

ABSTRACT

Title of Document: AN EXAMINATION OF MIDDLE SCHOOL
PROBLEM-SOLVING TEAMS

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2010

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This study investigated a middle school grade level Problem-Solving Teams (PST) model, Kid Talk (KT) teams, from one school district within the Mid-Atlantic region. Specifically, the fidelity of implementation of the problem solving process (PSP), student goal attainment for students who were referred to and received interventions from the KT team, and KT team members' perception and satisfaction with the KT team process were examined. Data collected included submitted case documentation, responses to an online electronic survey, and process observations of selected KT teams. A scoring rubric was used to measure fidelity of implementation of 8 PSP components and student goal attainment. A total of 59 cases from 16 middle schools, an average of 3 to 4 cases from each school, were reviewed. Mean ratings revealed less than desired levels of fidelity of implementation across the 8 PSP components, ranging from a low of 1.78 (intervention skill development) to a high of 3.48 (baseline data) where a score of 1 indicated low fidelity and a score of 5 indicated

high fidelity. The mean rating of student goal attainment was modest ($M = 3.33$) where a score of 1 indicated no progress and a score of 5 indicated that the goal was obtained. Significant positive relationships were found between 2 PSP components and goal attainment. KT team members across 16 middle schools completed an 18-item online electronic survey of their perceptions of the team. Mean ratings revealed less than robust KT team member satisfaction with student outcomes pervasive across schools. However, KT team members showed a positive level of comfort referring students to their KT team. Recommendations for changes in team models and for future research were presented.

AN EXAMINATION OF MIDDLE SCHOOL PROBLEM-SOLVING TEAMS

By

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Dissertation submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
2010

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Dedication

Dad, your spirit is still in my heart and your memory continues to inspire me.

Acknowledgements

Thank you to my advisor, Sylvia Rosenfield, for talking me through the details of my research, posing questions to help me be reflective, spending time completing multiple reviews of my document, and offering me much needed guidance and support in what seemed like an endless process. Thanks to Vickie Plitt for agreeing to take this journey with me, a rather long and arduous one at times. You encouraged and believed in me especially during the times when I did not. Thanks to Mary Levisohn-Klyap for helping me to refine my research, paving the way to get my data, and spending time reviewing cases. Thanks to Linda Kirby for printing lots and lots of excel charts for me, and helping support VLP during the MEMA years (as you and I both know, “it takes a village”). Thanks to Lin Blackman, Pat Lawlor, and Debbie Peterson for doing last minute editing. Thanks to my committee members, Bill Strein, Paula Maccini, Julia Bryan, and Deborah Nelson, for agreeing to serve on my committee, as well as providing me with valuable feedback on my research and editing suggestions to make my document better.

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Chapter 1: Introduction

Introduction

The ability to serve the educational needs of an increasingly diverse student population represents a critical component of effective education practice. Careful consideration of the demands that impact schools today, particularly those demands associated with increased accountability to meet high academic standards for all students, calls for improved efforts and more options for teachers to receive the guidance to teach an increasingly diverse student population. Bahr and Kovaleski (2006) comment that “teaching is hard work” (p. 3), hard work because of the complexity of routinely managing multiple variables, such as differentiating instruction to meet student needs, coordinating multiple simultaneous learning activities, and responding to unpredictable events that may occur (Erchul & Martens, 2002).

The No Child Left Behind (NCLB) Act, signed into law in 2002, was designed to improve educational outcomes for students. Since its inception, it has created a national educational focus on outcomes and accountability. Specifically, through state established assessment and accountability systems schools must show an increase in numbers of students reaching proficiency annually with an overall goal of 100% proficiency by 2014. Since schools bear the responsibility of educating all students, and the guiding legislation of NCLB mandates success for all students, there exists a climate of school accountability for students to meet and maintain high standards that has resulted in increased pressure for all school personnel.

Additionally, teachers are being mandated to implement efficacious instructional strategies and interventions to help individual students attain desired results. Thus, it is critical to have the ability to provide support to teachers who deliver classroom instruction and have the responsibility of improving student outcomes.

Problem-Solving Teams

The establishment of a school wide problem solving culture, including collegial collaboration between school personnel and the use of problem solving processes within collaborative problem-solving teams, is a means to provide such support (Rosenfield & Gravois, 1996). Collaborative problem-solving teams are typically multidisciplinary, comprised of teachers, administrators, and specialists. Together with the referring teacher, the team engages in a systematic problem solving process to develop interventions in order to support and maintain “difficult-to-teach” students within the general education environment (Kovaleski, 2002; Meyers, Valentino, Meyers, Boretti, & Brent, 1996; Safran & Safran, 1996).

History of problem-solving teams. Notably, using problem solving processes within collaborative teams is not a new innovation in schools (Rosenfield & Gravois, 1996). In the late 1970’s, Chalfant, Pysh, and Moultrie (1979) developed a collaborative peer support problem solving model for teachers referred to as Teacher Assistance Teams (TAT). The intent of a TAT was to provide support to general education teachers who lacked training and the knowledge to teach students with learning difficulties who remained within their general education classrooms. TATs emphasized a team-based consultation approach whereby collaboration between

teachers resulted in immediate support provided to teachers by teachers (Safran & Safran, 1996).

