However, more research is needed to determine what factors contribute to effective and sustainable PITs.

<center>Definitions of Terms</center>

As this is a replication study, it is important that variables and terms used be identical or similar to those used by Laverty (2007). Definitions of terms utilized in this study are provided below.

Curriculum-Based Assessment (CBA): An assessment method where a student's instructional needs are measured using materials from the curriculum. The purpose of CBA is to match a student's instructional level to appropriate instructional materials and methods. Instructional decision making is the primary focus of CBA (Gravois & Gickling, 2002).

Curriculum-Based Measurement (CBM): "Brief assessments, typically lasting from 1 to 5 minutes that are used to measure progress in acquiring basic academic skills in math, reading, writing, and/or spelling. The child's score can be graphed to provide teachers with a quick visual check of how the student is performing compared to expectations of performance" (Laverty, 2007, p. 14). Teachers may administer CBMs regularly to monitor student progress and evaluate intervention efficacy (Shinn, 2002).

Evaluation: The full and individual evaluation that is required by IDEA to determine whether a student requires specially designed instruction due to two factors: the presence of a disability and the need for extra support that cannot be adequately provided in the regular education classroom.

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General Education: This term refers to those services provided in the regular education classroom.IDEA 2004: The Individuals with Disabilities Education Act, which ensures special education and related services to students with disabilities (IDEA 2004).

Instructional Support Teacher: As defined by Laverty, a support teacher with responsibility for facilitating the IST process. According to Laverty:

The instructional support teacher coordinated the IST process within their building, conducted curriculum-based assessments, collected data, scheduled meetings, assisted the referring teacher with suggested classroom modifications and accommodations, and frequently provided direct instructional services to determine instructional level and to appraise whether interventions provided through the general education program could adequately meet a student's academic/behavioral needs without a special education placement. Although the regulations refer to this staff person as a support teacher, to avoid confusion with other support teacher roles within the elementary school, the title instructional support teacher is chosen for this study" (Laverty, 2007, p. 14-15).

Instructional Support Team (IST): According to Laverty (2007) IST is defined as: a state-mandated school-based group that included the building principal, the student's teacher(s), the instructional support teacher, and other professionals, such as elementary counselors, school psychologists, or special education teachers, who could provide consultative assistance. The purpose of the team was to provide support to general education teachers using a problem-solving model so that interventions could be introduced into the regular education classroom before a referral was made for special education services. Students were

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systematically screened and monitored using assessment and instructional

techniques (p. 15).

IST Initiative: "A statewide training project in operation from 1990 – 1997 designed to assist Pennsylvania in the implementation of Instructional Support Teams" (Laverty, 2007, p. 15).

Intermediate Units: "Twenty-nine educational agencies spread geographically across the State of Pennsylvania that assist with technical assistance, staff development, and special education programs and services to local school districts" (Laverty, 2007, p. 15).

Interventions: Learning and behavioral strategies or modifications in the delivery of instruction, designed to improve students' academic or behavioral functioning.

Level of Implementation: The degree to which a prereferral intervention team adheres to the steps of the problem-solving process, appropriate assessment procedures, and treatment fidelity.

No Child Left Behind Act (NCLB): Federal legislation, enacted in 2001, which emphasizes local control, standards-based testing, research-based instructional methods, and increased options for parents whose children are not making adequate academic progress in their current educational placement.

Prereferral Intervention: "An intervention developed to maintain students experiencing academic or behavioral difficulties within their regular education classroom without special education services. However, special education students could also be referred if the intervention did not relate to those areas expected to be addressed through their Individual Education Plans (IEPs)" (Laverty, 2007, p.16).

Prereferral Intervention Team (PIT): A group of teachers, specialists, and administrators who meet to help solve academic and behavioral problems of students referred for assistance. The goal of a PIT is to provide classroom interventions to assist students before they are referred for special education evaluations.

Response to Intervention: RTI has been defined as, "the practice of providing high-quality instruction and interventions matched to student need, monitoring progress frequently to make decisions about changes in instruction or goals and applying child response data to important educational decisions" (NASDSE, 2006, p. 3).

Special Education: Specially designed instruction and services to meet the needs of children with disabilities that extends beyond what is typically provided in the general education classroom.

Title I: A federal education program that provides additional financial support to states' and local school districts' efforts to promote academic success for students experiencing academic difficulties, particularly disadvantaged students.

Assumptions

As was true in Laverty's study (2007), given the use of a survey to gather data, this study first assumes that respondents to the survey have knowledge regarding the operation of the IST process in their school. Second, as noted by Laverty, studies using surveys depend upon the accuracy of the individual responding to the survey questions to ensure that responses are not unduly influenced by the need for respondents to be viewed favorably. Third, this study assumes that respondents are interpreting questions in comparable ways.

Limitations

As Laverty (2007) explains, because this study utilizes a survey method for data collection, the percentage of returned surveys significantly influences how much can be learned from the results. Also, the purpose of the study is to examine implementation of IST teams in public elementaries in Pennsylvania; thus, the generalizability of results is limited. It is possible that those districts that choose to respond will be those that have been more successful in their implementation of prereferral intervention teams and/or the IST model. Thus results may be biased in favor of more successful school teams.

Summary

Prereferral intervention teams have been operating in schools for decades; however, research regarding effectiveness of PITs is limited, and it is unclear which specific factors contribute to success of school teams. Researchers have proposed several factors believed to lead to improved team functioning, including the hiring of a dedicated staff member (i.e., instructional support teacher) to implement the process, support from the building-level administrator, effective team training, and use of systematic data collection procedures. These factors are believed to positively impact the level of implementation of PITs and reduce number of children identified with specific learning disabilities.

The goals of this study are to use survey methodology to investigate the relationship between specific variables related to team functioning (i.e., administrative support, instructional support teacher, team training, and systematic data collection) and two variables related to team performance: level of implementation and number of students identified with specific learning disabilities. The purpose of the proposed study

is to replicate the study previously conducted by Laverty and independently test the

survey results with another sample drawn from the same target population—public

elementary schools in Pennsylvania.

CHAPTER II

LITERATURE REVIEW

This chapter begins with a general review of the literature related to Response to Intervention (RTI) and Prereferral Intervention Teams (PITs). Research relating to the efficacy of PITs is discussed, and specific components believed to contribute to the effectiveness of PITs are addressed. More specifically, studies related to the proposed independent variables are reviewed. Research related to the skills of the instructional support teacher or team facilitator, administrative support, systematic data collection, and team training are discussed. The relationship of these factors to level of implementation of PITs and reduction in special education placement rates is explored. The literature review continues with a discussion of the Instructional Support Team (IST) initiative in Pennsylvania. The history of the IST initiative is reviewed and research supporting the effectiveness of ISTs is discussed.
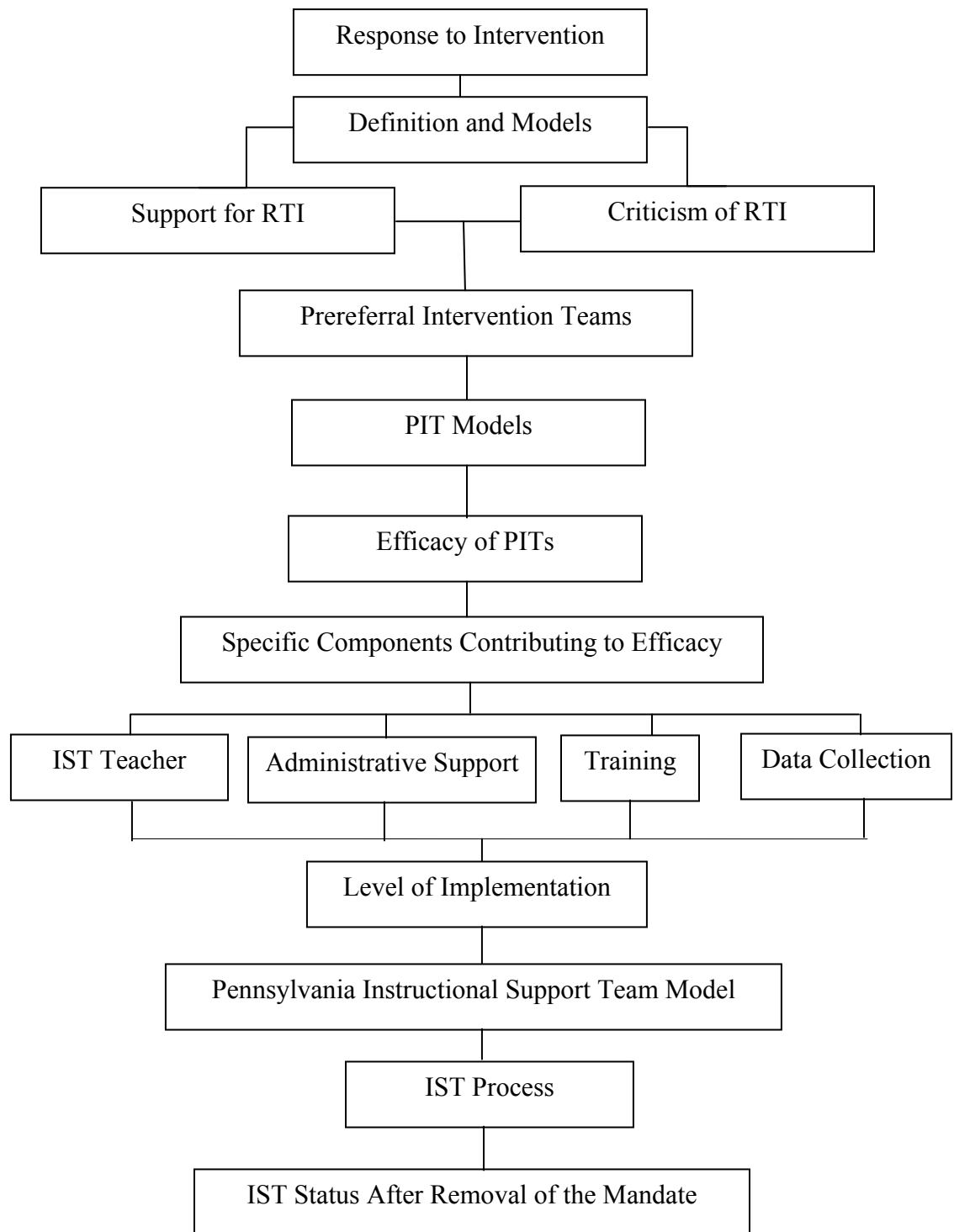
Figure 2. Literature review flow chart

Response to Intervention

Prereferral Intervention Teams (PITs) have been operating in schools for decades, with the goal of providing appropriate interventions to students before they are referred for comprehensive psychoeducational evaluations and consideration for special education eligibility. Most PITs use a problem-solving approach to assess student needs and provide appropriate individualized interventions prior to referring students for evaluation. In recent years, a great deal of attention has been aimed at the Response to Intervention (RTI) model for identification of specific learning disabilities (SLD). The focus on RTI continues to increase with its inclusion in the revised Individuals with Disabilities Education Act (IDEA 2004). IDEA 2004 encourages districts to utilize an RTI model as part of the identification process. Response to Intervention models measure baseline data, provide research-based interventions, and continually monitor academic progress to determine if students make adequate progress. In some districts those students who do not adequately respond to instructional interventions are considered for special education eligibility. In others, RTI is a necessary precursor to referral for special education evaluation.

Although a single definition of RTI has not yet been established, most current models of RTI include the following key features: group problem-solving, close monitoring of student progress, implementation of research-based individualized interventions, and provision of special education services only after a student fails to respond adequately to the prescribed interventions (Burns, Appleton, et al., 2005). Response to Intervention has gained popularity as the use of ability-achievement

discrepancy models has been the subject of intensifying criticism. Recently, a fiery

debate regarding appropriate identification of students with specific learning disabilities

(SLD) has raged in the school psychology and special education literature. According to

Kavale and Forness (2000), "the failure to produce a unified definition has meant that LD

lacks two critical elements: understanding—a clear and unobscured sense of LD—and

explanation—a rational exposition of the reasons why a particular student is LD" (p.240).

Critics assert that use of discrepancy models is invalid and should be abandoned due to

numerous methodological and technical problems. The use of standardized tests has been

denounced for psychometric properties which result in failure to identify children early

enough to intervene effectively (Case et al., 2003; Vaughn, Linan-Thompson, &

Hickman, 2003). Researchers have also noted that intelligence has not been found to be

predictive of reading achievement and that meaningful differences have not been found

between children with significant discrepancies and poor readers without IQ/achievement

discrepancies (Case et al.; Fletcher, Francis, Rourke, Shaywitz, & Shaywitz, 1992;

Scruggs & Mastropieri, 2002; Vaughn, et al.). Technical problems such as measurement

error and statistical regression and unreliability of discrepancy scores have also been

cited as fatal flaws of the discrepancy model (Scruggs & Mastropieri; Vaughn, et al.).

Among the most damaging criticisms of the discrepancy criteria is that it does not

effectively discriminate children who have learning disabilities from those who do not

and that it does not lead to effective instructional interventions or remediation

(Dombrowski et al., 2004). Finally, the lack of consistency in SLD identification

procedures between states and districts not only affects special education eligibility of

individual students, but also affects research findings because of sample selection problems (Dombrowski et al.).

In a survey of 113 editorial board members of four learning disability journals, Speece and Shekitka (2003) found that 69.8% of the scholars surveyed agreed that ability-achievement discrepancy should not be a consideration in learning disability identification. Reading achievement was endorsed by 83.7% of the respondents as part of the definitional criteria for SLD. Likewise, phonemic awareness (79.4%) and treatment validity (67.3%) were supported by a majority of those surveyed. The use of discrepancy between IQ score and reading achievement had the fewest number of respondents agreeing with its inclusion in the definitional criteria (30.2%). It should be noted that all researchers have not advocated for total abandonment of psychoeducational assessment for identifying students with learning disabilities. For example, Scruggs and Mastropieri (2002) argued that elimination of the concept of learning disabilities due to current methodological problems equates to "throwing the baby out with the bathwater" (p. 165).

As discrepancy models have lost favor, RTI has gained support as a tool for identifying students with specific learning disabilities. Many view RTI as a viable alternative to comprehensive psychoeducational evaluations, asserting that cognitive testing is no longer necessary, or even appropriate (Dombrowski et al., 2004). Equally vociferous arguments have erupted from researchers who question the validity of RTI as a stand-alone method for disability determination and argue for the necessity of comprehensive evaluations in helping determine student needs. More recently, a combined approach has been advocated, with problem-solving RTI approaches being implemented as a necessary precursor to comprehensive evaluations, thereby reducing

the need for unnecessary testing (Willis & Dumont, 2006; Wodrich, Spencer, & Daley, 2006).

The RTI model has received support from many key groups. In 2002, the President's Commission on Excellence in Special Education (PCESE, 2002) emphasized prevention and outcomes in special education. The Commission argued that special education eligibility decisions should be based on RTI rather than psychoeducational test results. The National Association of State Directors of Special Education (NASDSE) recommended that RTI be utilized in general education, as well as remedial and special education decision-making (NASDSE, 2006). The National Association of School Psychologists (NASP) has advocated the use of a three-tiered model, based on dual eligibility criteria of significantly low achievement and inadequate response to intervention (NASP, 2003). The first tier is comprised of high quality instructional and behavioral supports for all students, including ongoing progress monitoring and research-based instructional supports. The second tier includes targeted services for those students who demonstrate low academic performance and slow progress. When students do not make adequate progress in Tier 2, they move on to the third tier, and a comprehensive multi-disciplinary evaluation is utilized to determine eligibility for special education services (NASP). The recent reauthorization of the Individuals with Disabilities Act (IDEA 2005), also allowed for RTI as an alternative to discrepancy-based eligibility criteria. However, the regulations stopped short of requiring RTI, stating that districts have the option of using RTI as a part of the eligibility decision making process, but are not required to do so.

In addition to support from public agencies and organizations, RTI has received a great deal of attention in the professional literature. Supporters assert that RTI addresses many of the ills attributed to the discrepancy model of identification of learning disabilities. More specifically, RTI proponents argue that it provides more timely help to a larger number of students, reduces special education enrollment and costs, limits need for administration of intelligence tests, and avoids the use of potentially harmful labels (Fuchs et al., 2003). Furthermore, RTI is described as an effective method of discriminating students with disabilities from students who display poor achievement due to inadequate prior instruction (Fuchs et al., 2003). Additional advantages of RTI models include provision of supplemental instruction to large numbers of students at risk for academic difficulties, ongoing progress monitoring, and reduction of "the many biases inherent in traditional referral systems that depend considerably on perceptions and interpretations of classroom teachers" (Vaughn, et al., 2003).

Although recent published research supports RTI as a viable alternative to ability-achievement discrepancy models, the debate is far from over. Many criticisms and concerns regarding the use of RTI, particularly as a stand-alone method for identifying SLD, have been voiced. Critics have cited the dearth of examples of systematically applied RTI models (Vaughn, et al., 2003) and the lack of evidence that interventions implemented by problem-solving approaches are implemented with fidelity or improve academic achievement or behavior (Fuchs et al., 2003). Other criticisms include the lack of clear guidance about how long students must remain unresponsive before receiving effective remediation (Fuchs et al., 2003) and doubts whether RTI can be implemented within the span of a single year (Vaughn, et al.). Researchers also expressed concerns that

teachers do not receive the necessary training to enable them to effectively implement

appropriate interventions with students with SLD (Semrud-Clikeman, 2003). The

common thread among most criticisms of RTI is simply that not enough research has

been done to warrant use of RTI as the primary means of identifying learning disabilities.

Many critics of RTI agree that a systematic prereferral intervention process is a necessary

precursor to a comprehensive evaluation. However, some critics such as Kavale, are not

willing to take "the great conceptual leap necessary for nonresponsiveness to be

transformed into SLD" (Batsche, Kavale, & Kovaleski, 2006). Many unanswered

questions remain including: What criteria should be applied to determine if a child is

responding adequately to interventions? What leadership is needed to ensure that RTI is

implemented appropriately? Are parents and other stakeholders ready for a

noncategorical model of diagnosis and service delivery? Are intervention models

validated? Are personnel adequately trained to implement RTI models? How many

children would be identified as nonresponders? (Burns & Ysseldyke, 2005; Burns,

Appleton, et al., 2005). According to Burns, Appleton, et al. (2005), "research data are

needed to answer these questions and to determine if RTI is worthy of designation as

scientifically based practice" (p. 383).

<div align="center">Prereferral Intervention Teams</div>

Although the use of problem-solving in an RTI model for special education

eligibility determination is a relatively recent development, the use of problem-solving

models as part of a prereferral intervention process has a long history. According to

Telzrow, et al. (2000), "for more than a decade, problem-solving approaches have been

influential in shaping assessment and consultation activities in educational settings."

<div align="center">28</div>

Prereferral intervention teams address student needs outside the context of special education through a problem-solving process, utilizing interventions that include instructional modifications in the regular education classroom (Truscott, Cohen, Sams, Sanborn, & Frank, 2005). According to Welch, Brownell, and Sheridan (1999), the term *team* means "shared responsibility in problem-solving and decision making" (p. 37). Thus, in the school setting, teaming implies that professionals from the subdisciplines of special education, school psychology, school counseling, social work, and other related services work with regular education teachers to develop interventions (Welch, Brownell, & Sheridan, 1999). Collaborative problem-solving models operate with three assumptions: all children can and will learn, collaboration is the foundation for problem-solving, and the focus is on solving the child's problem rather than finding, labeling, or "admiring" it (Allen & Graden, 2002, p. 568). Thus, all assessment activities should be directed at planning interventions.

A number of different models and definitions of prereferral intervention teams have been proposed by researchers. The most common models discussed in the literature include Teacher Assistance Teams, Instructional Support Teams, Intervention Assistance Teams, Mainstream Assistance Teams, and Instructional Consultation Teams (Burns & Symington, 2002; Burns, Vanderwood, et al., 2005). Most share common features, but there are significant differences among models. These differences include the team's status within the state or district (e.g., mandated, encouraged, or choice of district), team membership, format and structure, administrative involvement, participation by specialists, assessment methods and tools, and other characteristics (Buck, Polloway, Smith-Thomas, & Cook, 2003; Bahr & Kovaleski, 2006). Teams also differ in the

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terminology used to describe the steps in the process and who takes ownership of leading

the process (i.e., special education, general education, or student services staff).

Prereferral intervention teams may also vary in types of problems addressed, as well as

the level of involvement of team members in assuring implementation of recommended

strategies (Buck et al.). Welch, Brownell, and Sheridan (1999) operationally defined

school-based problem solving teams as "an indirect service delivery approach consisting

of three or more educational professionals who share the responsibility of working with a

colleague or family member to develop and evaluate an action plan to address academic

or behavioral problems or to meet some other specific goal" (p. 38). Fuchs et al. (2003)

described problem-solving models as processes that generate solutions by evaluating

student responsiveness to a multi-step process comprised of problem identification,

analysis, implementation, and evaluation. They characterized problem-solving models as

being inductive, utilizing a trial and error approach including careful data collection, and

including a triad comprised of the consultant, the teacher, and the student. Bahr and

Kovaleski (2006) outlined the steps of the problem-solving model as follows: (a) request

for assistance, (b) analysis of the presenting problem, (c) precise statement of the

problem, (d) setting of a performance goal, (e) identification and selection of an

intervention, (f) support of the strategy in the classroom, (g) monitoring of the student's

progress during the intervention, and (h) evaluation of the outcomes of the intervention.

Buck and colleagues (2003) described four defining features of PITs. First they use a

preventative process, which occurs before formal evaluation for special education

eligibility. Second, PITs use a team-based problem-solving approach. Third, teams use an

approach that is oriented toward action research with pre- and post-testing. Fourth, PITs

use an intervention process focused upon ensuring the success of students and teachers within the general education curriculum and environment. Although prereferral intervention team models may differ in how they are implemented, most share key components including a multi-step consultative problem-solving approach, data collection procedures, focus on achievement of student academic goals, and provision of interventions in the regular education setting.

In spite of the increased focus on prereferral intervention, not all states or districts require that PITs be in place. In a survey of state departments of education, Carter and Sugai (1989) found that 34 states recommended or required teams that focused on prereferral interventions. A more recent survey (Buck et al., 2003) indicated that 43% of states required prereferral intervention processes, whereas 29% recommended them. A 2005 survey (Truscott et al., 2005) found that 69% of states mandated prereferral interventions of some kind, 41% specifically mandated PITs, and 44% recommended PITs. Therefore, a total of 86% either required or recommended teams. Eighty-five percent of the schools surveyed had PITs, with an average team numbering nine members

Buck et al. (2003) noted that other changes had occurred since the Carter and Sugai survey. These changes included the more active participation of school counselors, as well as increased likelihood of teams recommending instructional modifications. State level administrators also perceived the teams in their states as achieving a higher level of success than previously reported (Buck et al.). However, Truscott et al. (2005) found that teams surveyed shared few common goals; in fact, the only goal shared by more than a quarter of teams was to increase students' academic performance, which was reported by 28% of teams. The authors also reported that the most commonly reported PIT

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interventions (e.g., peer tutors, counseling, out of class remediation, seating changes, and decreased workload) did not require the classroom teacher to alter classroom instruction.

A number of researchers have demonstrated the potential efficacy of PITs (Truscott et al., 2005). A meta-analytic study of four models (Heartland, Ohio, Pennsylvania Instructional Support Teams, and Minneapolis) indicated "strong effects in improving student learning and systemic variables" such as increases in academic skills and reduction in referrals and placements (Burns, Appleton, et al., 2005). Teams utilizing the Instructional Consultation (IC) model have demonstrated overall reduction of special education referrals and placements and reduction in referrals and placements of minority students in special education (Gravois & Rosenfield, 2006). In addition to effects on special education referrals and placements, PITs have demonstrated improved student performance and improved teacher attitudes and skill in working with students who are difficult to teach (Truscott et al.). Teams have also shown potential for facilitation of individual interventions designed to directly address student needs (Telzrow, et al., 2000). According to Burns and Symington (2002) PITs are effective in positively influencing special education service delivery practices, student performance outcomes, teacher skills and attitudes, as well as classification rates.

Specific Components of Team Effectiveness

Though research has demonstrated the efficacy of PITs when they are implemented with fidelity, implementing a prereferral intervention team is a complex task. As Buck et al. (2003) noted, "It could be argued that prereferral intervention is one of the most inconsistently applied processes in education" (p.350). Successful implementation of PITs is dependent on both system and process factors, which vary

from team to team. In a survey of Instructional Support Teams in Pennsylvania, Bickel et al. (1999) found a number of features that were believed to be important to successful team implementation. Essential survey components included close involvement of administrative personnel, use of multidimensional assessment methods, use of data to monitor progress, use of data to design intervention plans, team composition, skill of the Instructional Support Teacher, collaborative work with the referring teacher, and active engagement in a problem-solving process built on trust and shared responsibility. Kovaleski (2002) also described a number of factors believed to be critical to team effectiveness. The first is the format of the team, which allows for the team members to share responsibility for developing and implementing recommendations. A second key system factor is administrative leadership. Administrative support in the form of coordination and allocation of resources is believed to be crucial in ensuring that teams function well. Likewise, administrative support of the problem-solving model is a critical element in ensuring acceptance by the instructional staff. A third system factor is the mandate of pre-referral intervention by the state or district. When teams are mandated, they tend to be implemented and maintained with more fidelity. A fourth system factor is assignment of staff to the PIT. Providing dedicated staff members, such as team facilitators and/or support teachers ensures that the process is given the time and attention necessary for successful implementation. The fifth important system factor is ensuring accountability through collection of data. The last system factor is training, as all team members must be trained in consultative collaboration skills, as well as curriculum-based assessment, and research-based instructional strategies. Additional key factors include, curriculum-based assessment, research-based practices, use of support teachers,

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providing intervention support to teachers, appropriate screening for further evaluation, and active parent involvement. The authors also noted that decisions about referrals for psychoeducational evaluations should be based on data obtained from the PIT process. (Kovaleski, 2002; Kovaleski & Glew, 2006).

Numerous barriers to effective implementation are believed to encumber prereferral intervention teams (Burns & Symington, 2002). These barriers may include insufficient time, lack of useful intervention strategies, and lack of readiness to initiate the team process. Additional possible barriers include potential interference with the special education process, insufficient impact on student performance, loss of funding from reduced special education enrollment, cost of intervention programs, loss of jobs, resistance to change, poor planning, and increased job responsibilities without increased compensation.

When PITs are implemented successfully, positive effects are observed on both student variables and systemic variables (Burns & Symington, 2002). When interventions are successful, students improve on outcomes such as time on task, task completion, behavior ratings, and observations of target behaviors. Likewise, systemic outcomes include reduced referrals to special education, reduced special education placements, reduction in the percentage of students identified as special education, reduced retentions, and increase in consultation and counseling services by school psychologists (Burns & Symington). In spite of documented positive outcomes, "there is still no empirical evidence regarding which of these many system or process factors of problem-solving teams are causative in mediating successful outcomes" (Kovaleski & Glew, 2006). Future research is needed to study the effects of PITs on dependent variables including

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performance of individual students, consumer satisfaction, and schoolwide indicators (Kovaleski & Glew).

Though a number of system and process variables have been described in the literature, the current study focuses on the following factors: skill of the instructional support teacher, administrative support, training related to the prereferral process, systematic data collection, and level of implementation of the prereferral intervention process.

Instructional Support Teacher

According to Doll et al. (2005) prereferral intervention teams that are effective have designated facilitators who are responsible for organizing meetings, monitoring status of cases, and developing and maintaining a system for ensuring accountability of team members. Many current PIT models, including Instructional Support Teams and Instructional Consultation Teams, require a team facilitator who coordinates team functions and helps to develop the team members' consultation skills (Gravois, Knotek, & Babinski, 2002). In a recent study, Buck et al. (2003) found that the job titles of team leaders vary, with 59% of teams led by general education teachers, 45% led by counselors, 47% led by special education teachers, 31% led by school psychologists, and 49% led by other staff members such as administrators, social workers or student service coordinators.

Doll et al. (2005) studied 13 PITs using self-assessment surveys, case evaluation activities, and focus group discussions. They found that teams reported that having team leaders who demonstrated expertise in data collection and analysis addressed team members' feelings of inexperience in those areas. Likewise, having experts in team

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consultation join with their teams was perceived as important. According to Knotek and Sandoval (2003), "The primary task of the consultant is to help the consultee pinpoint critical information and then consider multiple views about well-being, development, intrapersonal, interpersonal, and organizational effectiveness appropriate to the consultee's work setting" (p. 245).

In-class demonstrations and modeling are also an important part of the role of the instructional support teacher. Helping to establish the intervention in the regular classroom ensures treatment fidelity (Kovaleski, 2002). In a survey of 354 elementary teachers, those who received in-class demonstrations of recommended interventions rated those interventions as helpful, comfortable, and effective, whereas teachers who had not received demonstrations did not report them as potentially beneficial (Lane, Pierson, Robertson, & Little, 2004). Likewise, teachers who received follow-up support for interventions rated the support favorably, whereas teachers who did not receive the support perceived it as less likely to improve the effectiveness of the interventions (Lane, Pierson, et al., 2004). Tucker and Sornson (2007) noted that, "the collaborative culture needed for effective instructional support takes careful and ongoing work" (p.278). Furthermore, requesting assistance from another professional in the building requires a level of trust from a teacher. Teachers must feel that their experience will be nonjudgmental and constructive. Thus, the role of the instructional support teacher/ team facilitator appears to be an important component of a highly functioning PIT. A dedicated staff member with time to provide team coordination, consultation, training, modeling, and follow-up helps to ensure that the team is able to perform at a high level.

Administrative Support

In addition to the instructional support teacher, the role of the school administrator is considered critical to team success (Chalfant & Pysh, 1989). Kovaleski et al. (1999) found that schools that demonstrated high levels of implementation also had strong principal leadership. In a qualitative investigation of 12 first year high school teams, Rubinson (2002) found that school teams that lacked "visible and active principal support" were less likely to thrive (p. 207). Though most principals provided verbal support through advocacy at faculty meetings, direct attention and support from the administrator was lacking in schools with teams that failed to thrive. In an article summarizing lessons learned from 10 years implementing their Problem-Solving Model (PSM) in Minneapolis, Lau et al. (2006) emphasized the importance of the administrative role, noting, "it is ongoing administrative support that will ultimately have the greatest impact upon the success of the PSM" (p. 123). They noted that the primary role of the administrator in implementing problem solving is to act as a "change agent" (p. 123). The principal is instrumental in conveying that problem solving is not a short-term trend, but requires a long-term commitment. Interestingly, in a study of five PST models, Burns and Ysseldyke (2005) found that only the Instructional Support Team and Intervention-Based Assessment models *required* principal involvement. Although half of all PSTs are led by a school administrator or student service coordinator, research has suggested that teachers prefer administrative support that does not take the form of team participation or leadership (Sindelar, Griffin, Smith, & Watanabe, 1992). Rather, administrative support is considered to be most effective when it takes the form of finding resources necessary to improve classroom instruction, aiding teams in finding the time needed to perform

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their duties, scheduling trainings, and evaluating implementation (Kovaleski, 2002; Marston, Muyskens, Lau, & Canter, 2003).

Perhaps the most important element of administrative support is verbal support of the problem-solving model. Effective administrators show support for the problem-solving model by communicating the expectation that teachers will collaborate with team members and work to improve instruction. They also give the definitive message that interventions are necessary before the consideration of special education eligibility (Kovaleski, 2002). In a study of Teacher Assistance Teams (TATs), Kruger et al. (1995) found that teacher acceptance of TATs was strongly influenced by support of the administrator. In short, the administrator is a key figure in setting the stage for a PST to be integrated into the belief system, culture, and practices of his or her school.

Reducing the time constraints placed on team members is an important role of the school administrator. The ability of teams to make decisions may be negatively affected by time constraints (Iverson, 2002). Teams that are able to meet regularly and on a specific schedule are more quickly accepted as part of school culture. Time factors are the most frequently reported problem for PSTs, and administrators have cited teacher willingness to spend extra time and effort as a key element contributing to team effectiveness (Aksamit & Rankin, 1993). Studies evaluating fidelity of team implementation have indicated that the time demands required for team meetings and procedures reduced the feasibility of their operating successfully (Fuchs & Fuchs, 1998). Later studies advocated the use of consultant-consultee dyads to rather than larger team meetings to reduce team time constraints (Telzrow, et al., 2000). Positive working conditions, including adequate time allowances, increase team effectiveness, and

successful teams use time efficient problem-solving and documentation processes (Doll et al., 2005).

In summary, research suggests that successful teams have principals who have a demonstrated commitment to the practice of prereferral consultation and provide support in the form of staff time, training, and endorsement of team practices and philosophy. However, "in too many cases, administrative support is only verbal, and the resources and time provided to consultation teams remain inadequate" (Doll et al., 2005, p. 130). Though there is no replacement for time invested by the school administrator, this is often a difficult resource to access (Lau et al., 2006). More research is needed to investigate the specific administrator characteristics that lead to successful team implementation. Rafoth & Foriska (2006) noted that, "we may need to further investigate the relationship between specific variables that contribute to an interactive model of principal-teacher influence, shared instructional leadership, and specific administrative support mechanisms that lead to effective and successful teams" (p. 135).

Training Related to the Prereferral Process

According to Truscott et al. (2005), "there is a substantial disconnection between PITs as reported in the literature and the PITs that exist in most schools" (p. 139). One element that is present in university supported teams is training of team members in the problem-solving process. In a survey of state educational agency personnel, Buck et al. (2003) found that 63% of state agencies responding provided training to professionals participating in the prereferral process, whereas 35% did not. Thirty-two states indicated that training was provided. Of those states, 81% reported that training was conducted by local school districts, 47% reported that training was conducted by a state agency, and

47% reported that training was provided by individual schools. Thirty-four percent responded that training was provided by other entities, including special education resource centers, private consultants, and professional development centers.

In light of inconsistent training practices, Burns and Ysseldyke (2005) questioned whether there are adequately trained personnel to implement a problem-solving RTI model. They noted that training is an important component of implementation for the four models they investigated (Iowa's Heartland, Ohio's Intervention-Based Assessment, Pennsylvania's Instructional Support Team, and Minneapolis Public Schools' Problem-Solving Model), as each model provided phases of training including broad training for general education teachers and specific training of team members. Other authors have questioned whether state departments of education provide enough training to the PITs they require or recommend (Truscott et al., 2005). Further questions remain as to whether it is feasible to provide enough on-site training to ensure integrity of consultation practices, leading to the conclusion that quality team practices may depend on school professionals receiving sufficient preservice training (Doll et al., 2005).

Teams must not only receive sufficient training time, but the content of the training is also critical. Gravois, et al. (2002) asserted that "increased application of consultation as a service delivery model will require both a change in organizational assumptions and policies, as well as development of skills and knowledge of practitioners." Even though most states require or recommend PITs, they provide districts with little guidance on implementation (Truscott et al., 2005). This is a particularly damaging omission, given the importance of training in effective implementation. Training should include use of curriculum-based assessment, behavioral assessment,

differentiated instruction, collaboration, and steps in the consultative process (Burns, Vanderwood, et al., 2005).

Training of team members needs to include development of skills related to team processes as well as intervention and progress monitoring. Team processes include "group structure and communication dynamics that enhance, or detract from intervention planning and implementation" (Iverson, 2002, p. 657). Historically, some PITs have been criticized for loose organization and lack of systematic decision-making processes. Deficits in collecting, organizing, and presenting data can "doom decision making to failure" (Iverson, p. 664). Thus, team members should be trained in basic consultation skills, including relationship building and communication skills, and the steps of the problem-solving process (Rosenfield, 2002). Training should focus on skill development for each team member to help ensure that the team functions well as a whole (Gravois et al., 2002).

Team training must also include skills related to data collection, behavioral assessment, and intervention design (Kovaleski, 2002). A recent study by Truscott et al. (2005) indicated that PITs rarely recommended research-based interventions and often selected simple classroom interventions such as seat changes or reduced workload. However, most teachers request team assistance expecting to gain classroom interventions, as well as receive professional support and inform parents of their concerns (Lane, Mahdavi, & Borthwick-Duffy, 2003). Thus, "strong teams have access to ample training in quality team consultation practices including instruction in data collection, observation, quality interventions, systematic problem solving, team process, and team collaboration" (Doll et al., 2005, p. 129).

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Systematic Data Collection Procedures

A critical belief underlying problem-solving models is "that using evaluation data to examine effectiveness of the strategies implemented will improve the quality of the interventions and lead to improved student outcomes" (Burns, Vanderwood et al., 2005). A number of researchers have discussed the link between assessment of student performance and implementation of quality instructional practices (Burns, 2004; Gravois & Gickling, 2002; Hintze, Christ, & Methe, 2006; Jones, Southern, & Brigham, 1998; Shinn, 2002; Stecker, Fuchs, & Fuchs, 2005). Processes for monitoring individual progress are based on direct, repeated observations of a student's performance on tasks that are most related to the desired intervention outcome (Deno, 2005). Most often data collection procedures take the form of curriculum based assessment (CBA) or curriculum based measurement (CBM) procedures.

Curriculum based assessment is defined as "direct observation and recording of a student's performance in the local curriculum as a basis for gathering information to make instructional decisions" (Deno, 1987, p.41). The primary focus of CBA is to help make instructional decisions by assessing prior knowledge and skills and linking them to new learning (Gravois & Gickling, 2002). Prereferral intervention teams regularly utilize CBA methodology. Three characteristics link CBA models: (1) assessments are directly related to the curriculum, (2) progress in the curriculum is evaluated to determine the effectiveness of interventions, and (3) data from assessments are used to make instructional decisions (Dombrowski et al., 2004). Curriculum-based assessment has two major purposes: to create the most favorable possible learning conditions for instruction and to provide corrective feedback during the instructional process (Gravois & Gickling).

Curriculum-based assessment enhances the efficacy of instruction in three ways: by focusing teaching on the skills that need to be taught and how to teach them, by monitoring response to instruction, and by using data to guide decision-making about individual students with learning difficulties (Jones, Southern, & Brigham, 1999). Additional advantages of CBA include its facilitation of collaboration, its advantage over other sources of data in making instructional decisions, and the ease with which it is understood by others (Jones et al., 1999). However, obstacles to the use of CBA in intervention planning include teachers' perception that it is difficult to implement in conjunction with teaching demands, that it demands too much time, and that teachers feel unprepared to utilize it (Jones et al.).

In spite of the advantages of using CBA, its use is not as prevalent as might be expected. Forty-six percent of school psychologists reported that they used CBA in their practice, but only 18% reported using it regularly (Burns, 2004). Similarly, in a survey of PITs, Truscott et al. (2005) found that less than 1% of teams reported use of CBA and only 6% reported graphing to monitor behavior interventions. Likewise, Doll et al. (2005) found that teams that were not associated with university research did not collect data to either establish baselines or demonstrate intervention fidelity.

Curriculum-based measurement is another often cited method of collecting student performance data. According to Burns (2004) CBA and CBM are very similar as they both use frequent, repeated measures, use brief testing procedures, and require responses that are direct products. However, they differ in several ways outlined by Hintze, Christ, and Methe (2006). First, CBM focuses on broader, long-term objectives rather than short-term mastery. Second, because the focus is on broader curriculum

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objectives, CBM assesses retention and generalization of skills. Third, CBM utilizes specific measurement tools with standardized procedures for administration and scoring procedures. Whereas CBM examines the difference between the performance of an individual student and typical peers, CBA focuses on evaluating student difficulties as a mismatch between their skills and curriculum and/or instructional variables. Research has demonstrated the utility of CBM procedures in facilitating progress monitoring. In a review of research on use of CBM to improve student achievement, Stecker et al. (2005) noted that students made significant progress if their teachers used CBM for progress monitoring while implementing instructional modifications based upon student data. Progress monitoring without accompanying modifications did not yield improved achievement. The authors also noted that teachers who used data-based decision rules to guide interpretation of CBM graphs appeared more able to be responsive to student needs.

If progress monitoring is to be of use in measuring the effects of interventions, assessment methods selected must be efficient (Deno, 2005). Both CBA and CBM procedures are efficient, effective means of measuring student progress and evaluating intervention effectiveness. The combination of CBA and CBM in an intervention model is "an especially useful and effective assessment to intervention model" (Burns & Ysseldyke, 2005).

Level of Implementation of the Prereferral Intervention Process

In spite of the increasing prevalence and emphasis on prereferral intervention teams, "reliable implementation of problem-solving approaches in schools remains elusive" (Fuchs et al., 2003). Too often, classroom-based interventions are not

implemented with fidelity and are ineffective in improving student achievement.

Although many schools operate prereferral intervention teams, many of those teams fail

to implement the process at a high level of success. A number of studies have indicated

low levels of implementation of team processes and interventions. Flugum and Reschly

(1994) demonstrated low levels of implementation for variables associated with high

quality prereferral interventions, such as collection of baseline data and progress

monitoring. Likewise, a study of Ohio multidisciplinary teams found that

"implementation was frequently inconsistent and below desired levels of fidelity"

(Telzrow, et al., 2000). In a survey of PITs, Truscott et al. (2005) reported that only 12%

of teams responding indicated that they provided consultation to referring teachers. As

noted previously, teams responding reported primarily providing interventions such as

peer tutoring, counseling, out of class remediation, seat changes, and decreased workload

rather than high quality instructional interventions. In a separate survey of state special

education directors, Truscott and colleagues found that only 35% indicated that their

teams were "usually successful" with 45% reporting that they were "sometimes

successful." Thus, the level of implementation of teams appears to vary widely, with

research indicating that far too many teams are operating ineffectively.

There are a number of reasons that teams appear to have such great difficulty

operating at a high level of implementation. Doll et al. (2005) noted five "key pragmatic

barriers" to implementation of research-supported procedures: unfamiliar tasks, extensive

time demands, procedural complexity, limited intervention resources, and limited

administrative support. Time demands are an oft-cited reason for low levels of

implementation (Fuchs & Fuchs, 1998; Telzrow, et al., 2000). The complexities of

ensuring treatment fidelity are also a barrier to successful implementation of PSTs (Lane et al., 2003; Lane, Pierson, Robertson, & Little, 2004). In a study of 13 PITs, Doll et al. found that school staff members considered the consultation procedures recommended by researchers to be too complex and irrelevant to student success. Another study of 354 elementary teachers found that although 55% reported that they had implemented interventions "exactly as described," only 27% of teachers rated the student outcomes as highly desirable (Lane, et al., 2004). Thus, a gap existed between desired and obtained outcomes. Likewise 63% of students who received interventions from the PIT remained in the general education setting, but were still having academic or behavioral problems after intervention. These studies suggest that prereferral interventions often do not result in positive outcomes for either students or teachers. Thus, it is important that teams collect data related to treatment integrity, as well as student outcomes.

In spite of the difficulties inherent in implementing high quality PITs, research has indicated positive results when teams are implemented well. Kovaleski et al. (1999) compared student performance data in schools with high functioning Instructional Support Teams (ISTs), low functioning ISTs, and no ISTs. Students in schools that implemented the IST model at high levels of implementation demonstrated progress on measures of time-on-task, task completion, and comprehension. However, students in schools with low functioning ISTs fared no better than those with no IST process in place. Other researchers have noted positive results related to reduction in special education referrals and placements (Burns & Ysseldyke, 2005), placements of minority students in special education (Gravois & Rosenfield, 2006), and improved teacher attitudes and skills (Truscott et al., 2005). Nevertheless, implementation fidelity is

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complicated to achieve, and some researchers have noted that the most successful teams have been affiliated with university research (Burns & Symington, 2002; Doll et al., 2005). However, a more recent meta-analysis found that field-based teams consistently demonstrated higher effect sizes than research-based teams (Burns, Appleton, & Stehouwer, 2005). Though these results appear in conflict with previous studies, the authors suggested that the longer duration of the field-based models may have led to refinement of the process over time. Teams that have high levels of implementation also tend to have strong principal leadership, systematic data collection procedures, the presence of a support teacher, and extensive training (Kovaleski et al., 1999). The fidelity of implementation is vital if interventions are to be effective; positive outcomes in student achievement have been documented when teams have received extensive training and practiced careful implementation of team procedures and interventions (Burns & Ysseldyke, 2005).

In a review of lessons learned about long-term implementation and sustainability of Iowa's problem-solving model, Grimes, Kurns, and Tilly (2006) note:

> Changing one component in the system without attending to the entire system will not result in sufficient and sustained attention by a critical body of educators and, as a result, most strategies introduced will not be sustained over time. Attention to the entire system and its interrelationships provides the leverage to sustain infrastructure movement and development over time. Without systematic attention to the entire system structure, our experience has taught us that long-standing, meaningful change is unlikely to occur. (p. 230)

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The research on level of implementation sends a clear message to teams. Partial or "half-hearted" implementation of PITs is not better than no implementation at all and may actually be detrimental (Kovaleski et al., 1999; Kovaleski & Glew, 2006). Nevertheless, research on teams operated at high levels of implementation suggests reason for optimism that positive results for students can be achieved.

<center>The Pennsylvania Initiative: Instructional Support Teams</center>

In the opinion of a number of researchers, the Instructional Support Team (IST) Initiative in Pennsylvania is an example of successful widespread implementation of a PIT model (Burns, Appleton, et al., 2005; Burns & Ysseldyke, 2005; Hartman & Fay, 1996). The IST initiative was introduced in 1990 in response to increases in special education costs in Pennsylvania. The IST model was based on previous Pennsylvania pilot programs, Teacher Assistance Teams (Chalfant & Pysh, 1989) and Instructional Consultation Teams (Rosenfield, 2002). The IST model was developed with the intention of providing a continuum of services in each school, supporting general education teachers working with at-risk students, screening students for possible special education services, and facilitating inclusive special education programming (Kovaleski & Glew, 2006). In July 1990 the IST initiative was mandated by the Pennsylvania legislature following the enactment of the Chapter 14 regulations (Kovaleski, Tucker, & Duffy, 1995). The regulations required that each of the 501 Pennsylvania districts implement IST in at least one elementary school (Kovaleski & Glew, 2006). Each district was required to employ an Instructional Support Teacher to provide assessment, intervention assistance, and facilitation of the IST process. Each IST was mandated to include the referring teacher, the school administrator, the instructional support teacher, and other

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appropriate members on the team. The IST Initiative was implemented in five phases beginning with the 1990-91 school year. During each phase more schools were added, and by the end of Phase V (1994-95), 45% of Pennsylvania public elementary schools had been trained in the IST model (Kovaleski & Glew, 2006). Each school district was provided with two-year stipends, after which the district was responsible for funding the program. School teams were provided with comprehensive training using a peer coaching model, which utilized workshops, on-site demonstrations, and guided practice. Seventy-five state consultants were employed to train ten new schools per year (Kovaleski & Glew, 2006).

The Instructional Support Team Process

Instructional Support Teams utilize a group problem-solving approach, whereby students are systematically screened prior to referral for evaluation for special education eligibility. The IST is a "functional group of colleagues who will both model collaboration and provide expertise as needed" (Tucker & Sornson, 2007, p. 273). The IST assists regular education teachers in providing effective instruction in the regular education classroom to prevent unnecessary special education evaluations. The instructional support teacher works with the referring teacher to gather information, establish measurable goals, and monitor academic progress (Kovaleski, Tucker, & Duffy, 1995).

The IST process is initiated by the referral of a student by a school staff member, or parent. The process may also be initiated by results obtained through screenings. Level I screenings include review of educational records, including report cards and attendance records, as well as medical records. Records are systematically reviewed to determine if a

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referral for instructional support is warranted. The Level II screening includes hearing, vision, speech/language, and motor screenings, and students were referred to the IST if these problems could not be addressed through medical interventions. The IST process is referred to as Level III screening (Kovaleski & Glew, 2006).

Level III screenings are comprised of four phases, which are completed in a total of 60 days. The four phases are: (1) Entry, (2) Hypothesis Forming, (3) Verifying, and (4) Outcome. (Kovaleski, et al., 1999). The Entry phase occurs within ten school days of receipt of the referral. During this phase the principal documents the referral and notifies the student's parents. The instructional support teacher interviews the referring teacher and the student's parents, and observes the student in the classroom setting. Work samples are reviewed and academic assessments are conducted.

The Hypothesis Forming phase focuses on problem identification, measuring the gap between student performance and expectations, setting measurable goals, and developing interventions aimed at improving rates of acquisition. Recommendations for for classroom modifications are also made during this phase.

The Verifying phase lasts a maximum of 30 school days and focuses on implementation of interventions recommended in the Hypothesis Forming phase. During the Verifying Phase, students are instructed at their instructional level and necessary adaptations to materials and procedures are made. Toward the end of this phase, the instructional support teacher fades direct support and identifies services within the regular education environment to assist the student.

The Outcome Phase lasts ten days and is focused around reviewing data to determine intervention effectiveness. Data to be reviewed includes examination of

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student progress on curriculum-based measures, including acquisition and retention rates. During this phase, the team determines if the student is able to function in the regular education environment or if a full evaluation for special education services is warranted. If the IST determines that an evaluation is necessary, the referral must be completed within ten days of the completion of the intervention.

One important component of the IST model is the instructional support teacher. During the IST initiative, each instructional support teacher received specialized training in the IST process. Instructional support teachers are responsible for modeling strategies in the regular classroom, assessing referred students, collecting data, and conducting observations (Kovaleski & Glew, 2006). Another key member of the IST is the building principal, who is responsible for scheduling and convening meetings, coordinating the assigned roles of IST members, freeing team members' time for assessment and intervention activities, contacting parents regarding the referral process, and maintaining a log documenting progress of referred students (Kovaleski & Glew, 2006).

A third key component in the IST process is training (Kovaleski & Glew, 2006). During the IST initiative, training was provided by staff from the Department of Education Instructional Support Team Project and Student Assistance Program (SAP), as well as staff from intermediate units. Training of instructional support teachers included didactic workshops, guided practice, and networking with other instructional support teachers. Principals participated in a Principal Training Model, which taught the IST components as well as leadership skills. Training was also provided in specific assessment techniques, particularly CBA (Gickling & Rosenfield, 1995).

The fourth major element of the IST process is assessment and systematic data collection. Assessments utilized in the IST model include evaluation of student performance in the regular curriculum, behavioral assessments, and examination of the referred student's coping skills. Academic assessments typically utilize CBA, systematic classroom observations, and interviews with parents and teachers, Principal's logs are also used to monitor data related to the IST process such as adherence to timelines, number of students served by the IST, number of students referred for special education evaluations, number of students placed in special education, and numbers of students retained.

Removal of the Mandate

In 1997, the Pennsylvania legislature voted to remove the requirement that school districts use an IST model (Kovaleski & Glew, 2006). School districts are required to continue using a screening process, but may choose to use other models. All models are required to include components of IST such as assessment of academic levels, development of appropriate interventions, and progress monitoring.

Evaluation of the IST implementation indicated a number of outcomes. A study of cost-effectiveness of the IST model indicated that the program was more cost effective than the traditional program (Hartman & Fay, 1996). The number of students placed in special education was reduced, while more intensive intervention services were provided to greater numbers of regular education students. The researchers determined that these outcomes were achieved at a cost no greater than that of the traditional program over a period of five to ten years. Other researchers noted that positive outcomes included increase in number of students referred for IST assistance, fewer students referred for

special education evaluations in IST schools, and lowered rate of classification of students placed in special education in the category of Specific Learning Disability (SLD) (Kovaleski et al., 1999). Positive outcomes related to student performance were also observed, but only when schools implemented the IST process to a high degree (Kovaleski et al.). It remains unclear what specific factors are associated with a high level of implementation and positive student outcomes.

<div align="center">Summary</div>

This chapter began with a review of the literature regarding Response to Intervention and Prereferral Intervention Teams. Specific factors believed to contribute to the effectiveness of PITs were discussed, including skills of the instructional support teacher, administrative support, data collection, and training. The history of the Pennsylvania Instructional Support Team Initiative was reviewed.

CHAPTER III

METHODS AND PROCEDURES

This chapter presents methods and procedures which, given the nature of this

research (i.e., replication study) parallel those presented by Laverty (2007). As Laverty

did, this chapter describes the research design, the population sampled, and sample

selection procedures. Variables used in this study are defined, and the instruments used to

measure the variables are described. A research timeline is provided, and statistical

procedures relating to research questions and hypotheses are presented.   As in Laverty's

study, the purpose of this study is to survey elementary school principals in Pennsylvania

to examine specific variables believed to contribute to successful implementation of

prereferral intervention teams. The specific variables examined in this study include:

employment of a trained coordinator charged with coordination and oversight of the

prereferral intervention team process, support from school administrators for the

prereferral intervention team process, training of team members and team leaders in skills

related to the prereferral intervention team process, and the teams' systematic use of

research-baseddata collection procedures to guide intervention. This study investigated

the influence that the abovementioned variables have on the dependent variables: level

of implementation of the prereferral team process and the number of students identified

as having a specific learning disability and qualifying for special education services.

Design

As was true in Laverty's study (2007), the study utilized survey methodology to

collect information about how prereferral intervention teams function in Pennsylvania

elementary schools. The study utilized a quantitative, non-experimental research design.

The dependent variables measured included: the level of implementation of the

prereferral intervention process and the number of students identified as having specific

learning disabilities receiving special education services. The first dependent variable,

level of implementation of the prereferral intervention process, was measured using a

rubric created by Laverty, the author of the study described previously. The rubric is

presented in Appendix B. The rubric was completed using responses from six questions

contained within the survey.

The second dependent variable, the number of students identified with specific

learning disabilities and qualifying for special education services, is operationally defined

as the percentage of the student population in a school identified with a specific learning

disability. This information was provided by respondents to the survey.

Administrative support was also hypothesized to act as a moderator variable. A

moderator variable is defined as "a qualitative (e.g., sex, race, class) or quantitative (e.g.,

level of reward) variable that affects the direction and/or strength of the relationship

between and independent or predictor variable and a dependent or criterion variable"

(Baron & Kenny, 1986, p. 1173). A moderator variable has an effect on the relationship

between two variables and interacts with the independent variable to affect the dependent

variable.

As was true in Laverty's study, this study utilized statistical methods to analyze

the relationship between the independent and dependent variables. More specifically, the

analyses examined variables related to the training and function of instructional support

teachers, practices related to administrative support, training provided to prereferral

intervention team members, and methods of data collection used in the prereferral

intervention process. The relationship between these variables and the dependent

variables (level of implementation and the number of students identified with specific

learning disabilities and qualifying for special education services) were examined using

statistical procedures described below.
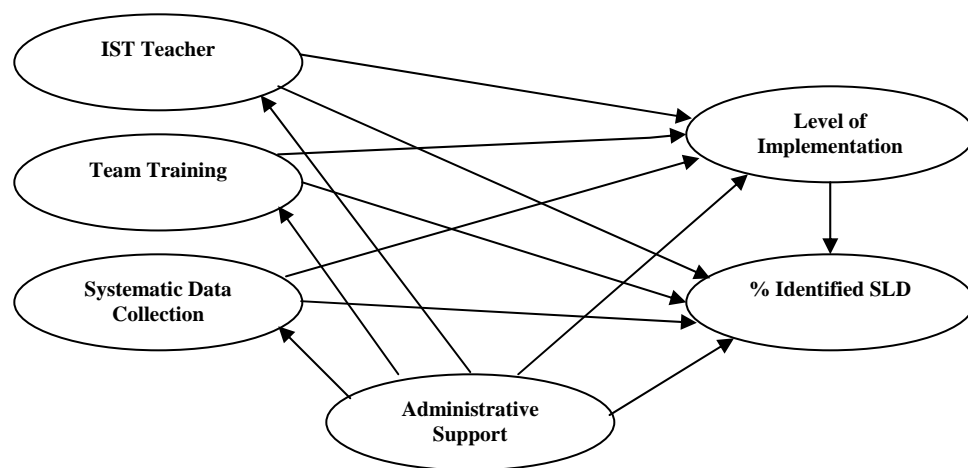
Figure 3. Research path diagram of the latent variables.

Sample

As previously noted, replication research is considered an "invaluable aid to

scientific progress" (Reese, 1999). As this was a replication of Laverty's (2007) study,

the same population was selected for sampling. The sample was selected from 1738

elementary schools in Pennsylvania. Once schools were selected, the Pennsylvania

Department of Education website was used to access school addresses and names of

administrators. Surveys were sent to the principal of each school in the sample.

Administrators were informed that they could choose other appropriate members of the

school staff to complete the surveys. All survey respondents were instructed to supply

their job titles, to control for possible differences between principals and other school

staff members responding.

Elementary school principals from 440 schools, representing approximately 25%

of the total elementary principals in Pennsylvania, were contacted to voluntarily complete

the survey. The subjects were selected based upon the following school characteristics:

(1) school district funding sources, (2) geographic location, and (3) population density of

the school district where the school is located. In addition, schools that participated in the

study conducted by Laverty (2007) were excluded from the sample for the current study.

The criteria for selecting subjects were selected to ensure that the sample contained

schools that represented the diversity of Pennsylvania elementary schools. More

specifically, schools were selected from three geographic regions of the state, West,

Central, and East. Each region of the state is served by a specific unit of the Pennsylvania

Training and Technical Assistance Network (PaTTAN). Schools were also selected based

upon their funding ratio, to ensure that schools serving students of all socioeconomic

statuses were selected for participation. This is important because it is possible that

schools with larger financial resources are able to provide more instructional resources

and lower student-teacher ratios. Likewise, schools classified as urban, rural, and

suburban were selected for participation to ensure a representation from all areas.

As Laverty (2007) explained, according to the School Finance Advisory Board

(2001), 57% of Pennsylvania school funds are provided by local taxes. The Market

Value/Personal Income aid ratio (MV/PI) is used to measure socioeconomic status of Pennsylvania school districts (Pennsylvania Department of Education, 2006). Each of Pennsylvania's 501 school districts is ranked in ascending order from the lowest ratio of .1500 representing the wealthiest school district to the highest ratio of .8597 representing the poorest.. The districts were divided into three groups representing high (.1500 to .5076), medium (.5083 to.6503), low (.6512 to .8597) socioeconomic status. The ranges were selected so that each of the three categories contained an equal number of school districts. Each category was comprised of 167 school districts. One hundred forty-seven (147) schools with high aid ratio, 133 schools with medium aid ratio, and 160 schools with low aid ratio were selected. The categories were unequal due to low school numbers in some cells (see Table 1).

As was true in Laverty's study (2007), geographic location was also considered when selecting participants. The state of Pennsylvania is divided into three broad regions (West, Central, and East), each served by a unit of the Pennsylvania Training and Technical Assistance Network (PaTTAN). One hundred forty-six (146) schools from the East region, 161 schools from the Central region, and 133 schools from the West region were selected. The regions were unequally represented due to low numbers of schools in some cells. (See Table 1).

As in Laverty's study, population density was the third consideration when selecting participating elementary schools. Data on population density was obtained from the Pennsylvania Department of Education website (2006). Districts coded 1 (large city) or 2 (midsized city) are classified as urban, districts with codes of 3 (urban fringe) or 4 (inside a Metropolitan Statistical Area) are classified as suburban, and districts with

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codes of 5 (large town), 6 (small town), 7 (rural), or 8 (outside an MSA) are classified as rural. Eighty-four urban, 177 suburban, and 179 rural schools were selected (see Table 1). The number of urban schools was low because few school districts in Pennsylvania are classified as urban, and a number of urban schools were disqualified from participation because they were sampled in Laverty's study.

Subjects were assigned using the following process. First, schools that participated in the first study were automatically eliminated from selection. Second, an alphabetic listing of school districts based on socioeconomic status was compiled using the 2006-07 Aid Ratio Excel database. Third, PaTTAN assignment and population density information were added to the database. Fourth, participants were randomly selected until 20 elementary schools were identified for each of the 27 cells displayed in Table 1. In some cells more than 20 schools were included to help compensate for cells with few or no schools.

Table 1

Sample Assignments

	High Aid Ratio			Middle Aid Ratio			Low Aid Ratio		
	East	**Central**	**West**	**East**	**Central**	**West**	**East**	**Central**	**West**
Urban	2	24	24	0	0	3	17	6	8
Suburban	20	12	6	25	21	20	24	24	25
Rural	24	24	11	19	25	20	15	25	16

Materials

Tools created by Laverty (2007) were utilized with minor revisions and

adaptations made to address the research questions in the current study. The *Survey of*

Prereferral Intervention Team Process, consisting of 29 questions, was used to collect

data for this study. A second tool, The *Level of Implementation of the Prereferral*

Intervention Process Rubric is comprised of a subset of six questions from the larger

Survey of Prereferral Intervention Team Process. Both tools were created by Laverty for

use in the study described above. The tools were designed to measure four independent

variables: skills of the instructional support teacher, training of teams, data collection

procedures, and administrative support. The *Prereferral Intervention Process Rubric* was

designed to measure one of the dependent variables—level of implementation of the

prereferral intervention process. Each dependent variable was measured by specific

questions contained within the survey. Laverty's survey instrument was modified slightly

by the researcher to include questions that measure the second dependent variable,

percentage of students receiving special education services for specific learning

disabilities.

Survey of the Prereferral Intervention Team Process

The survey is divided into six sections, which contain questions regarding how

the prereferral intervention process is implemented in the selected school. The first

section contains nine questions, which address the specific model used for prereferral

intervention (e.g. IST or other model), the skills and experience of the person responsible

for coordinating the process, and two questions related to administrative support. The

second section contains six questions that relate to the level of implementation of the

prereferral process. The third section addresses available training opportunities related to the prereferral intervention process. The fourth section contains questions related to data collection and level of implementation. The fifth section contains questions addressing administrative support for the prereferral intervention process. The final section contains questions regarding demographic data, including school population and number of students identified with SLD.

Eight questions address the role of the instructional support teacher or other person responsible for coordinating the prereferral intervention process. School administrators continuing to utilize the IST process responded to five questions and those no longer utilizing IST responded to four questions. Questions specifically address characteristics of the prereferral coordinator including years of experience, types of professional experience and student to prereferral coordinator ratio.

Six questions address data collection procedures. Those participants who indicate that they collect data on a systematic basis were asked to respond to five additional questions regarding types of student performance data collected, methods of data collection, procedures for monitoring progress, and types of schoolwide data collected (e.g., number of students referred for prereferral interventions, number of students referred for multidisciplinary evaluations, and number of students identified in need of special education services). Participants were also asked if decisions to refer students for multidisciplinary evaluations were based upon assessments related to the prereferral process. A copy of the *Survey of the Prereferral Intervention Team Process* is in Appendix A.

Level of Implementation of the Prereferral Intervention Process Rubric

Six questions were included in the *Survey of the Prereferral Intervention Team Process* to obtain a measure of Level of Implementation for each of the responding elementary schools. These questions were based on the work of Glew (2003) who revised the Quality Performance Standards and Instructional Support Benchmarks (Kovaleski, 1994) originally created to help school teams measure implementation fidelity of the IST process in the Armstrong School District in Pennsylvania. Laverty, the author of the previous study, created a new design, which was then reviewed by Kovaleski, the original author of the Quality Performance Standards and Instructional Support Benchmarks. The Level of Implementation of the Prereferral Process Rubric has a maximum of 18 points and a minimum of zero. Each of the six relevant survey questions is scored from one to three, with three being the highest possible score for each item. Each survey was scored using an Excel database, which calculated the total rubric score.

Procedures

As the current study is a replication of a previous study conducted by Laverty (2007), data collection procedures and hypotheses are adapted from, or are in some cases identical to, those presented in that study.

Data Collection

Following the procedures of Laverty, at the beginning of the study timeline, survey packets were mailed to the 440 elementary school principals who had been selected to participate in the study. Each packet contained a cover letter, which explained the purpose of the study and procedures for maintaining confidentiality. A copy of the cover letter is in Appendix C. Each packet also contained a copy of the *Survey of the*

Prereferral Intervention Team Process, and a stamped return envelope. Surveys and

mailing labels were assigned numbers so that the researcher could identify which subjects

had returned their surveys. The initial mailing inadvertently contained an earlier

uncorrected version of the survey, and a corrected survey with explanatory cover letter

was mailed to each of the 440 selected principals. Appendices A and D contain the

survey and second cover letter. Two weeks from the second mailing, a follow-up

postcard (see Appendix E) was mailed to each principal to thank those who had

responded or to remind those who had not. Replacement packets were sent to principals

who had misplaced their packets and requested new ones. Two weeks later, another

reminder letter (see Appendix F) was sent to those who had not yet responded. Another

complete survey packet, including an explanatory letter (see Appendix G) was sent to the

100 principals who had responded to the initial incorrect survey, but not the corrected

survey. As completed surveys were returned, results were entered into an Excel database.

Confidentiality

As was true in Laverty's study (2007), confidentiality of the subjects in this study

was similarly maintained by assigning a numeric identification code to each

questionnaire and mailing label. As Laverty didhe numeric code was used to identify

whether follow-up mailings were necessary to encourage the completion and return of the

survey packets by each respondent.

Research Hypotheses

The following questions and hypotheses assist in the replication of Laverty's (2007) study. Some questions are identical to those presented by Laverty and others are adapted from that study. This study has ten primary hypotheses and 18 secondary hypotheses.

Research Question 1. Is there a relationship between specific characteristics of the instructional support teacher and level of implementation of the prereferral intervention process?

Hypothesis 1. Schools that continue to employ an instructional support teacher will demonstrate higher level of implementation than schools that do not employ an instructional support teacher.

a. There is a positive relationship between the presence of a full-time instructional support teacher and the level of implementation of the prereferral intervention process.

b. There is a positive relationship between continued staffing of an instructional support teacher who participated in the initial IST trainings and the level of implementation of the prereferral intervention process.

c. There is a positive relationship between the ratio of instructional support teacher/prereferral intervention coordinator and the number of students in the elementary school and the level of implementation of the prereferral intervention process.

Research Question 2. Is there a relationship between specific characteristics of the instructional support teacher and the number of students found eligible for special education services with specific learning disabilities?

Hypothesis 2. Schools that employ an instructional support teacher will find fewer students eligible for special education services for specific learning disabilities than schools that do not employ an instructional support teacher.

    a.   There is an inverse relationship between the presence of a full-time instructional support teacher and the number of students with specific learning disabilities placed in special education.

    b.   There is an inverse relationship between continued staffing of an instructional support teacher who participated in the initial IST trainings and the number of students with specific learning disabilities placed in special education.

    c.   There is an inverse relationship between the ratio of the instructional support teacher/prereferral intervention coordinator and the number of students in the elementary school and the number of students with specific learning disabilities placed in special education.

Research Question 3. What is the relationship between administrative support of the prereferral intervention process (i.e., written policy and/or procedure requiring prereferral interventions, attendance at prereferral intervention meetings, and scheduling meetings during teacher contracted time) and level of implementation of the prereferral intervention process?

Hypothesis 3. Schools with higher levels of administrative support will demonstrate higher levels of implementation of the prereferral intervention process than schools with lower levels of administrative support.

a. There is a positive relationship between the administrative requirement that students participate in an IST/prereferral intervention team process and the level of implementation of the prereferral intervention process.

b. There is a positive relationship between the percentage of time principals attend the IST/prereferral intervention team meetings and the level of implementation of the prereferral intervention process.

c. There is a positive relationship between the administrative decision to schedule IST/prereferral intervention team meetings during regular teacher-contracted hours and the level of implementation of the prereferral intervention process.

d. There is a positive relationship between the presence of a written policy or procedure that strongly encourages parents to refer students for prereferral interventions before being referred for a multidisciplinary evaluation and the level of implementation of the prereferral intervention process.

Research Question 4. What is the relationship between administrative support of the prereferral intervention process (i.e., written policy and/or procedure requiring prereferral interventions, attendance at prereferral intervention meetings, and scheduling meetings during teacher contracted time) and the number of students found eligible for special education services with specific learning disabilities?

Hypothesis 4. Schools with high levels of administrative support will find fewer students eligible for special education services for specific learning disabilities than schools with lower administrative support.

a. There an inverse relationship between the administrative requirement that students participate in an IST/prereferral intervention team process and the number of students with specific learning disabilities placed in special education.

b. There is an inverse relationship between the percentage of time principals attend the IST/prereferral intervention team meetings and the number of students with specific learning disabilities placed in special education.

c. There is an inverse relationship between the administrative decision to schedule IST/prereferral intervention team meetings during regular teacher-contracted hours and the number of students with specific learning disabilities placed in special education.

d. There is a positive relationship between the presence of a written policy or procedure that strongly encourages parents to refer students for prereferral interventions before being referred for a multidisciplinary evaluation and the number of students with specific learning disabilities placed in special education.

Research Question 5. What is the relationship between team training and level of implementation of the prereferral intervention process?

Hypothesis 5. Elementary school teams that access training in the prereferral intervention process will demonstrate higher levels of implementation of the prereferral intervention process than schools that do not access training.

a. There is a positive relationship between number of trainings related to the prereferral intervention process and the level of implementation of the prereferral intervention team process.

b. There is a positive relationship between the types of trainings related to the prereferral intervention process and the level of implementation of the prereferral intervention process.

Research Question 6. What is the relationship between team training and the number of students found eligible for special education services with specific learning disabilities?

Hypothesis 6. Elementary school teams that access training in the prereferral intervention process find fewer students eligible for special education services for specific learning disabilities than schools that do not access training.

a. There is an inverse relationship between number of trainings related to the prereferral intervention process and the number of students with specific learning disabilities placed in special education.

b. There is an inverse relationship between the types of trainings related to the prereferral intervention process and the number of students with specific learning disabilities placed in special education.

Research Question 7. What is the relationship between the use of systematic data collection and the level of implementation of the prereferral intervention process?

Hypothesis 7. Elementary schools that utilize systematic data collection procedures for decision-making will demonstrate higher levels of implementation of the

prereferral intervention process than schools that do not utilize systematic data collection procedures.

Research Question 8. What is the relationship between the use of systematic data collection and the number of students found eligible for special education services with specific learning disabilities?

Hypothesis 8. Elementary schools that utilize systematic data collection procedures for decision-making have fewer students with specific learning disabilities placed in special education than schools that do not utilize systematic data collection procedures.

Research Question 9. Is there a relationship between level of implementation of the prereferral intervention process and the identification and placement of students with specific learning disabilities?

Hypothesis 9. There is an inverse relationship between the level of implementation of the prereferral intervention process and the number of students with specific learning disabilities placed in special education.

Research Question 10. Is there a relationship between high levels of administrative support and levels of systematic data collection, use of instructional support teachers, and training of team members?

Hypothesis 10. Elementary schools with high levels of administrative support will have higher levels of systematic data collection, use of instructional support teachers, and training of team members.

Statistical Analysis

The ten primary research hypotheses and 18 secondary hypotheses were analyzed using multiple statistical analyses. Table 2 outlines the specific variables measured and the statistical procedures selected to determine whether the null hypotheses in this study can be rejected. Correlations between independent and dependent variables were calculated. Pearson correlations were utilized to address research questions 1, 2, 5, 6, 7, and 8. Spearman's Rho coefficients were utilized for questions 3, 4, and 10. Multiple linear regressions were completed to determine relationships between the dependent, independent, and moderator variables for questions 7, 8, and 9.

Table 2

Statistical Procedures Utilized to Test Research Hypotheses

Hypotheses	Variable(s)	Statistical Procedure
1. Schools that continue to employ an instructional support teacher will demonstrate higher level of implementation than schools that do not employ an instructional support teacher.		
a. There is a positive relationship between the presence of a full-time instructional support teacher and the level of implementation of the prereferral intervention process.	SQ2 & LOI	Pearson Correlation
b. There is a positive relationship between continued staffing of an instructional support teacher who participated in the initial IST trainings and the level of implementation of the prereferral intervention process.	SQ3 & LOI	Pearson Correlation
c. There is a positive relationship between the ratio of instructional support teacher/prereferral intervention coordinator and the number of students in the elementary school and the level of implementation of the prereferral intervention process.	SQ4 & LOI	Pearson Correlation
2. Schools that employ an instructional support teacher will find fewer students eligible for special education services for specific learning disabilities than schools that do not employ an instructional support teacher.		
a. There is an inverse relationship between the presence of a full-time instructional support teacher and the number of students with specific learning disabilities placed in special education.	SQ2 & %SLD	Pearson Correlation

Hypotheses	Variable(s)	Statistical Procedure
b. There is an inverse relationship between continued staffing of an instructional support teacher who participated in the initial IST trainings and the number of students with specific learning disabilities placed in special education.	SQ3 & %SLD	Pearson Correlation
c. There is an inverse relationship between the ratio of the instructional support teacher/prereferral intervention coordinator and the number of students in the elementary school and the number of students with specific learning disabilities placed in special education.	SQ4 & %SLD	Pearson Correlation
3. Schools with higher levels of administrative support will demonstrate higher levels of implementation of the prereferral intervention process than schools with lower levels of administrative support.		
a. There is a positive relationship between the administrative requirement that students participate in an IST/prereferral intervention team process and the level of implementation of the prereferral intervention process.	SQ13 & LOI	Spearman's Rho
b. There is a positive relationship between the percentage of time principals attend the IST/prereferral intervention team meetings and the level of implementation of the prereferral intervention process.	SQ26 & LOI	Spearman's Rho
c. There is a positive relationship between the administrative decision to schedule IST/prereferral intervention team meetings during regular teacher-contracted hours and the level of implementation of the prereferral intervention process.	SQ27 & LOI	Spearman's Rho
d. There is a positive relationship between the presence of a written policy or procedure that strongly encourages parents to refer students for prereferral interventions before being referred for a multidisciplinary evaluation and the level of implementation of the prereferral intervention process.	SQ14 & LOI	Spearman's Rho

Hypotheses	Variable(s)	Statistical Procedure
4. Schools with high levels of administrative support will find fewer students eligible for special education services for specific learning disabilities than schools with lower administrative support.		
a. There an inverse relationship between the administrative requirement that students participate in an IST/prereferral intervention team process and the number of students with specific learning disabilities placed in special education.	SQ13 & %SLD	Spearman's Rho
b. There is an inverse relationship between the percentage of time principals attend the IST/prereferral intervention team meetings and the number of students with specific learning disabilities placed in special education.	SQ26 & %SLD	Spearman's Rho
c. There is an inverse relationship between the administrative decision to schedule IST/prereferral intervention team meetings during regular teacher-contracted hours and the number of students with specific learning disabilities placed in special education.	SQ27 & %SLD	Spearman's Rho
d. There is a positive relationship between the presence of a written policy or procedure that strongly encourages parents to refer students for prereferral interventions before being referred for a multidisciplinary evaluation and the number of students with specific learning disabilities placed in special education.	SQ14 & %SLD	Spearman's Rho
5. Elementary school teams that access training in the prereferral intervention process will demonstrate higher levels of implementation of the prereferral intervention process than schools that do not access training.		
a. There is a positive relationship between number of trainings related to the prereferral intervention process and the level of implementation of the prereferral intervention team process.	SQ16 & LOI	Pearson Correlation
b. There is a positive relationship between the types of trainings related to the prereferral intervention process and the level of implementation of the prereferral intervention process.	SQ17 & LOI	Pearson Correlation

Hypotheses	Variable(s)	Statistical Procedure
6. Elementary school teams that access training in the prereferral intervention process find fewer students eligible for special education services for specific learning disabilities than schools that do not access training.		
a. There is an inverse relationship between number of trainings related to the prereferral intervention process and the number of students with specific learning disabilities placed in special education.	SQ16 & %SLD	Pearson Correlation
b. There is an inverse relationship between the types of trainings related to the prereferral intervention process and the number of students with specific learning disabilities placed in special education.	SQ17 & %SLD	Pearson Correlation
7. Elementary schools that utilize systematic data collection procedures for decision-making will demonstrate higher levels of implementation of the prereferral intervention process than schools that do not utilize systematic data collection procedures.	SQ20 & LOI SQ22, 24 & LOI	Pearson Correlation Multiple Linear Regression
8. Elementary schools that utilize systematic data collection procedures for decision-making have fewer students with specific learning disabilities placed in special education than schools that do not utilize systematic data collection procedures.	SQ20 & %SLD SQ22, 24 & %SLD	Pearson Correlation Multiple Linear Regression
9. There is an inverse relationship between the level of implementation of the prereferral intervention process and the number of students with specific learning disabilities placed in special education.	LOI & %SLD	Linear Regression
10. Elementary schools with high levels of administrative support will have higher levels of systematic data collection, use of instructional support teachers, and training of team members.		Spearman's Rho

Summary

In summary, the current study examined how the prereferral intervention process operates in a sample of Pennsylvania elementary schools. More specifically, the study utilized survey methodology to examine specific team factors that may lead to improved level of implementation and reduced number of students identified as having Specific Learning Disabilities. The study design and sample selection procedures were reviewed. The Survey of the Prereferral Intervention Team Process and Level of Implementation of the Prereferral Intervention Team scoring rubric were described. Data collection procedures were outlined, and a timeline was presented. Research questions and hypotheses were reviewed. Statistical procedures utilized to test the research questions were also described.

CHAPTER IV

RESULTS

Elementary schools in Pennsylvania were surveyed to determine their prereferral intervention practices since the removal of the Instructional Support Team mandate. Schools were selected to ensure that the sample was representative of elementary schools in Pennsylvania. School districts were divided into three geographic regions (East, Central, and West), three levels of aid ratio (Low, Middle, and High), and three population densities (Urban, Rural, and Suburban). A stratified random sampling procedure was utilized using these three factors as criteria.

The study was designed to investigate four independent variables, one moderator variable, and two dependent variables. The independent variables included (1) the characteristics of the instructional support teacher/prereferral intervention coordinator, (2) administrative support for the prereferral process, (3) training related to the prereferral process, and (4) systematic data collection procedures. Administrative support of the prereferral intervention process was hypothesized to act both as an independent variable and a moderator variable. The first dependent variable was Level of Implementation of the Prereferral Process (LOI), which was measured by a rubric comprised of six survey questions. The percentage of students in the school identified with a specific learning disability and receiving special education services was identified as a second dependent variable.

This chapter describes the results of the data analysis conducted utilizing results of the survey described in Chapter III. This chapter begins with information regarding

complications of the study, the computer program utilized to analyze data, and survey

return rates. Descriptions of analyses related to the 10 research hypotheses are presented.

The chapter concludes with a summary of results.

Complications of the Study

The major complication of this study was an error made in the initial mailing. Due

to researcher error, an earlier incorrect version of the survey was mailed to the sample.

Once the error was caught, a second survey packet was sent to each participant with a

letter apologizing for the error. However, 100 participants returned surveys before they

received the second survey packet. This error may have contributed to a lower return rate,

as many participants may have been unwilling to complete a second survey and the

second survey packet was mailed after the end of the school year for some schools.

Computer Program

The SPSS 13.0 statistical software program was used to conduct statistical

analyses including descriptive statistics, correlations, and multiple linear regressions. For

all statistical procedures a level of $p<.05$ was used.

Information on Participants Providing Survey Responses

Four hundred forty surveys were sent to elementary school principals in

Pennsylvania. None of the initial packets were returned by the post office. Two surveys

were returned by principals who chose not to participate in the project. A total of 118

were returned to the researcher resulting in a return rate of 26.8%. Rural schools had the

highest return rate (35%), followed by suburban schools (26%). Urban schools had a very

low return rate (11%). Schools in the Central region had a 29% return rate, followed by

eastern schools (27%), and western schools (22%). Schools with medium aid ratios had a

32% return rate, followed by schools with low aid ratios (26%), and schools with high aid

ratios (22%). Return rates for each subject assignment category are shown in Table 3.

Table 3

Return Rates for Cell Assignments

	High Aid Ratio 33/147 22%			Medium Aid Ratio 43/133 32%			Low Aid Ratio 42/160 26%		
	East	**Central**	**West**	**East**	**Central**	**West**	**East**	**Central**	**West**
Urban 9/84 11%	0/2 0%	3/24 12%	1/24 4%	0/0	0/0	0/3 0%	2/17 12%	1/6 17%	2/8 25%
Suburban 46/177 26%	6/20 30%	3/12 25%	2/6 33%	8/25 32%	10/21 48%	0/20 0%	4/24 17%	5/24 21%	8/25 32%
Rural 63/179 35%	6/24 25%	9/24 38%	3/11 27%	7/19 36%	10/25 40%	8/20 40%	6/15 40%	6/25 24%	8/16 50%
Total 118/440 27%	12/46 26%	15/60 25%	6/41 15%	15/44 34%	20/46 43%	8/43 19%	12/56 21%	12/55 22%	18/49 37%

Of the 118 respondents 102 were elementary principals (86%). Five respondents

were instructional support teachers (4%), two were counselors (2%), and one was a

prereferral intervention coordinator (<1%). Two respondents held other jobs as Director

of Student Services or School Psychologist. Three of the respondents did not indicate their position title.

Elementary Schools Continuing to Implement the IST Process

Of the 118 schools responding, 83 (70%) indicated that they were continuing to use the Instructional Support Team process. Thirty-one schools (26%) responded that they were no longer utilizing the IST model. Sixty-one schools (51%) continued to employ an IST teacher and 57 (48%) did not. Of the schools with IST teachers, 32 (52%) continued to employ at least one IST teacher who participated in the initial IST training process, and 28 (46%) did not. Only 27 of the participants responded to the question regarding years of experience of their IST teacher. The mean number of years of experience for those IST teachers was 10 years. The mean ratio of IST teacher to students was 1 to 471. The range was from 1 to 4 to 1 to 1400. The mean number of years of teaching experience of the IST teacher was 18.4. Years of experience ranged from 1 to 35. Many respondents cited experience in more than one type of position. Thirty-nine instructional support teachers had experience as regular education teachers (33%). Thirteen (11%) had prior experience as remedial educators (e.g., Title I teacher, reading specialist), 20 (17%) had prior experience as special educators, and 20 (17%) had experience in other positions such as paraprofessional, guidance counselor, and librarian. Table 4 displays the previous positions held by instructional support teachers in this survey.

Table 4

Frequency Table of the Professional Experience of the Instructional Support
Teacher (N = 61)

	Frequency	Percent
Regular education teacher	39	63.9%
Special education teacher	20	32.8%
Remedial education teacher	13	21.3%
Counselor	6	9.8%
Beginning teacher/student teaching	2	3.3%
Master's of Education/Instruction	2	3.3%
Librarian	1	1.6%
Learning support teacher	1	1.6%
English as a second language (ESL) teacher	1	1.6%
Paraprofessional	1	1.6%
Federal programs coordinator	1	1.6%
Pre-1st	1	1.6%
Principal, Montessori school	1	1.6%
Multiage classroom teacher	1	1.6%
Educational liaison to a children's hospital	1	1.6%

Elementary Schools Implementing Alternative Prereferral Intervention Processes

As noted previously, 26% of schools responding (N = 31) indicated that they no longer utilize the IST process. In addition, 25 schools (21%) indicated that they continue to implement the IST process, but no longer employ an IST teacher to coordinate the prereferral intervention process. Schools who no longer have IST teachers utilize various staff members to coordinate the prereferral intervention process. In the 56 schools without instructional support teachers, school counselors were most frequently charged with coordinating or co-coordinating the prereferral process (N = 38, 68%). In 25% of non-IST schools, regular educators coordinated the process (N = 14). School psychologists acted as prereferral intervention coordinators in 21% (N = 12) of non-IST schools responding, and remedial education teachers coordinated in 16% of non-IST schools (N = 9). Eighteen schools (32%) reported that other staff members coordinated their prereferral intervention process. Principals coordinated the prereferral process in nine of those schools (16%). Other staff members acting as prereferral intervention coordinators included RTI coordinator (2), special education liaison (1), inclusion specialist (1), child study coordinator (1), pre-doctoral intern (1), assistant principal (1), director of special services (1), and data team (1). A number of respondents indicated that their prereferral intervention services were coordinated by a team of people, represented by a combination of the positions noted above. Fourteen respondents (25%) reported multiple team members acting as co-coordinators of the prereferral intervention process. A frequency count of positions held by prereferral intervention coordinators and co-coordinators is provided in Table 5.

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Table 5

Frequency Table of Positions Held by the Prereferral Intervention Coordinator and/or Co-Coordinators   (N = 56)

	Frequency	Percent
Counselor	38	67.9%
Regular education teacher	14	25.0%
School psychologist	12	21.4%
Principal	9	16.1%
Remedial education teacher	9	16.1%
RTI coordinator	2	3.6%
Special education liaison	1	1.8%
Child study coordinator	1	1.8%
Pre-doctoral intern	1	1.8%
Assistant principal	1	1.8%
Director of Student Services	1	1.8%
Data team	1	1.8%
Inclusion coordinator	1	1.8%

Level of Implementation of the Prereferral Intervention Process

Scores on the *Level of Implementation Rubric* were tabulated for each responding school utilizing an Excel database. The maximum total score was 18 and the minimum was 0. Level of Implementation (LOI) Scores from 0 to 6 fell within the "low implementation" range, scores from 7 to 12 fell within the "medium implementation" range, and scores from 13 to 18 fell within the "high implementation" range. These categories were based on the guidelines developed by Laverty (2007). Total scores on the *Level of Implementation Rubric* ranged from a low of 4 (N = 1, 1%) to a high of 18 (N = 6, 5%). A LOI score could not be tabulated for one elementary school responding, due to missing data.

Sixty-four percent of schools responding (N = 76) had LOI scores in the high implementation range. Of these schools 66% (N = 50) reported employing instructional support teachers. Thirty-one percent of schools (N = 38) reported LOI scores in the medium implementation range. Four schools (3%) had LOI scores in the low implementation range. Of these schools, one (25%) continued to employ an instructional support teacher.

Level of implementation scores were also tabulated for each of the six questions comprising the *Level of Implementation Rubric.* Scores of 3 represented "low implementation, scores of 2 represented "medium implementation," and scores of 1 represented "low implementation." Scores of zero indicated no implementation of that activity.

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Activities of the Instructional Support Teacher

On SQ10, which addressed activities of the prereferral intervention teacher or coordinator, 75% of schools had high implementation scores (N = 89), 19% had medium implementation scores (N = 22), and 5% had low implementation scores (N = 6). The mean implementation score was 2.71.

Activities Expected of Instructional Support Teachers

Survey question 11 addressed activities that referring teachers expect of instructional support teachers/prereferral intervention coordinators. Twenty-three percent of schools had high implementation scores (N = 27), 41% had medium implementation scores (N = 48), and 31% had low implementation scores (N = 37). Six schools (5%) reported no implementation. The mean implementation score was 1.80.

Involvement of Regular Education Teachers

Responses to SQ12, which addressed involvement of regular education teachers in the prereferral intervention process, indicated that 67% of respondents had high implementation scores (N = 79), 25% had medium implementation scores (N = 30), and 7% had low implementation scores (N = 8). The mean implementation score was 2.61.

Involvement of Parents

Survey question 15 addressed parent involvement in the prereferral intervention process. Eighty percent of schools responding had high implementation scores (N = 94), 9% had medium implementation scores (N = 11), and 9% had low implementation scores (N = 11). Two schools reported no implementation (2%). The mean implementation score was 2.67.

Data Collection Procedures

Responses to SQ21, which addressed data collection procedures, indicated that 63% of schools responding had high implementation scores (N = 75), 10% had medium implementation scores, and 1% had low implementation scores (N = 1). Thirty respondents (25%) indicated no implementation of systematic data procedures. It should be noted that schools who responded "no" to SQ20, which asked if schools collected data on a systematic basis to assess need for interventions were instructed not to respond to SQ21, SQ22, SQ23, SQ24, and SQ25. Some respondents indicated that they implemented some data collection procedures, but not in a systematic way to assess need for intervention. The mean implementation score was 2.12.

Progress Monitoring

Survey question 23 addressed how progress toward team goals was measured. Responses were arranged hierarchically, with respondents indicating weekly assessment by a member of the prereferral team receiving a score of 3, those indicating pre- and post-assessments by a member of the prereferral team receiving a score of 2, and those indicating collection of pre- and post- data by the classroom teacher receiving a score of 1. Those who indicated no systematic data collection received a score of 0. Responses indicated that 26% of respondents received a high implementation score (N = 31), 31% received a medium implementation score (N = 36), and 16% received a low implementation score (N = 19). Thirty-two schools reported no implementation (27%). The mean implementation score was 1.56. Table 6 displays the mean implementation scores for each survey question and the mean total LOI score.

Table 6

Results of Level of Implementation Rubric

Survey question	Mean LOI Score	% High Implementation	%Medium Implementation	% Low Implementation	% No Implementation
IST Teacher Activities SQ10 (0-3)	2.71	75%	19%	5%	0
IST Teacher Expectations SQ11 (0-3)	1.80	23%	41%	31%	5%
Regular Education Involvement SQ12 (0-3)	2.61	67%	25%	7%	0
Parent Involvement SQ15 (0-3)	2.67	80%	9%	9%	2%
Data Collection SQ21 (0-3)	2.12	63%	10%	1%	25%
Progress Monitoring SQ23 (0-3)	1.56	26%	31%	16%	27%
Total LOI score (0-18)	13.51	64%	31%	3%	0

Note: Scores on Survey Questions range from 0-3. Total LOI scores range from 0-18.

Percentage of Students Identified in Need of Special Education Due to a

Specific Learning Disability

Respondents were asked to report the number of students in their school identified with a SLD and receiving special education services. Based upon the school population (provided by the respondent) and the number of students with SLD, a percentage was calculated. Eight respondents provided a percentage, rather than a number, and in those cases, the percentage provided by the respondent was used. Fourteen schools did not provide data regarding numbers of students with SLD. The percentage of students receiving special education services for SLD ranged from 0.8% to 30.0%. The mean percentage rate was 8.5%. Twenty-nine percent of schools responding (N = 30) reported percentages of 10% or more. Forty-six percent of schools (N = 48) had percentages of students with SLD between 5% and 9.9%, and 25% of schools (N = 26) reported percentages less than 5%. Forty-seven percent (N = 49) of schools responding reported percentages below the Pennsylvania state average of 7.95%, and 53% (N = 55) reported percentages above the state average.

Analysis

As described by Laverty, the following research questions and hypotheses were analyzed for this study.

Research Question 1. Is there a relationship between specific characteristics of the instructional support teacher and level of implementation of the prereferral intervention process?

Hypothesis 1. Schools that continue to employ an instructional support teacher will demonstrate higher level of implementation than schools that do not employ an instructional support teacher.

a. There is a positive relationship between the presence of a full-time instructional support teacher and the level of implement11.93ation of the prereferral intervention process.

b. There is a positive relationship between continued staffing of an instructional support teacher who participated in the initial IST trainings and the level of implementation of the prereferral intervention process.

c. There is a positive relationship between the ratio of instructional support teacher/prereferral intervention coordinator and the number of students in the elementary school and the level of implementation of the prereferral intervention process.

Pearson correlation coefficients were calculated to investigate the relationship between specific characteristics of the instructional support teacher and the dependent variable level of implementation of the prereferral intervention process. The employment of an instructional support teacher was compared with the LOI. Likewise, continued staffing of an instructional support teacher who participated in the initial IST training and ratio of the instructional support teacher/coordinator to students were each compared with LOI. The mean LOI score for schools employing instructional support teachers was 14.97 (SD = 2.78), whereas the mean LOI for those not employing instructional support

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teachers was 11.93 (SD = 3.47). The correlation between the presence of an instructional

support teacher and LOI was statistically significant, r = .440, p = .01. This result

supports the hypothesis that schools that continue to employ an instructional support

teacher will demonstrate higher level of implementation of the prereferral process than

those that do not.

The correlation between the continued staffing of an instructional support teacher

who participated in initial training (SQ3) and LOI was not statistically significant, r =

.147, p = .263. Thus, the hypothesis that schools that employ instructional support

teachers that participated in initial training will have higher levels of implementation was

not supported. Similarly, the correlation between ratio of student to instructional support

teacher (SQ4) and LOI was also not significant, r = -.183, p = .164. The hypothesis that

schools that have lower student to instructional support teacher ratios will have higher

level of implementation of the prereferral intervention process was not supported. Table 7

presents correlations for variables relating to Hypothesis 1.

Table 7

Correlations between LOI and Variables Relating to the Instructional Support Teacher

DESCRIPTIVE STATISTICS

	n	Mean	SD	Range
IST Teacher (SQ2)	117	13.51	3.466	4-18
Initial Training (SQ3a)	60	14.93	2.785	6-18

CORRELATION MATRIX

Pearson Correlation	SQ2	SQ3a	SQ4	LOI
IST Teacher (SQ2)	--	a	a	.440**
Initial Training (SQ3a)		--	.039	.147
Ratio (SQ4)			--	-.183
LOI (Rubric Total)				--

**p<.01

a. Cannot be computed because at least one of the variables is constant.

Research Question 2. Is there a relationship between specific characteristics of the instructional support teacher and the number of students found eligible for special education services with specific learning disabilities?

Hypothesis 2. Schools that employ an instructional support teacher will find fewer students eligible for special education services for specific learning disabilities than schools that do not employ an instructional support teacher.

a. There is an inverse relationship between the presence of a full-time instructional support teacher and the number of students with specific learning disabilities placed in special education.

b. There is an inverse relationship between continued staffing of an instructional support teacher who participated in the initial IST trainings and the number of students with specific learning disabilities placed in special education.

c. There is an inverse relationship between the ratio of the instructional support teacher/prereferral intervention coordinator and the number of students in the elementary school and the number of students with specific learning disabilities.

Pearson correlation coefficients were calculated to investigate the relationship between specific characteristics of the instructional support teacher and the number of students with specific learning disabilities placed in special education. The employment of an instructional support teacher was compared with the dependent variable of the number of students with specific learning disabilities placed in special education. Likewise, continued staffing of an instructional support teacher who participated in the

initial IST training and ratio of the instructional support teacher/coordinator to students were each compared with the number of students with specific learning disabilities placed in special education. The mean percentage of students identified with specific learning disabilities and receiving special education services for schools employing instructional support teachers was 7.41% (SD = 3.76), whereas the mean percentage of students identified with SLD for those not employing instructional support teachers was 9.69% (SD = 6.31). The correlation between the presence of an instructional support teacher (SQ2) and the percentage of students with specific learning disabilities placed in special education was statistically significant, r = -.219, p = .05. This result supports the hypothesis that schools that continue to employ an instructional support teacher will have smaller numbers of students placed in special education for specific learning disabilities.

The correlation between the continued staffing of an instructional support teacher who participated in initial training (SQ3) and the number of students with specific learning disabilities placed in special education was not statistically significant, r = .075, p = .590. Thus, the hypothesis that schools that employ instructional support teachers that participated in initial training will have smaller number of students with specific learning disabilities placed in special education was not supported. Similarly, the correlation between ratio of student to instructional support teacher (SQ4) and the number of students with specific learning disabilities placed in special education was also not significant, r = -.013, p = .924. The hypothesis that schools that have lower student to instructional support teacher ratios will have lower numbers of students with specific

learning disabilities placed in special education was not supported. Table 8 presents

correlations for variables relating to Hypothesis 2.

Table 8

Correlations between Numbers of Students with SLD Placed in Special Education and Variables Relating to the Instructional Support Teacher

DESCRIPTIVE STATISTICS

	n	Mean	SD	Range
IST Teacher (SQ2)	104	.085	.052	.008-.300
Initial Training (SQ3a)	54	.075	.037	.008-.149

CORRELATION MATRIX

Pearson Correlation	SQ2	SQ3a	SQ4	% SLD
IST Teacher (SQ2)	--	a	a	-.219*
Initial Training (SQ3a)		--	.039	.075
Ratio (SQ4)			--	-.013
% SLD				--

*p<.05
a. Cannot be computed because at least one of the variables is constant.

Research Question 3. What is the relationship between administrative support of the prereferral intervention process (i.e., written policy and/or procedure requiring prereferral interventions, attendance at prereferral intervention meetings, and scheduling meetings during teacher contracted time) and level of implementation of the prereferral intervention process?

Hypothesis 3. Schools with higher levels of administrative support will demonstrate higher levels of implementation of the prereferral intervention process than schools with lower levels of administrative support.

a. There is a positive relationship between the administrative requirement that students participate in an IST/prereferral intervention team process and the level of implementation of the prereferral intervention process.

b. There is a positive relationship between the percentage of time principals attend the IST/prereferral intervention team meetings and the level of implementation of the prereferral intervention process.

c. There is a positive relationship between the administrative decision to schedule IST/prereferral intervention team meetings during regular teacher-contracted hours and the level of implementation of the prereferral intervention process.

d. There is a positive relationship between the presence of a written policy or procedure that strongly encourages parents to refer students for prereferral interventions before being referred for a multidisciplinary evaluation and the level of implementation of the prereferral intervention process.

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Correlation coefficients were calculated to investigate the relationship between four variables related to administrative support and the level of implementation of the prereferral intervention team. Due to considerable non-normality of the data, a Spearman's Rho correlation was calculated. Specific variables examined included the implementation of a written policy/procedure that requires teachers to refer to prereferral process before multidisciplinary evaluation (SQ13), the implementation of a written policy/procedure that informs and strongly encourages parents to refer to prereferral process before multidisciplinary evaluation (SQ14), the percentage of IST/prereferral intervention team meetings attended by principal (SQ26), and allotted time during school week for prereferral intervention team to meet during contracted hours (SQ27).

Only one of the four variables was significantly correlated with LOI—the implementation of a written policy encouraging parents to refer to a prereferral process prior to referral for a multidisciplinary evaluation (SQ14). The correlation between a parent policy and LOI was statistically significant, $r = .288$, $p = .002$. This result supports the hypothesis that there is a positive relationship between the presence of a written policy or procedure that strongly encourages parents to refer students for prereferral interventions before being referred for a multidisciplinary evaluation and the level of implementation of the prereferral intervention process.

The correlation between the requirement that students participate in an IST/prereferral intervention team process prior to multidisciplinary evaluation and LOI was not statistically significant, $r = .156$, $p = .095$. Thus, the hypothesis that there is a positive relationship between the administrative requirement that students participate in

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an IST/prereferral intervention team process and LOI was not supported. Likewise, the correlation between the percentage of time principals attend the IST/prereferral intervention team meetings and LOI was also not significant, r = -.058, p = .537. The hypothesis that there is a positive relationship between the percentage of time principals attend the IST/prereferral intervention team meetings and the level of implementation of the prereferral intervention process was not supported. The correlation between the administrative decision to schedule IST/prereferral intervention team meetings during regular teacher-contracted hours and LOI was also not statistically significant, r = .125, p = .180. Table 9 presents correlations for variables relating to Hypothesis 3.

Table 9

Correlations between LOI and Variables Relating to Administrative Support

DESCRIPTIVE STATISTICS

	n	Mean	SD	Range
Teacher referral policy (SQ13)	116	13.52	3.480	4-18
Parent referral policy (SQ14)	117	13.51	3.466	4-18
Meetings held during school time (SQ27)	116	13.53	3.478	4-18

CORRELATION MATRIX

Spearman's Rho	SQ13	SQ14	SQ26	SQ27	LOI
Teacher referral policy (SQ13)	--	.537**	-.066	.095	.156
Parent referral policy (SQ14)		--	-.208*	.058	.288**
Principal attendance at meetings (SQ26)			--	.001	-.058
Meetings held during school time (SQ27)				--	.125
LOI (Rubric Total)					--

* p < .05, **p<.01

Research Question 4. What is the relationship between administrative support of the prereferral intervention process (i.e., written policy and/or procedure requiring prereferral interventions, attendance at prereferral intervention meetings, and scheduling meetings during teacher contracted time) and the number of students found eligible for special education services with specific learning disabilities?

Hypothesis 4. Schools with high levels of administrative support will find fewer students eligible for special education services for specific learning disabilities than schools with lower administrative support.

a. There an inverse relationship between the administrative requirement that students participate in an IST/prereferral intervention team process and the number of students with specific learning disabilities placed in special education.

b. There is an inverse relationship between the percentage of time principals attend the IST/prereferral intervention team meetings and the number of students with specific learning disabilities placed in special education.

c. There is an inverse relationship between the administrative decision to schedule IST/prereferral intervention team meetings during regular teacher-contracted hours and the number of students with specific learning disabilities placed in special education.

d. There is a positive relationship between the presence of a written policy or procedure that strongly encourages parents to refer students for prereferral interventions before being referred for a multidisciplinary evaluation and the

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number of students with specific learning disabilities placed in special

education.

Correlation coefficients were calculated to investigate the relationship between four variables related to administrative support and the number of students found eligible for special education services with specific learning disabilities. Due to considerable non-normality of the data, a Spearman's Rho correlation was calculated. Specific variables examined included the implementation of a written policy/procedure that requires teachers to refer to prereferral process before multidisciplinary evaluation (SQ13), the implementation of a written policy/procedure that informs and strongly encourages parents to refer to prereferral process before multidisciplinary evaluation (SQ14), the percentage of IST/prereferral intervention team meetings attended by principal (SQ26), and allotted time during school week for prereferral intervention team to meet during contracted hours (SQ27).

None of the four variables was significantly correlated with the number of students found eligible for special education services with specific learning disabilities. The correlation between a parent policy (SQ13) and rate of SLD was not statistically significant, $r = .039$, $p = .692$. This result does not support the hypothesis that there is a positive relationship between the presence of a written policy or procedure that strongly encourages parents to refer students for prereferral interventions before being referred for a multidisciplinary evaluation and the rate of SLD identification. The correlation between the requirement that students participate in an IST/prereferral intervention team process

prior to multidisciplinary evaluation (SQ14) and percentage of students identified with

SLD was not statistically significant, $r = -.061$, $p = .537$. Thus, the hypothesis that there is

a positive relationship between the administrative requirement that students participate in

an IST/prereferral intervention team process and the number of students found eligible

for special education services with specific learning disabilities was not supported.

Likewise, the correlation between the percentage of time principals attend the

IST/prereferral intervention team meetings (SQ26) and the number of students found

eligible for special education services with specific learning disabilities was also not

significant, $r = -.074$, $p = .456$. The hypothesis there is a positive relationship between the

percentage of time principals attend the IST/prereferral intervention team meetings and

the number of students found eligible for special education services with specific learning

disabilities was not supported. The correlation between the administrative decision to

schedule IST/prereferral intervention team meetings during regular teacher-contracted

hours (SQ27) and LOI was also not statistically significant, $r = .136$, $p = .169$.

Research Question 5. What is the relationship between team training and level of

implementation of the prereferral intervention process?

Hypothesis 5. Elementary school teams that access training in the prereferral

intervention process will demonstrate higher levels of implementation of the prereferral

intervention process than schools that do not access training.

a. There is a positive relationship between number of trainings related to the prereferral intervention process and the level of implementation of the prereferral intervention team process.

b. There is a positive relationship between the types of trainings related to the prereferral intervention process and the level of implementation of the prereferral intervention process.

Fifty-two percent of the 61 schools responding to SQ3 indicated that they continued to employ at least one instructional support teacher who participated in initial IST training. The mean number of years that the instructional support teacher had held the position was 10, and ranged from two to twenty-two.

One hundred thirteen participants provided an estimate of the number of trainings related to the prereferral intervention process that their instructional support teacher or prereferral intervention coordinator had participated in within the past two school years. Two respondents provided numbers that appeared unrealistic (36 and 100) indicating possible misinterpretation of the question. Those two responses were deleted when statistical analyses were completed. The mean number of trainings was 2.95. The number of trainings reported ranged from zero (N = 37) to fifteen (N = 2).

Of the 73 respondents who reported that their instructional support teacher or prereferral intervention coordinator attended trainings, 74% (N = 54) reported training in CBA and or CBM. Eighty-four percent (N = 61) reported training in differentiated instruction. Fifty-one percent of respondents reported other types of training. Training in

Response to Intervention was reported by 24% of respondents (N = 17). Table 10 outlines

the types of training reported by study participants.

Table 10

Frequency Table of Training Opportunities for Instructional Support Teacher or
Prereferral Intervention Coordinator

_____

	Frequency
Response to Intervention	17
Elementary student assistance program	6
Progress monitoring	3
Behavior management strategies	2
4 Sight	1
AIMS	1
Behavior Intervention Plans	1
CBA Math	1
Data collection techniques	1
DRA training	1
Functional behavior assessment	1
Intervention training	1
IU Support Network Meetings	1
Learning Focused Schools	1
LETRS	1
Math and reading interventions	1
Multiple differentiated instruction	1
Project Read	1

Table 10 (continued).

Frequency Table of Training Opportunities for Instructional Support Teacher or Prereferral Intervention Coordinator

	Frequency
PSSA	1
Reading comprehension strategies	1
Reading First	1
Reading Mastery	1
Research based/evidence-based practices	1
SAT	1
School-Wide Positive Behavior Support	1
Selective Mutism	1
Technical training in leveled screenings	1

Pearson correlation coefficients were calculated to investigate the relationship between variables related to team training and LOI. Specific variables examined included the number of trainings related to the prereferral intervention process (SQ16) and the types of trainings related to the prereferral intervention process (SQ17). For purposes of data analysis, those two values were deleted. The number of training sessions was significantly correlated with LOI, $r = .338$, $p < .001$. Table 11 presents correlations between number of training sessions and LOI.

Table 11

Correlations between LOI and Number of Training Sessions

DESCRIPTIVE STATISTICS

	n	Mean	SD	Range
Number of training sessions (SQ16)	112	13.55	3.505	4-18

CORRELATION MATRIX

Pearson Correlation	SQ16	LOI
Number of training sessions (SQ16)	--	.338**
LOI (Rubric Total)		--

**p<.01

Two specific types of team training were measured – curriculum-based assessment/measurement and differentiated instruction. Both types of training were significantly correlated with LOI. Training in curriculum-based assessment/measurement (SQ17a) was significantly correlated with LOI, r = .405, p = .000. Likewise, the correlation between training in differentiated instruction and LOI was statistically significant, r = .326, p = .005. Table 12 contains correlations between LOI and variables related to types of training.

Table 12

Correlations between LOI and Types of Training

DESCRIPTIVE STATISTICS

	n	Mean	SD	Range
Type of Training (SQ17a & 17b)	71	14.03	3.286	6-18

CORRELATION MATRIX

Pearson Correlation	SQ17a	SQ17b	LOI
CBA/CBM (SQ17a)	--	.067	.405**
Differentiated Instruction (SQ17b)		--	.326**
LOI (Rubric Total)			--

**p<.01

Two regression analyses were conducted to further examine the relationship
between number and types of training and LOI. The first regression model tested the
following variables as predictors of level of implementation of the prereferral
intervention process: participation by the instructional support teacher in the initial IST
training (SQ3), training related to CBA/CBM (SQ17a), training related to differentiated

instruction (SQ17b), number of trainings attended (SQ16), and guided practice or supervision (SQ19). This model accounted for approximately 11% of the total variance of Level of Implementation of the Prereferral Intervention Process, which was not statistically significant, $F(5, 35) = 2.026$, $p = .099$. In this model, none of the variables demonstrated a significant effect on LOI.

A second model tested the variables listed above, with the exception of participation of the instructional support teacher in the initial IST training (SQ3). When SQ3 was removed from the model, all of the remaining variables demonstrated significant effects on LOI. The model accounted for approximately 42% of the variance in LOI, which was highly significant, $F(4,61) = 12.691$, $p < .001$. Training in CBA/CBM demonstrated the most significant effect ($\beta = .389$, $p = .000$), followed by guided practice or supervision ($\beta = .285$, $p = .005$), number of trainings attended ($\beta = .279$, $p = .005$), and training in differentiated instruction ($\beta = .242$, $p = .017$). These results support the hypothesis that the number and types of trainings are related to level of implementation of the prereferral intervention process. Table 13 shows the regression model using number and types of training to predict LOI.

Table 13

Summary of Regression Analysis for Variables Related to Team Training Predicting LOI

Model Fit		R square		Adjusted R squared	
$F [4, 61] = 12.691; p < .001$		.454		.418	

Variable	B	SE B	β	t	p
CBA/CBM (SQ17a)	2.948	.724	.389	4.074	<.001**
Differentiated Instruction (SQ17b)	2.240	.909	.242	24.465	.017*
Number of Trainings (SQ16)	.311	.108	.279	2.891	.005**
Guided practice (SQ19)	2.207	.761	.285	2.900	.005**

* p < .05, **p<.01

Research Question 6. What is the relationship between team training and the number of students found eligible for special education services with specific learning disabilities?

Hypothesis 6. Elementary school teams that access training in the prereferral intervention process find fewer students eligible for special education services for specific learning disabilities than schools that do not access training.

a. There is an inverse relationship between number of trainings related to the prereferral intervention process and the number of students with specific learning disabilities placed in special education.

b. There is an inverse relationship between the types of trainings related to the prereferral intervention process and the number of students with specific learning disabilities placed in special education.

Pearson correlation coefficients were calculated to investigate the relationship between variables related to team training and the number of students with specific learning disabilities placed in special education. Specific variables examined included the number of trainings related to the prereferral intervention process (SQ16) and the types of trainings related to the prereferral intervention process (SQ17). It should be noted that all values on SQ16 fell below 20, with the exception of two which were significantly higher. These two responses (36 and 100) appeared to represent misunderstanding of the question, rather than reasonable responses. For purposes of data analysis, those two values were deleted. The number of training sessions was not significantly correlated with the number of students with SLD placed in special education, $r = -.131$, $p = .193$.

Two types of team training were specifically measured – curriculum-based assessment/curriculum-based measurement and differentiated instruction. Training in differentiated instruction (SQ17b) was significantly correlated with the number of students with SLD placed in special education, $r = .283$, $p = .026$, but in the opposite direction hypothesized. Training in curriculum-based assessment/curriculum-based

measurement (SQ17a) was not significantly correlated with the number of students with

SLD placed in special education, r = -.153, p = .234. Table 14 contains the correlations

between the percentage of students identified with SLD and types of training.

Table 14

Correlations between Percentage of Students Identified with SLD and Types of Training

DESCRIPTIVE STATISTICS

	n	Mean	SD	Range
Type of Training (SQ17a & 17b)	62	.078	.052	.008-.300

CORRELATION MATRIX

Pearson Correlation	SQ17a	SQ17b	% SLD
CBA/CBM (SQ17a)	--	.067	-.153
Differentiated Instruction (SQ17b)		--	.283*
% SLD			--

*p<.05

A regression analysis was conducted to further examine the relationship between number and types of training and the number of students with SLD placed in special education. The regression model tested the following variables as predictors of level of implementation of the prereferral intervention process: participation by the instructional support teacher in the initial IST training (SQ3), training related to CBA/CBM (SQ17a), training related to differentiated instruction (SQ17b), number of trainings attended (SQ16), and guided practice or supervision (SQ19). This model accounted for approximately 5% of the total variance of Level of Implementation of the Prereferral Intervention Process, which was not statistically significant, $F(5, 30) = 1.391$, $p = .256$. In this model, none of the variables demonstrated a significant effect on the number of students with SLD placed in special education. Results of the regression analysis did not support that hypothesis that number of trainings is related to lower numbers of students identified with specific learning disabilities receiving special education services. Table 15 contains results of the regression analysis.

Table 15

Summary of Regression Analysis for Variables Related to Team Training Predicting Percentage of Students Identified with SLD

Model Fit	R square	Adjusted R squared
F [5, 30] = 1.391; p = .256	.188	.053

Research Question 7. What is the relationship between the use of systematic data collection and the level of implementation of the prereferral intervention process?

Hypothesis 7. Elementary schools that utilize systematic data collection procedures for decision-making will demonstrate higher levels of implementation of the prereferral intervention process than schools that do not utilize systematic data collection procedures.

Pearson correlation coefficients were calculated to investigate the relationship between variables related to systematic data collection and level of implementation. Participants were asked if their prereferral intervention teams collected data on systematic basis to assess need for prereferral intervention. Eighty-one percent (N = 92) of the 114 participants responding to the question indicated that they collected data on a systematic basis. The systematic collection of data was significantly correlated with LOI, r = .676, p = .000. Results supported the hypothesis that systematic data collection is related to higher levels of implementation. Table 16 presents the correlation between systematic data collection and LOI.

Table 16

Correlations between LOI and Systematic Data Collection

DESCRIPTIVE STATISTICS

	n	Mean	SD	Range
Systematic data collection (SQ20)	114	13.54	3.50	4-18

CORRELATION MATRIX

Pearson Correlation	SQ20	LOI
Systematic data collection (SQ20)	--	.676**
LOI (Rubric Total)		--

**$p<.01$

A regression analysis was conducted to further examine the relationship between systematic data collection and LOI. The regression model tested the following variables as predictors of level of implementation of the prereferral intervention process: use of curriculum-based assessment/measurement to help determine appropriate interventions (SQ22a), use of group achievement test scores to help determine appropriate interventions (SQ22b), and use of assessments related to prereferral interventions in

decisions to refer students for multidisciplinary evaluations (SQ24). All of the

respondents except for two reported that they used curriculum-based

assessment/measurement in developing interventions. Thus, data from that question could

not be analyzed. The model accounted for less than 1% of the variance ($\Delta R^2 = .008$) of

the total variance of Level of Implementation of the Prereferral Intervention Process,

which was not statistically significant, $F(2, 82) = 1.326$, $p = .271$. In this model, none of

the variables demonstrated a significant effect on LOI. Results of the regression analysis

did not indicate that use of group achievement tests to help design interventions was

related to higher LOI. Results related to use of CBA/CBM were inconclusive due to

almost all respondents indicating that they used CBA or CBM. Results did not indicate

that using assessments related to prereferral interventions in decisions to refer students

for multidisciplinary evaluations was related to higher LOI. Table 17 presents results of

the multiple linear regression analysis.

Table 17

Summary of Regression Analysis for Variables Related to Systematic Data Collection Predicting LOI

Model Fit	R square	Adjusted R squared
F [2, 82] = 1.326; p = .271	.031	.008

Research Question 8. What is the relationship between the use of systematic data collection and the number of students found eligible for special education services with specific learning disabilities?

Hypothesis 8. Elementary schools that utilize systematic data collection procedures for decision-making have fewer students with specific learning disabilities placed in special education than schools that do not utilize systematic data collection procedures.

Pearson correlation coefficients were calculated to investigate the relationship between variables related to systematic data collection and the number of students found eligible for special education services with specific learning disabilities. The systematic collection of data was not significantly correlated with percentage of students identified with SLD, r = -.069, p = .489. Results did not support the hypothesis that systematic data collection is related to the number of students found eligible for special education services with specific learning disabilities. Table 21 presents the correlation between systematic data collection and percentage of students identified with SLD.

A regression analysis was conducted to further examine the relationship between systematic data collection and the number of students found eligible for special education services with specific learning disabilities. The regression model tested the following variables as predictors of level of implementation of the prereferral intervention process: use of curriculum-based assessment/measurement to help determine appropriate interventions (SQ22a), use of group achievement test scores to help determine appropriate interventions (SQ22b), and use of assessments related to prereferral interventions in decisions to refer students for multidisciplinary evaluations (SQ24). All of the respondents except for two reported that they used curriculum-based assessment/measurement in developing interventions. Thus, data from that question could not be analyzed. The model accounted for less than 1% of the variance of Level of Implementation of the Prereferral Intervention Process, which was not statistically significant, $F(2, 74) = .974$, $p = .382$. In this model, none of the variables demonstrated a significant effect on percentage of students identified with SLD. Results of the regression analysis did not indicate that use of group achievement tests to help design interventions was related to lower percentage of students identified with SLD. Results related to use of CBA/CBM were inconclusive due to almost every respondent indicating that his or her school used CBA or CBM. Results did not indicate that using assessments related to prereferral interventions in decisions to refer students for multidisciplinary evaluations was related to percentage of students identified with SLD. Table 18 presents results of the multiple linear regression analysis.

Table 18

Summary of Regression Analysis for Variables Related to Systematic Data Collection
Predicting Percentage of Students Identified with SLD

Model Fit	R square	Adjusted R squared
F [2, 82] = 1.326; p = .271	.031	.008

Research Question 9. Is there a relationship between level of implementation of the prereferral intervention process and the identification and placement of students with specific learning disabilities?

Hypothesis 9. There is an inverse relationship between the level of implementation of the prereferral intervention process and the number of students with specific learning disabilities placed in special education.

A Pearson correlation coefficient was calculated to investigate the relationship between LOI and the number of students with specific learning disabilities placed in special education. The Level of Implementation of the Prereferral Intervention Process was significantly negatively correlated with the number of students with SLD placed in special education, $r = -.211$, $p = .031$. A regression analysis was conducted to further examine the relationship between LOI and the number of students with SLD placed in special education. Level of Implementation accounted for approximately 3.5% of the total variance of students with SLD placed in special education, which was statistically significant, $F(1, 102) = 4.759$, $p = .031$. Though results of the regression analysis

supported the hypothesis that there is an inverse relationship between the level of implementation of the prereferral intervention process and the number of students with specific learning disabilities placed in special education, the relationship between LOI and number of students with SLD appears to be weak given the low amount of variance accounted for. Table 19 shows the results of the correlations and regression analysis.

Table 19

Summary of Regression Analysis for LOI Predicting Percentage of Students Identified with SLD

Model Fit	R square	Adjusted R squared
F [1, 102] = 4.759; p = .031	.045	.035

Variable	B	SE B	β	t	p
Level of Implementation	-.003	.001	-.211	-2.182	.031*

* p < .05, **p<.01

Research Question 10. Is there a relationship between high levels of administrative support and levels of systematic data collection, use of instructional support teachers, and training of team members?

Hypothesis 10. Elementary schools with high levels of administrative support will have higher levels of systematic data collection, use of instructional support teachers, and training of team members.

As reported above, factors related to administrative support for the prereferral process were found to be largely unrelated to LOI or percentage of students identified with SLD. Only a parent policy encouraging prereferral interventions had any relationship to LOI and no variables were significantly related to percentage of students identified with SLD. Thus, the hypothesis that high level of administrative support acted as a moderator variable related to levels of systematic data collection, use of instructional support teachers, and training of team members was not supported.

Summary

Results of the data analysis procedures were presented in this chapter. Demographic characteristics of the sample were presented. Descriptive statistics used to evaluate each research question and hypothesis were presented and interpreted.

Four hundred forty elementary principals in Pennsylvania were surveyed to determine their prereferral intervention practices since the removal of the Instructional Support Team mandate. Schools were selected to ensure that the sample was representative of Pennsylvania elementary schools. School districts were divided into

three geographic regions (East, Central, and West), three levels of aid ratio (Low, Middle, and High), and three population densities (Urban, Rural, and Suburban). A stratified random sampling procedure was utilized using these three factors as selection criteria. The return rate was 27%, representing approximately 6.8% of the total number of elementary schools in Pennsylvania.

This study was designed to investigate four independent variables, one moderator variable, and two dependent variables. The independent variables included (1) the skills of the instructional support teacher/prereferral intervention coordinator, (2) administrative support for the prereferral process, (3) training related to the prereferral process, and (4) systematic data collection procedures. Administrative support was also hypothesized to act as a moderator variable. Level of Implementation of the Prereferral Process (LOI), which was measured by a rubric comprised of six survey questions, was one dependent variable. The second proposed dependent variable was the percentage of students in the school identified with a specific learning disability and receiving special education services.

Results of the data analyses indicated that schools that continued to employ an instructional support teacher demonstrated higher levels of implementation and lower rates of students identified with SLD and receiving special education services. However, neither participation in the initial training, nor ratio of student to instructional support teacher was related to increased LOI or decreased rates of SLD.

Only one variable related to administrative support for the prereferral intervention process—implementation of a policy encouraging parents to refer children for prereferral

intervention prior to referral for a multidisciplinary evaluation—was related to higher levels of implementation. However, the implementation of a parent policy was not related to reduced rates of SLD identification. Implementation of a policy requiring teachers to refer students to the prereferral intervention process, scheduling of meetings during teacher-contracted hours, and percent of meetings attended by principals were not related to increased LOI or reduced numbers of students identified with SLD.

Two types of training were found to be related to higher levels of implementation of the prereferral intervention process: training related to curriculum-based assessment and measurement (CBA/CBM) and training related to differentiated instruction. A multiple regression analysis found that a model including training in CBA/CBM, training in differentiated instruction, participation in guided practice or supervision, and number of trainings attended was significantly related to higher LOI. This same model was not related to reduced rates of SLD identification, though training in differentiated instruction was significantly correlated with lower rates of SLD.

Systematic data collection was significantly correlated with LOI. However, use of prereferral intervention data to decide on referrals for multidisciplinary evaluations was not related to higher LOI. Use of group achievement test data to design interventions was also unrelated to LOI. Almost every respondent indicated that they used CBA/CBM to design interventions; therefore, results were inconclusive. Systematic data collection was not significantly correlated with percentage of students identified with specific learning disabilities. Neither of the individual factors related to data collection (i.e., use of group achievement data, use of prereferral intervention data to decide on multidisciplinary

evaluation referrals). As noted above correlations for use of CBA/CBM could not be calculated.

Higher levels of implementation of the prereferral intervention process were found to be significantly correlated with lower rates of students identified with SLD and receiving special education services. A regression analysis indicated that LOI accounted for approximately 3.5% of the variance in numbers of students identified with SLD, which was statistically significant.

CHAPTER V

DISCUSSION

The recent focus on Response to Intervention has led to more schools

implementing prereferral intervention models. Although a number of researchers have

written extensively about RTI and problem-solving models, few studies have examined

the factors that lead to high-functioning teams. Researchers have proposed a number of

characteristics and practices that are believed to contribute to effective interventions for

students; however, a definitive research base examining specific variables contributing to

successful team practices is currently unavailable. The need for this line of research is

more evident as schools are required to implement prereferral intervention models. Many

schools are struggling with program implementation and lack guidance as to which

specific components are most critical in designing programs for their students. In

summary, though characteristics leading to successful prereferral processes have been

discussed in the literature, few studies have empirically examined which the influence of

specific team characteristics on successful implementation. Therefore, the current study

will contribute to the existing literature regarding effective prereferral practices.

The current study was designed to build upon a previous study conducted by

Laverty (2007). The study utilized survey methodology to obtain information from

elementary schools in Pennsylvania regarding their prereferral intervention practices. The

study examined four specific characteristics of prereferral intervention teams:

employment of an instructional support teacher/prereferral intervention coordinator,

administrative support, training of team leaders, and systematic data collection. The study

was designed to examine the relationship of the four independent variables to two key dependent variables: Level of Implementation of the Prereferral Intervention Process and number of students with specific learning disabilities placed in special education.

This chapter will provide an overview of the research findings based on the research questions and methodology used in the study. The second section provides a summary of the results and conclusions. The third section outlines the implications of the study. The fourth section summarizes recommendations for the profession based upon results of the study. The fifth section provides recommendations for future research. The final section discusses methodological limitations of the study.

Review of Research Questions and Methodology

The study was designed to investigate the characteristics that lead to successful implementation of Instructional Support Teams and other prereferral intervention teams. The following research questions were proposed:

1. Is there a relationship between specific characteristics of the instructional support teacher and level of implementation of the prereferral intervention process?

2. Is there a relationship between specific characteristics of the instructional support teacher and the number of students found eligible for special education services with specific learning disabilities?

3. What is the relationship between administrative support of the prereferral intervention process (i.e., written policy and/or procedure requiring prereferral interventions, attendance at prereferral intervention meetings, and scheduling meetings during

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teacher contracted time) and level of implementation of the prereferral intervention process?

4. What is the relationship between administrative support of the prereferral intervention process (i.e., written policy and/or procedure requiring prereferral interventions, attendance at prereferral intervention meetings, and scheduling meetings during teacher contracted time) and the number of students found eligible for special education services with specific learning disabilities?

5. What is the relationship between team training and level of implementation of the prereferral intervention process?

6. What is the relationship between team training and the number of students found eligible for special education services with specific learning disabilities?

7. What is the relationship between the use of systematic data collection and the level of implementation of the prereferral intervention process?

8. What is the relationship between the use of systematic data collection and the number of students found eligible for special education services with specific learning disabilities?

9. Is there a relationship between level of implementation of the prereferral intervention process and the identification and placement of students with specific learning disabilities?

10. Is there a relationship between high levels of administrative support and levels of systematic data collection, use of instructional support teachers, and training of team members?

Study participants were selected from a database listing the public elementary schools in Pennsylvania accessed on the Pennsylvania Department of Education website (http://www.pde.state.pa.us/). Data were collected from surveys that were mailed to 440 elementary principals. Participants were selected based upon specific demographic characteristics of the school including PaTTAN unit serving the school (i.e., geographic location), population density, and school district funding formulas. Data were collected using the following steps: initial survey distribution, postcard reminder, and follow-up mailing.

By the end of the data collection period, 26.8% (N = 118) of the surveys had been returned. This response rate was lower than the response rate obtained by Laverty. One possible explanation for the lowered response rate was the time of year that the survey was sent. The initial mailing was conducted at the end of May as principals were nearing the end of the school year. Subsequent mailings were sent at the end of the school year and during summer break. Several principals or staff members contacted the researcher indicating that their instructional support teachers or other staff members were on summer vacation and were unable to provide the information necessary to respond to the survey. Others informed the researcher that the principal had retired or was on vacation. Thus, the timing of the survey was likely a contributing factor to the reduced response rate. Another possible contributing factor to the lowered response rate was the error in the initial mailing. It is likely that respondents who initially responded to the initial incorrect survey were less likely to respond to a second mailing. Thus, additional surveys were sent

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to those principals who had responded to the incorrect survey, but not to the corrected version. This resulted in return of 32 additional surveys. A third possible explanation for the reduced response rate is changes in the prereferral intervention processes in Pennsylvania. Two participants contacted the examiner and stated that the survey was no longer relevant to them, as they moved to an RTI model and away from IST.

The survey materials were comprised of a survey developed by Laverty and modified by the researcher to include data indicating percent of students identified with specific learning disabilities and receiving special education services. Laverty's survey utilized district special education data, and the revised survey was amended to include more specific special education information.

The ten primary research hypotheses and 18 secondary hypotheses were analyzed using multiple statistical analyses. Correlations between independent and dependent variables were calculated. Then multiple linear regressions were completed to determine relationships between the dependent, independent, and moderator variables.

<div align="center">Summary of Results and Conclusions</div>

1. Is there a relationship between specific characteristics of the instructional support teacher and level of implementation of the prereferral intervention process?

Survey results indicated that 51% of schools responding continued to employ an instructional support teacher. Of the schools that continued to employ instructional support teachers, 52% had teachers that had attended the initial IST trainings. Only 27 respondents indicated the number of years experience of the instructional support teacher. The mean number of years of experience was 10 years. The mean ratio of instructional

support teacher to student was 1 to 471. The mean number of years of teaching experience was 18.4. Types of experience cited by instructional support teachers included regular education teacher (33%), special educator (17%), remedial educator (11%), and other positions such as paraprofessional, guidance counselor, and librarian.

Schools employing instructional support teachers had a mean score on the Level of Implementation of the Prereferral Intervention Process rubric of 14.97 (SD = 2.78). Schools not employing instructional support teachers had a mean LOI score of 11.93 (SD = 3.47). The employment of an instructional support teacher was positively correlated with scores on the Level of Implementation of the Prereferral Intervention Process rubric, r=.440, p = .01. These results suggest that continued employment of a staff member dedicated to the prereferral intervention process is associated with higher implementation of the prereferral process.

However, participation in initial training and lower ratio of instructional support teacher to student were not found to be related to higher LOI scores. The correlation between continued staffing of an instructional support teacher who participated in initial training and LOI was not statistically significant, r = .147, p = .263. Likewise, the correlation between ratio of student to instructional support teacher and LOI was also not statistically significant, r = -.183, p = .164. Thus, although the employment of an instructional support teacher is related to high levels of implementation, previous IST training and lower teacher to student ratios do not appear to be related to higher levels of implementation.

2. Is there a relationship between specific characteristics of the instructional support teacher and the number of students found eligible for special education services with specific learning disabilities?

The mean number of students identified with SLD and receiving special education services for schools employing instructional support teachers was 7.41% (SD = 3.76). The mean percentage of students identified with SLD for schools not employing instructional support teachers was 9.69%. The presence of an instructional support teacher was negatively correlated with the percentage of students with specific learning disabilities placed in special education, r = -.219, p = .05. Thus, the employment of an instructional support teacher appears related to reduced numbers of students identified with specific learning disabilities and receiving special education services.

As in the case of level of implementation, characteristics of the instructional support teacher were not related to reduced rates of SLD. Participation in the initial training by the instructional support teacher was not significantly correlated with reduced rates of SLD, r = .075, p = .590. Ratio of student to instructional support teacher was also not significantly correlated with lower rates of SLD, r = -.013, p = .924. Thus, those specific characteristics of instructional support teachers do not appear related to rates of students identified with specific learning disabilities and placed in special education.

3. What is the relationship between administrative support of the prereferral

intervention process (i.e., written policy and/or procedure requiring prereferral

interventions, attendance at prereferral intervention meetings, and scheduling meetings

during teacher contracted time) and level of implementation of the prereferral

intervention process?

Four characteristics of administrative support were examined— implementation

of a written policy/procedure that requires teachers to refer to a prereferral process before

referring for multidisciplinary evaluation, implementation of a written policy/procedure

that encourages parents to refer to a prereferral process before referring for

multidisciplinary evaluation, percentage of IST/prereferral intervention team meetings

attended by the principal, and dedicated time during the school week for the prereferral

intervention team to meet during contracted hours. Of those four characteristics, only

one—the implementation of a written policy or procedure encouraging parents to refer to

a prereferral intervention process before referring students for multidisciplinary

evaluation—was significantly correlated with LOI, $r = .288$, $p = .002$. None of the other

characteristics were significantly correlated with LOI.

4. What is the relationship between administrative support of the prereferral

intervention process (i.e., written policy and/or procedure requiring prereferral

interventions, attendance at prereferral intervention meetings, and scheduling meetings

during teacher contracted time) and the number of students found eligible for special

education services with specific learning disabilities?

The number of students identified with specific learning disabilities and receiving

special education services was not significantly correlated with any of the four

characteristics of administrative support described above (i.e., teacher referral policy,

parent referral policy, principal attendance at meetings, and meetings during contracted

hours). These results do not support the hypothesis that administrative support is related

to reduced numbers of students found eligible for special education services for specific

learning disabilities.

5. What is the relationship between team training and level of implementation of the

prereferral intervention process?

Numbers of training sessions attended, and two types of training—curriculum-

based assessment/measurement and differentiated instruction—were compared with level

of implementation of the prereferral intervention process. The number of training

sessions attended was significantly correlated with LOI, r = .338, p = .000. Likewise,

training in both CBA/CBM (r = .405, p = .000) and differentiated instruction were

significantly correlated with LOI (r = .326, p = .005). A regression model examining

participation by the instructional support teacher in the initial IST training, training

related to CBA/CBM, training related to differentiated instruction, number of trainings

attended, and guided practice and supervision was not statistically significant. None of

the variables demonstrated a significant effect on LOI. However, a second model that

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excluded participation of the instructional support teacher in the initial IST training as a variable but included the other four factors accounted for approximately 42% of the variance in LOI ($\Delta r^2 = .418$) and was statistically significant, $F(4,61) = 12.691$, $p = 000$. Training in CBA/CBM had the greatest effect, followed by guided practice or supervision, number of trainings attended, and training in differentiated instruction. These results support the hypothesis that number and types of trainings are related to LOI.

6. What is the relationship between team training and the number of students found eligible for special education services with specific learning disabilities?

Numbers of training sessions attended, and two types of training—curriculum-based assessment/measurement and differentiated instruction—were compared with number of students identified with specific learning disabilities and receiving special education services. Number of trainings was not significantly correlated with the percent of students identified with SLD. With regard to types of training only differentiated instruction was correlated with percent of students identified with SLD, $r = .283$, $p = .026$. Training in CBA/CBM was not significantly correlated with number of students with SLD placed in special education, $r = -.153$, $p = .234$.

7.   What is the relationship between the use of systematic data collection and the level of implementation of the prereferral intervention process?

Of the 114 participants responding 81% (N = 92) indicated that they collected data on a systematic basis. Systematic data collection was significantly correlated with LOI (r = .676, p = .000), supporting the hypothesis that systematic data collection is related to higher levels of implementation. Results of regression analysis indicated that use of group achievement test scores to help determine appropriate interventions was not related to LOI. Likewise, use of assessments related to prereferral interventions to help make decisions regarding referral for multidisciplinary evaluation was also not related to LOI. All but two of the respondents indicated that they used CBA/CBM to help develop appropriate interventions; thus, no statistical relationship could be established. The regression model incorporating use of group achievement test scores and use of prereferral intervention assessment data predicting LOI accounted for less than 1% of the variance. Whereas use of systematic data collection was significantly correlated with LOI, no relationship was found when specific aspects of data collection were examined.

8.   What is the relationship between the use of systematic data collection and the number of students found eligible for special education services with specific learning disabilities?

Systematic data collection was not significantly correlated with number of students found eligible for special education services with specific learning disabilities Likewise, results of linear regression analysis indicated that use of group achievement

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test scores to help determine appropriate interventions was not related to percentage of students identified with specific learning disabilities. Likewise, use of assessments related to prereferral interventions to help make decisions regarding referral for multidisciplinary evaluation was also not related to percentage of students identified with specific learning disabilities. All but two of the respondents indicated that they used CBA/CBM to help develop appropriate interventions; thus, no statistical relationship could be established. The regression model incorporating use of group achievement test scores and use of prereferral intervention assessment data predicting LOI accounted for less than 1% of the variance ($\Delta R^2 = -.001$), which was not statistically significant, $F(2, 74) = .974$, $p = .382$. Results did not support the hypothesis that systematic data collection is related to reduced rates of students identified with specific learning disabilities.

9. Is there a relationship between level of implementation of the prereferral intervention process and the identification and placement of students with specific learning disabilities?

Level of implementation was significantly negatively correlated with the number of students with SLD placed in special education, $r = -.211$, $p = .031$. Results of the regression analysis indicated that LOI accounted for approximately 3.5% ($\Delta R^2 = .035$) of the total variance of percent of students with SLD receiving special education services. They hypothesis that there is an inverse relationship between LOI and percentage of students with SLD placed in special education was supported; however, given the small amount of variance accounted for, the relationship appears to be a weak one.

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10. Is there a relationship between high levels of administrative support and levels of systematic data collection, use of instructional support teachers, and training of team members?

Previously discussed analyses related to administrative support suggested that administrative support was unrelated to LOI or percentage of students identified with SLD. Only one survey question, which pertained to the implementation of a parent policy encouraging prereferral interventions prior to multidisciplinary evaluations, was related to LOI. No factors measured were significantly related to percentage of students identified with SLD. Therefore, the hypothesis that administrative support acts as an moderator variable related to use of instructional support teachers, training of team leaders, and systematic data collection was not supported.

<div align="center">Implications of the Study</div>

The results of the current study may have implications for elementary school principals, school system administrators, school psychologists, directors of training programs, and other school system and university personnel.

Instructional Support Teacher

Results of the study lent support to the practice of employing instructional support teachers as dedicated staff members who are responsible for managing the prereferral intervention process. Schools that employed instructional support teachers had higher levels of implementation and lower rates of SLD. While having an instructional support teacher was related to these positive outcomes, specific characteristics of the instructional support teacher did not appear important in ensuring positive outcomes. The results

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suggested that having a person in that role, regardless of his or her training, experience, or student to teacher ratio, was a key element of a successful team. Thus, the assertion that successful teams have designated facilitators who organize meetings, monitor case status, and ensure accountability (Doll et al., 2005) is supported by the results of the current study.

Results of the study imply that schools should employ instructional support teachers or team facilitators to manage the prereferral intervention process if they want their teams to function effectively. It remains unclear if any specific characteristics of the instructional support teacher are important. Rather, having a skilled person in that role regardless of years of experience, previous teaching experience, or ratio, appears vital.

Administrative Support

A number of researchers have emphasized the importance of administrative support in ensuring team success (Kovaleski, 2002; Lau et al., 2006; Marston et al., 2003). Although those with experience in prereferral intervention teams often cite administrative support as the most important factor in implementation of teams, results of the current study did not support those opinions. Only the implementation of a parent policy encouraging prereferral intervention prior to referral for multidisciplinary evaluations was related to higher levels of implementation. Scheduling meetings during teacher contracted hours, attending team meetings, and implementing a policy requiring teachers to refer students for interventions prior to referral for multidisciplinary evaluations were not related to higher implementation. No variables were related to reduced rates of SLD.

While these results imply that administrative support is not as important as researchers have asserted, it is likely that key variables related to administrative support were not addressed by the survey instrument utilized in this study. The prereferral intervention literature has emphasized the role of principal as an agent of change, influencing the climate of the school building and supporting prereferral intervention both implicitly and explicitly (Kovaleski, 2002; Kruger, et al., 1995; Lau, et al.; Rubinson, 2002). It may be that the administrative variables most influential on school teams are those most difficult to measure, such as beliefs and attitudes about prereferral interventions and continuous verbal support of the process. Also, some additional variables such as time and money devoted to staff training and provision of materials and resources may also be related to greater efficacy of teams. Thus, more research is needed to investigate the "specific administrative support mechanisms that lead to effective and successful teams" (Rafoth & Foriska, p. 135).

Training in Prereferral Intervention Practices

Survey results indicated that training in CBA/CBM and differentiated instruction were correlated to higher levels of implementation, but only differentiated instruction was correlated to reduced rates of SLD. A regression model which included CBA/CBM, differentiated instruction, guided practice, and number of trainings was significantly correlated with LOI, but not rates of SLD. These results suggest that training of team leaders is an important factor in ensuring team effectiveness.

Types of training reported by respondents varied widely, with 24% reporting training in RTI. Twenty-five other types of training were reported, with most reported by

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only one respondent. Thus, aside from training in differentiated instruction and CBA/CBM, little consistency in training experiences was evident. This supports observations by researchers that team training is inconsistent and often inadequate (Buck et al, 2003; Burns & Ysseldyke, 2005; Truscott et al., 2005).

Nevertheless, training in data collection procedures (i.e., CBA/CBM) and differentiated instruction does appear related to increased team effectiveness. Likewise, training in differentiated instruction may contribute to reduced rates of SLD, as teachers are better able to address varied student needs in the regular education setting. Thus, results suggest training is an important element of effective prereferral intervention teams, and that time and resources should be devoted to increasing the skills of team leaders and other team members.

Systematic Data Collection

Study results indicated that schools that reported systematic collection of data for instructional decision-making had significantly higher levels of implementation of the prereferral intervention process. This supports prior research, which suggested that use of data to plan and evaluate interventions leads to improved quality of student outcomes (Burns, Vanderwood et al., 2005). Results of the survey indicated that 81% of respondents systematically collected data. Of those, only two respondents indicated that they did not use CBA and/or CBM. This contrasts with results of a 2005 study (Truscott et al.) that indicated that only 1% of teams used CBA. This may suggest that Pennsylvania teams are more likely to be trained in CBA and use it more often. Response

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bias may also have been a factor, as those who did not utilize curriculum-based assessments may have been less likely to respond to the survey.

The results of the survey suggest that systematic data collection is another essential element in team functioning, leading to higher levels of implementation. Results also suggest that teams are more routinely using CBA and CBM. These results imply that school teams should consistently use data collection procedures for planning and monitoring effective interventions.

Level of Implementation and Rates of SLD

Result of the study indicated a weak relationship between level of implementation and rates of students receiving special education services for SLD. Obviously, a number of factors determine if children are eligible for special education services. Nevertheless, results suggest that schools with higher functioning prereferral intervention teams are more likely to have reduced rates of SLD. This supports previous studies that have found reduced numbers of special education placements for teams utilizing prereferral intervention practices (Gravois & Rosenfield, 2002).

Recommendations for the Profession

The results of the current study are the basis for the recommendations outlined below. The recommendations are intended to assist school psychologists, school administrators, university faculty, and others in implementing successful prereferral intervention teams.

1. Schools implementing PITs should employ a dedicated staff member who is responsible for managing the prereferral intervention process, collecting data, and

ensuring treatment integrity. Having someone in the role of team coordinator appears related to more effective implementation and ensures that the process gets the attention and focus that successful and sustained implementation requires.

2. Additional study of the role of the administrator in prereferral intervention is needed. While experts with extensive experience in prereferral intervention teams generally agree that administrative support is crucial, clarification is needed regarding the nature of that support and its role in ensuring effective teams.

3. School administrators should ensure that teams have access to continued training and technical support in prereferral intervention practices. Training in data collection procedures and differentiated instruction may be especially important in ensuring that students receive high quality interventions.

4. Prereferral intervention teams should also pay careful attention to data collection and treatment integrity in planning and implementation of interventions. Teams that routinely collect data on student progress appear to function more effectively than those that do not.

Recommendations for Future Research

1. The current study and the previous study by Laverty (2007) looked broadly at a number of factors related to effective implementation of prereferral intervention teams. Future research should explore each of these factors more deeply, to try to determine specific characteristics leading to effective teaming. For example, the current study did not find administrative support to have a strong relationship to level of implementation; however, a number of researchers (Chalfant & Pysh,

1989; Kovaleski, 2002; Kruger et al., 1995; Lau, et al., 2006; Rubinson, 2002) have expressed the opinion that administrative support is a key variable related to effective teams. It is likely that the questions on the survey instrument utilized in this study did not adequately measure the aspects of administrative support most influential in team implementation (e.g., verbal support of the process, belief in the prereferral intervention process, providing adequate time and materials). Future research should investigate the beliefs and actions considered most relevant to effective team leadership.

2. Future research should also investigate variables related to effective prereferral intervention teams in jurisdictions other than Pennsylvania. The survey instrument utilized in this study could be modified to more broadly examine prereferral intervention team variables with school staff members in other locations and using other models of prereferral intervention.

3. Finally, further research should focus on observing, evaluating, and comparing actual teams to help determine which team factors are most related to higher levels of implementation. While survey results are informative, more research evaluating successful implementation practices with existing and/or newly formed teams may help clarify the team factors most critical to high functioning.

Methodological Limitations

Threats to internal validity include the effect that history may have on the manner in which individuals participated in the study. It is possible that participants were influenced by events prior to completing the survey that may have affected their

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responses. For example, some principals chose not to complete the survey because they no longer felt it was relevant to them given the movement toward an RTI model in Pennsylvania. It is possible that movement away from the IST model in Pennsylvania may have influenced who chose to respond to the survey. Also, the error in the initial mailing, leading to the need for a second mailing is likely to have influenced response rates and responses from some participants. Location also appeared to have some bearing on responses, as response rates were substantially lower for urban schools. Another potential threat to validity may be the effects of testing. Surveys sometimes elicit reactions from participants that may influence their responses. Responses to the survey may have been influenced if participants had completed similar surveys in the past. Responses may also have been influenced by the position of the respondent. Though most of the respondents were elementary principals, some respondents held other positions within the school. It is possible that respondents who were not school administrators may have responded differently than elementary principals.

Potential threats to external validity include generalizability of results. The results of the present study are specific to elementary prereferral intervention teams in Pennsylvania. The results cannot be generalized to prereferral intervention teams outside of Pennsylvania or at the secondary level. A second threat to external validity may be the Hawthorne effect, which may have caused respondents to answer survey questions to place themselves in a more favorable light.

Summary

This chapter provided a discussion of the results presented in Chapter IV. The

results of the study suggested that a number of factors were related to increased level of

implementation of the prereferral intervention. More specifically, employment of an

instructional support teacher was related to higher levels of implementation and

decreased rates of SLD. However, no specific characteristics of the instructional support

teacher were significantly related to LOI or rates of SLD. This suggests that the role of

the instructional support teacher is important in ensuring effective teams, but that

training, experience, or ratio are not necessarily important factors.

The role of administrative support in ensuring effective team practices remains

unclear, as only one variable—implementation of a policy encouraging parents to refer

children for prereferral interventions prior to referring for multidisciplinary evaluations—

was related to higher LOI. No variables were related to reduced rates of SLD. While this

does not support opinions of researchers that administrative support is important, it is

likely that key elements of administrative support were not measured in the current study.

Two types of training were related to higher LOI: training related to CBA/CBM

and training related to differentiated instruction. Regression analysis also suggested that

CBA/CBM, differentiated instruction, guided practice or supervision, and number of

trainings attended were significantly related to higher LOI. However, this model was not

related to reduced SLD percentages. However, training in differentiated instruction was

significantly negatively correlated with rates of SLD. These results support the role of

training in effective team practices, and suggest that schools should invest in training for team members.

Systematic data collection was also significantly correlated with LOI. However, neither use of prereferral intervention data to make decisions regarding multidisciplinary evaluations ore use of group achievement test data to design interventions were correlated with LOI. Results regarding use of CBA/CBM were inconclusive. No factors were significantly correlated with percentages of students with SLD. These results that data collection is an important element of effective prereferral intervention teams, but results were not supportive of specific types of data collection. The data suggest that teams should routinely use systematic data collection procedures to ensure that students receive high quality interventions and are making adequate progress.

Results also suggested a small but statistically significant inverse relationship between Level of Implementation and numbers of students found eligible for special education services for specific learning disabilities. This suggests that schools with high functioning teams may be more likely to have lower rates of SLD.

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SURVEY OF THE PREREFERRAL INTERVENTION TEAM PROCESS

Identify the position of the individual who completed this survey. **Check the appropriate box below.**

▬▬▬ Elementary school principal		____ Counselor
____ Instructional support teacher		____ Other: _____
____ Prereferral intervention coordinator		

Part 1.			
1.	The Instructional Support Team (IST) process initially was a state mandated prereferral process. A problem-solving model was followed to assist difficult-to-teach students by introducing interventions in the regular education classroom. The instructional support teacher coordinated the process, collected different forms of assessments to determine instructional level, and worked with other team members to try to meet student's academic/behavioral needs without a special education placement. Although IST is no longer a state-mandated program, my elementary school continues to operate an IST prereferral process. *Circle Yes or No.*	Yes	No
2.	My school continues to employ at least one instructional support teacher. *Circle Yes or No.*	Yes	No
	If your answer is "No" to Question #2, skip the next 4 questions and go to question #7.		
3.	Do you have at least one instructional support teacher who participated in the initial IST training process when IST was first introduced to your elementary school? *Circle Yes or No.* **If you answered "Yes," identify the number of years in which your instructional support teacher has held this position in your elementary school.** _____ **years**	Yes	No
4.	What is the estimated ratio of elementary students to instructional support teacher(s)? 1 instructional support teacher to _____ students		
5.	How many years of **teaching experience** does your instructional support teacher have? (If there is more than one instructional support teacher employed in your elementary school, identify the years of teaching experience for the teacher with the **most** experience.) _____ years of teaching experience		
6.	What professional experience has your instructional support teacher had prior to becoming the IST teacher? If you have more than one IST teacher, provide information on the teacher employed in the position the **longest.** *Check one or more of the following positions.*		
	____ Regular education teacher ____ Remedial education teacher (e.g., Title I teacher, reading specialist)	____ Special education teacher ____ Other: _____	
	If you have answered Questions 3 through 6, skip the next 3 questions and go to question #10.		
7.	The prereferral intervention process is a system in which students with academic or behavioral difficulties are screened before they are referred for a formal special education evaluation. If you do **not** have an instructional support teacher, who is responsible for coordinating prereferral intervention services in your elementary school? *Check the appropriate box below.*		
	____ Regular education teacher ____ Remedial education teacher (e.g., Title I teacher, reading specialist)	____ Counselor ____ School psychologist ____ Other: (Identify position): _____	

8.	What is the estimated ratio of elementary students to the staff member(s) responsible for the prereferral intervention? 1 prereferral intervention coordinator to _____ students
9.	How many years of teaching experience does your prereferral intervention coordinator have? (If there is more than one prereferral intervention coordinator, identify the years of teaching experience for the coordinator with the most experience.) _____ years of teaching experience

Part 2.

10.	Check all of the following activities that the instructional support teacher/prereferral intervention coordinator is conducting on an ongoing basis in your elementary school. *Check all that apply.* ____ Interviews teachers who refer students ____ Collects information from the majority of teachers who provide instruction ____ Interviews parent(s) or guardian(s) ____ Observes student in classroom and/or unstructured settings ____ Conducts curriculum-based (instructional) assessments ____ Informs and invites parent(s) or guardian(s) to meetings ____ Facilitates the problem solving process ____ Maintains required paperwork
11.	Check all types of support the referring classroom teacher would expect from the instructional support teacher/ prereferral intervention team coordinator. *Check all that apply.* ____ Contacting other teachers providing instruction to the referred student ____ Demonstrations in the classroom as to how suggested interventions can be integrated as part of regular classroom routine ____ Providing referred student with small group instruction outside of the regular classroom ____ One-on-one instruction of the referred student outside of the regular classroom by the IST teacher or other member of the team ____ Coordination of tutorial program involving adult or student volunteers
12.	In what ways are the majority of regular education classroom teachers actively involved in the elementary school IST/prereferral intervention process? *Check all that apply.* ____ Refer students having academic or behavior difficulties in the regular education classroom ____ Attend scheduled IST/prereferral intervention team meetings of students they refer ____ Carry through with interventions or strategies selected by the IST/prereferral team ____ Collect data on student performance before and after the IST/prereferral team intervention ____ Serve on IST/prereferral intervention teams, if invited, even though the teacher did not make the IST/prereferral intervention referral

13.	Does your elementary school have a written policy and/or procedure that requires teachers to refer a student to an IST/prereferral intervention process before students suspected of a learning disability are referred for a multidisciplinary team evaluation? *Circle Yes or No.*	Yes	No
14.	Does your elementary school have a written policy and/or procedure that informs and strongly encourages parents/guardians to refer the student for an IST/ prereferral intervention process before being referred for a multidisciplinary evaluation? *Circle Yes or No.*	Yes	No

15.	Check all the ways the parent(s) or guardian(s) are involved in the IST/prereferral intervention process.
	____ Contacted orally or in writing of their child's referral for an IST/prereferral intervention
	____ Invited to attend IST/prereferral intervention meeting
	____ Asked to work with the team to identify effective strategies or interventions
	____ Informed of progress toward goals established by IST/prereferral team
	____ Notified orally or in writing of IST/prereferral intervention outcomes

Part 3.

16.	To the best of your knowledge, approximately how many training sessions has your instructional support teacher/prereferral intervention coordinator participated in **related to the prereferral intervention process** during the past **two years** (2005-2006, 2006-2007 school years)? *Fill in your best estimate as to the number of trainings.*
	Number of training sessions: _____

	If the instructional support teacher/prereferral intervention coordinator did not participate in any training sessions, skip the next 3 questions to Question #20.
17.	Which training sessions related to the prereferral intervention process was the instructional support teacher/ prereferral intervention coordinator able to access after the IST mandate was removed? *Check all that apply. Please ask your instructional support teacher/prereferral intervention coordinator if you do not have access to this information.*
	____ Curriculum-based assessment/measurement/DIBELS (Dynamic Indicators of Beginning Emergent Literacy)
	____ Differentiated Instruction (Learning how to adapt existing curricula to meet needs of individual students)
	____ Other: *List other trainings related to the prereferral team intervention process not mentioned above:*_____
18.	How did the IST teacher/prereferral intervention coordinator access this training? *Check all that apply.*
	____ In-service workshop(s) presented in your district
	____ Training conducted at local Intermediate Unit or PATTAN sites.
	____ Other: Explain _____

19.	If changes were made in your school's prereferral intervention process as a result of any training sessions, were staff members who were instrumental in implementing the changes provided with guided practice or on-going supervision? *Circle Yes or No.*	Yes	No

Part 4.

20.	Does the IST/prereferral intervention team at your elementary school collect data on a systematic basis to **assess need** for an **IST/prereferral intervention**? *Circle Yes or No.*	Yes	No

	If you circled "No" to #20, skip questions 21 through 25. Go to Question # 26.
21.	The IST/prereferral intervention process includes collecting comprehensive and varied data on a regular basis **(in at least 80% of the cases)** about the referred student. *Check all assessments that are collected on a consistent basis.*
	____ Information from parent/teacher interviews
	____ Classroom observations
	____ Classroom graded materials
	____ Curriculum-based assessments/measurements
	____ Functional behavior assessments
	____ Standardized testing information

22.	Check all methods of ongoing data collection used by the IST/prereferral intervention team to help determine what type of intervention(s) to try with the referred student individually and/or to make adaptations to the regular education classroom setting or curriculum. *Check all that apply.* ____ Curriculum-based assessment/measurement/DIBELS measurements ____ Group achievement test scores **(This does not include PSSA scores.)** ____ Other: _____
23.	Check how progress toward IST/prereferral intervention team goals is measured. *Check all that apply.* ____ A member of the IST/prereferral team (not the referring teacher) conducts a weekly assessment. ____ A member of the IST/prereferral team (not the referring teacher) collects assessment information at the beginning and the end of the intervention period. ____ The classroom teacher collects pre- and post-data information, usually test scores, grades, or checklists. ____ There is no systematic data collection conducted to determine the success of an intervention.

24.	Is the decision to refer a student to the multidisciplinary evaluation team based upon an assessment that is related to the IST/prereferral intervention? *Circle Yes or No.*	Yes	No

25.	Check the types of information listed below that your elementary school continues to collect annually, although this information is no longer required by the State. *Check all that apply.* ____ Number of students referred for an IST/prereferral intervention during a school year ____ Number of students referred for a multidisciplinary evaluation following the IST/prereferral intervention ____ Number of student referred by the IST/prereferral intervention team identified to be in need of special education services ____ None of the above
Part 5.	
26.	Estimate the percentage of the IST/prereferral intervention team meetings that the principal was able to attend during the past year (2006-2007 school year). _____ % of meetings were attended by the elementary principal

27.	Is there time allotted during the school week for the IST/prereferral team to meet during teacher contracted hours? *Circle Yes or No.*	Yes	No
Demographic Information			
28.	How many students attend your school? _____		

29.	How many students from your school's catchment area are identified as Specific Learning Disabled and are currently receiving special education services? _____ A. Of these students how many receive special education services in your school building? _____ B. How many receive special education services in another school or location? _____ (Responses to questions A. and B. should equal total number of students receiving services for Specific Learning Disability).

Please contact Lori Fernald at <u>lorinfernald@yahoo.com</u> if you have any questions related to this questionnaire. Your cooperation in providing information for this study is sincerely appreciated.

Appendix B. Level of Implementation of the Prereferral Intervention Process Rubric

10.	Check which of the following activities that the instructional support teacher/prereferral intervention coordinator is conducting on an ongoing basis in your elementary school. *Check all that apply.*
	____ Interviews teachers who refer students
	____ Collects information from the majority of teachers who provide instruction
	____ Interviews parent(s) or guardian(s)
	____ Observes student in classroom and/or unstructured settings
	____ Conducts curriculum-based (instructional) assessments
	____ Informs and invites parent(s) or guardian(s) to meetings
	____ Facilitates the problem solving process
	____ Maintains required paperwork

Standard	3 (High Implementation)	2 (Medium Implementation)	1 (Low Implementation)	0 (No Implementation)
A full-time support teacher or prereferral intervention coordinator is in place and performing critical instructional support functions.	The support teacher or prereferral intervention coordinator conducts interviews, classroom observations, and ongoing assessments; involves parents in the prereferral process by conducting interviews and inviting them to meetings; teaches students learning strategies; facilitates the problem solving process; and maintains required paperwork.	The support teacher or prereferral intervention coordinator is a team facilitator who periodically provides essential functions with students, parents and teachers.	The support teacher or prereferral intervention coordinator performs minimal activities to assure compliance with the prereferral intervention requirement.	There is not a support teacher or prereferral intervention coordinator in place to conduct essential functions.
	If 7-8 items are checked on question #10, 3 points are assigned.	**If 4-6 items are checked on #10, 2 points are assigned.**	**If 1-3 items are checked on #10, 1 point is assigned.**	**If no items checked on #10, 0 points are assigned.**

11.	Check what types of support the referring classroom teacher would expect from the IST teacher/ prereferral intervention team coordinator. ***Check all that apply.***
	____ Contacting other teachers providing instruction to the referred student
	____ Demonstrations in the classroom as to how suggested interventions can be integrated as part of regular classroom routine
	____ Providing referred student with small group instruction outside of the regular classroom
	____ One-on-one instruction of the referred student outside of the regular classroom by the IST teacher or other member of the team
	____ Coordination of tutorial program involving adult or student volunteers

Standard	3 (High Implementation)	2 (Medium Implementation)	1 (Low Implementation)	0 (No Implementation)
The IST teacher or Prereferral Intevention coordinator utilizes a regular education continuum of services to provide support for identified students.	The support teacher or prereferral intervention coordinator works with the referred student during the prereferral process by helping the teacher integrate learning strategies as part of the regular classroom routine; providing small group instruction outside of the classroom; one-on-one instruction by a member of the team; coordination of tutorial assistance.	The support teacher or prereferral intervention coordinator supports the referred student during the prereferral process by performing 3 of the services listed above.	The support teacher or prereferral intervention coordinator supports the referred students, but only provides a minimum of the above services.	The support teacher or prereferral intervention coordinator does not perform any of the tasks listed above.
	If 5 items are checked on #11., 3 points are assigned.	**If 3-4 items are checked on #11, 2 points are assigned.**	**If 1-2 items are checked on #11, 1 point is assigned.**	**If no items are checked on #11, 0 points are assigned.**

12.	In what ways are the majority of regular education classroom teachers actively involved in the elementary school IST/prereferral intervention process? ***Check all that apply.***
	____ Refer students having academic or behavior difficulties in the regular education classroom.
	____ Attend scheduled IST/prereferral intervention team meetings of students they refer
	____ Carry through with interventions or strategies selected by the IST/prereferral team
	____ Collect data on student performance before and after the IST/prereferral team intervention
	____ Serve on prereferral intervention teams, if invited, even though the teacher did not make the prereferral intervention referral.

Standard	3 (High Implementation)	2 (Medium Implementation)	1 (Low Implementation)	0 (No Implementation)
Classroom teachers are actively involved in the IST or prereferral process.	Classroom teachers refer students with learning difficulties for an IST or prereferral intervention; attend scheduled meetings; willingly incorporate effective strategies as part of their regular classroom routines; and service on prereferral intervention teams for students from other classrooms.	Classroom teachers refer students with learning difficulties; attend scheduled meetings; participate in one or two other functions listed above.	Classroom teachers refer students with learning difficulties and/or attend scheduled meetings, but do not as a rule carry through with interventions, collect data, or serve on prereferral intervention teams for students that they did not refer.	Teachers do not identify students as needing an IST or prereferral intervention and do not make classroom modifications as developed by the initial IST Initiative.
	If 5 items are checked on #12, 3 points are assigned.	**If 3-4 items are checked on #12, 2 points are assigned.**	**If 1-2 items are checked on #12, 1 point is assigned.**	**If no items are checked on #12, 0 points are assigned.**

15.	Check in what ways the parent(s) or guardian(s) are involved in the IST/prereferral intervention process. ***Check all that apply.***
	____ Contacted orally or in writing of their child's referral for an IST/prereferral intervention
	____ Invited to attend IST/prereferral intervention meeting
	____ Asked to work with the team to identify effective strategies or interventions
	____ Informed of progress toward goals established by IST/prereferral team
	____ Notified orally or in writing of IST/prereferral intervention outcomes

Standard	3 (High Implementation)	2 (Medium Implementation)	1 (Low Implementation)	0 (No Implementation)
Parents or guardians are actively involved in the IST/prereferral intervention process.	Parents or guardians are contacted about an IST/prereferral intervention; invited to attend meeting; asked to work with team to identify strategies and interventions; informed of progress toward goals and/or notified about prereferral outcomes.	Parents or guardians are invited to participate in the process, but the IST/prereferral team only perform 3 of the tasks listed above related to obtaining maximum participation.	Parents or guardians are only minimally involved in the prereferral intervention process.	Parents or guardians are not informed when their child needs an IST/prereferral intervention.
	If 4-5 items are checked on #15, 3 points are assigned.	**If 3 items are checked on #15, 2 points are assigned.**	**If 1-2 items are checked on #15, 1 point is assigned.**	**If no items are checked on #15, 0 points are assigned.**

21.	Check the type of information that is collected on a regular basis on all students who are referred for an IST/prereferral intervention. *Check all that apply.*
	____ Information from parent/teacher interviews
	____ Classroom observations
	____ Classroom graded materials
	____ Curriculum-based assessments/measurements
	____ Functional behavior assessments
	____ Standardized testing information

Standard	3 (High Implementation)	2 (Medium Implementation)	1 (Low Implementation)	0 (No Implementation)
The IST/ prereferral intervention team collects data on a consistent basis to help with team decision-making.	The IST/ prereferral intervention team collects at least 5 of the following types of data to help with team decision-making: parent/teacher interviews, classroom observation, classroom graded materials, curriculum-based assessments/ measurements, functional behavior assessments, and/or standardized testing information.	The IST/ prereferral intervention team collects 3 to 4 of the following types of data to help with team decision-making: parent/teacher interviews, classroom observation, classroom graded materials, curriculum-based assessments/ measurements, functional behavior assessments, and/or standardized testing information.	The IST/ prereferral intervention team only collects minimal information to assist with team decision-making.	The IST/ prereferral intervention team does not collect information on a consistent basis to help with team decision-making.
	If 5-6 items are checked for #21, 3 points are assigned.	**If 3-4 items are checked for #21, 2 points are assigned.**	**If 1-2 items are checked for #21, 1 point is assigned.**	**If no items are checked for #21, 0 points are assigned.**

Appendix B (continued). Level of Implementation of the Prereferral Intervention Process Rubric

23.	Check how progress toward IST/prereferral intervention team goals is measured. ***Check all that apply.***
	_____ A member of the IST/prereferral team (not the referring teacher) conducts a weekly assessment.
	_____ A member of the IST/prereferral team (not the referring teacher) collects assessment information at the beginning and the end of the intervention period.
	_____ The classroom teacher collects pre- and post-data information, usually test scores, grades, or checklists.
	_____ There is no systematic data collection conducted to determine the success of an intervention.

Standard	3 (High Implementation)	2 (Medium Implementation)	1 (Low Implementation)	0 (No Implementation)
The referred student's response to the IST/prereferral interventions is monitored throughout the IST/prereferral intervention period.	A member of the IST/prereferral team (not the referring teacher) conducts a weekly assessment.	A member of the IST/prereferral team (not the referring teacher) collects assessment information at the beginning and the end of the intervention period.	The classroom teacher collects pre- and post-data information.	There is no systematic data collection conducted to determine the success of an intervention.
	If the first item is checked, 3 points are assigned.	**If the second item is checked, 2 points are assigned.**	**If the third item is checked, 1 point is assigned.**	**If the fourth item is checked, 0 points are assigned.**

Appendix C. Initial letter to principals

May 24, 2007

Dear Elementary Principal:

Over five years have passed since the State mandate was removed that an instructional support team operate in at least one elementary school within every Pennsylvania school district. Many elementary schools chose to continue with their IST process after the mandate was removed; however, some elementary schools decided to put into action another form of prereferral intervention process. Limited research exists on prereferral intervention teams, and little is known about which variables have the strongest effect on positive academic outcomes for the difficult-to-teach student. This research, which is being conducted by Lori Fernald, a doctoral student at Indiana University of Pennsylvania, Indiana, Pennsylvania, consists of a survey, which is designed to investigate the relationships between a number of variables related to the prereferral process. Dr. Edward Levinson, the Interim Chairperson of the School Psychology Program at Indiana University of Pennsylvania, is supervising this research. This research has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724/357-7730).

The enclosed survey should take less than 20 minutes to complete. If you think that another staff member would be more knowledgeable about how the prereferral intervention team process operates in your school, please forward the survey to this individual. For mailing purposes, each survey has been assigned an identification number to help the researcher determine which surveys have not been returned. The name of the individual completing the survey is not associated with any of the findings since the results are reported only as group data. Your responses will be kept confidential.

Please complete and return the survey in the enclosed, stamped envelope by **June 8, 2007.** Your return of a completed survey implies consent.

If you have any additional questions, please contact either of the names listed below. We appreciate your cooperation and support by completing the enclosed survey. If you choose **not** to participate, please return the incomplete survey in the enclosed envelope.

Sincerely,

Lori Fernald, Doctoral Candidate   Edward Levinson, Ph.D., Professor
Indiana University of Pennsylvania   Indiana University of Pennsylvania
Educational & School Psychology   Educational & School Psychology
246 Stouffer Hall   246 Stouffer Hall
Indiana, PA 15705   Indiana, PA 15705
(410) 829-4959   (724) 357-3786
lorinfernald@yahoo.com   emlevins@iup.edu

Appendix D. Corrected letter to principals

June 5, 2007

Dear Elementary Principal:

Last week a survey was mailed to you regarding instructional support teams in Pennsylvania. The version of the survey you received contained errors in numbering and wording. Enclosed is a corrected version of the survey with corrected numbering and changes in wording of some questions. Please accept my sincere apology for sending the incorrect version of the survey. If you have not already responded to the previously mailed survey, please discard it and complete the enclosed survey. If you have already responded to the initial mailing, thank you for your time and effort. Your responses to the enclosed corrected survey will be greatly appreciated and will contribute to the research on effective team practices. I am truly sorry for any inconvenience this error has caused.

The enclosed survey should take less than 20 minutes to complete. If you think that another staff member would be more knowledgeable about how the prereferral intervention team process operates in your school, please forward the survey to this individual. For mailing purposes, each survey has been assigned an identification number to help the researcher determine which surveys have not been returned. The name of the individual completing the survey is not associated with any of the findings since the results are reported only as group data. Your responses will be kept confidential.

This research, which is being conducted by Lori Fernald, a doctoral student at Indiana University of Pennsylvania, Indiana, Pennsylvania, is designed to investigate the relationships between a number of variables related to the prereferral process. Dr. Edward Levinson, the Interim Chairperson of the School Psychology Program at Indiana University of Pennsylvania, is supervising this research. This research has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724/357-7730).

Please complete and return the survey in the enclosed, stamped envelope by **June 20, 2007.** Your return of a completed survey implies consent.

If you have any additional questions, please contact either of the names listed below. We greatly appreciate your cooperation and support in completing the enclosed survey. If you choose **not** to participate, please return the incomplete survey in the enclosed envelope.

Sincerely,

Lori Fernald, Doctoral Candidate   Edward Levinson, Ed.D., Professor
Indiana University of Pennsylvania   Indiana University of Pennsylvania
Educational & School Psychology   Educational & School Psychology
246 Stouffer Hall   246 Stouffer Hall
Indiana, PA 15705   Indiana, PA 15705
(410) 829-4959   (724) 357-3786
lorinfernald@yahoo.com   emlevins@iup.edu

Appendix E. Follow-up postcard.

Dear Elementary School Principal,

Approximately two weeks ago a corrected survey on the prereferral intervention team process was sent to your school. The principal was given the option of answering the questions based upon his or her knowledge of the process or to forward the survey onto the individual who would be the most knowledgeable about how the school's prereferral process operates at the elementary level.

If your survey has already been returned, I would like to thank you for your participation. If you have not had the opportunity to complete the corrected survey, I hope you will be able to do so as soon as possible because your input is important. However, I need to state again that your participation is <u>voluntary</u>.

If you did not receive the survey or if it has been misplaced, please e-mail me at <u>lorinfernald@yahoo.com</u> or call me at (410)829-4959, and I will make certain that another survey is mailed to you immediately.

Thank you again for your assistance.

Sincerely,

Lori Fernald
Doctoral Candidate
Indiana University of PA
Educational & School Psychology
Indiana, PA 15705

Appendix F. Follow-Up Letter to Principals Who Responded to the First Survey.

July 8, 2007

Dear Elementary School Principal,

I am writing to thank you for taking the time to complete the *Survey of Prereferral Intervention Teams.* I very much appreciate you completing the survey during a very busy time of year. Unfortunately, as I stated in a follow-up mailing, an earlier version of the survey was inadvertently mailed and results from the initial mailing cannot be used. I sincerely apologize for the error and any inconvenience it caused you. I am also requesting that you take a few minutes to complete the correct survey so that your data can be included in the group results. I have enclosed another copy of the correct version of the survey.

Research is limited on how prereferral intervention teams operate in Pennsylvania, and this study may provide additional information as to which variables might be most related to positive academic outcomes for children who have academic and/or behavioral problems.

Please consider returning your survey as soon as possible. If you have already done so, **thank you** for your participation. Once again, despite my continued solicitation for you to participate in this study by submitting a completed survey, your participation is strictly <u>voluntary</u>.

If you have any questions, please email me at <u>lorinfernald@yahoo.com</u> or call me at (410) 829-4959.

Thank you very much for your time and consideration.

Sincerely,

Lori Fernald
Doctoral Candidate
Indiana University of PA
Educational & School Psychology
Stouffer Hall
Indiana, PA 15705

Appendix G. Follow-Up Letter to Principals Who Did Not Respond to the Initial Mailings

July 8, 2007

Dear Elementary School Principal,

I am writing because, as of today, I have not received your completed *Survey of Prereferral Intervention Teams*. I realize that this is a busy time for you, but I would greatly appreciate being able to include the information related to your school's prereferral intervention process in my group results.

Research is limited on how prereferral intervention teams operate in Pennsylvania, and this study may provide additional information as to which variables might be most related to positive academic outcomes for children who have academic and/or behavioral problems.

Please consider returning your survey as soon as possible. If you have already done so, **thank you** for your participation. Once again, despite my continued solicitation for you to participate in this study by submitting a completed survey, your participation is strictly voluntary.

If you have misplaced your copy, please email me at lorinfernald@yahoo.com or call me at (410) 829-4959 so that I may send you a new copy.

Thank you very much for your time and consideration.

Sincerely,

Lori Fernald
Doctoral Candidate
Indiana University of PA
Educational & School Psychology
Stouffer Hall
Indiana, PA 15705