The development of TATs was part of the prereferral intervention movement that began in the late 1970s and 1980s. The prereferral intervention movement helped to reshape and reconceptualize the delivery of services to students with learning and behavioral difficulties. “Prereferral intervention is a consultation-based approach for providing behavioral and or instructional support to students experiencing problems before considering eligibility for special education services” (McDougal, Moody, & Martens, 2000, p. 150).

Models of PSTs. Prereferral intervention has typically been implemented by prereferral intervention teams (PITs). The steps utilized by PITs include request by the teacher for consultation, consultation with the referring teacher, and if needed referral to consider eligibility for special education (Burns, Wiley, & Viglietta, 2008; Carter & Sugai, 1989; Graden, Casey, & Bonstrom, 1985; Graden, Casey, & Christenson, 1985; McDougal, Clonan, & Martens, 2000). As indicated by Burns et al. (2008), PITs were the precursor to problem-solving teams (PSTs), but there exist qualitative differences between PITs and PSTs. Mainly, PITs screen for referral to special education, whereas the conceptual framework underlying PSTs includes a focus on prevention, incorporation of the problem solving process embedded within behavioral consultation, and utilization of an ecological approach of viewing students’ learning within the classroom environment. Behavioral consultation employs a problem solving process approach that includes problem identification, problem analysis, plan implementation, and plan evaluation. An ecological approach

refers to viewing student learning within the context of classroom environmental factors.

The procedures typically used by PSTs include a data driven structured step-by-step problem solving process that includes the identification and analysis of problems and the design, implementation, and evaluation of interventions implemented within the general education setting (Buck, Polloway, Smith-Thomas, & Cook, 2003; Burns et al., 2008; Carter & Sugai, 1989; Graden, Casey, & Bonstrom, 1985; Graden, Casey, & Christenson, 1985). Some research (Burns & Symington, 2002; Gravois & Rosenfield, 2006; Rosenfield & Gravois, 1999) supports problem solving teams as having a positive impact on desired student and systemic outcomes, such as a decreased number of referrals and placement of students in special education, maintenance of students within general education, and decreased overrepresentation of minority students referred to and placed into special education. In practice, problem-solving teams have assumed various names in schools, such as Instructional Support Teams, Instructional Consultation Teams, Intervention Assistance Teams, and Mainstream Assistance Teams (Gutkin & Curtis, 1999; Rosenfield & Gravois, 1996; Safran & Safran, 1996). Since several of these types of teams have a similar basic function (with some distinctions and different names), from this point forward the generic term, “problem-solving teams” (PSTs) will be used.

National surveys completed by Carter and Sugai (1989), Truscott, Cohen, Sams, Sanborn and Frank (2005), and Buck, Polloway, Smith-Thomas, and Cook (2003) have revealed that the use of PSTs in schools has become commonplace.

Moreover, such teams are being increasingly used to generate interventions particularly given the recent emphasis on early intervention and prevention of academic and behavioral difficulties. Implicit within the use of PSTs is the intent to reduce inappropriate referrals to special education, and enhance the classroom teacher's capability in teaching students with a variety of academic and behavioral needs within the general education environment (Meyers & Kline, 2002).

Improving the effectiveness of the classroom teacher is critical because the presumption is that future students will benefit. Primarily, the teacher's enhanced repertoire of effective intervention strategies should reduce the need for the teacher to refer future "difficult-to-teach" students for additional services. Thus, the benefits of PSTs are (a) they provide a support system for teachers and means to collaborate with other school personnel to discuss ideas and concerns, and (b) the implementation of intervention strategies via PSTs allows students to receive support within the general education environment without first having to receive a special education label.

PSTs at the secondary school level. The extant literature has revealed positive student and systemic outcomes for schools that implement PSTs, but the majority of that information has been obtained at the elementary school level creating a paucity of research at the secondary level. In fact, a meta-analysis of research examining the effectiveness of PSTs on student and systemic outcomes revealed positive findings, which were encouraging, but all of the studies were conducted at the elementary level (Burns & Symington, 2002). Thus, in order to make recommendations for practice the researchers cited the need to expand the research

base on the implementation and effectiveness of PSTs, particularly in secondary schools.

Chapter 2: Literature Review

Literature Review

Supporting teachers and improving student outcomes are important reasons why PSTs are implemented in schools. However, schools are “real world” settings with a confluence of factors that create a “complex reality of practice”, (Nastasi & Truscott, 2000, p. 120). Relative to this complexity of practice Burns, Vanderwood, and Ruby (2005) noted that the implementation and practice of PSTs within schools has lacked consistency and stability. This could be due to identified challenges such as (a) the amount of time needed for implementation of the recommended interventions may exceed teachers’ expectations; (b) the behaviors targeted for intervention may not be the most important or relevant to teachers; (c) logistical and administrative issues, such as trouble finding common times for the PST to meet, excessive paperwork, and insufficient resources to implement desired interventions; (d) lack of training or regular professional development for PST members in effective group process skills and the problem solving process; and (e) teachers unwilling to follow recommendations for interventions generated through the PST process (Burns et al., 2008; Burns & Symington, 2002; Doll, Haack, Kosse, Osterloh, Siemens, & Pray, 2005; Gresham & Lopez, 1996; McNamara, Rasheed, & Delamatre, 2008; Slonski-Fowler & Truscott, 2004; Yetter & Doll, 2007).

PSTs must also compete “with the status quo” (Erchul & Martens, 2002, p. 209) of how schools function and provide support services to students. Specifically, schools function as bureaucracies and traditionally have not readily created a climate conducive for collegial collaboration among staff members (Erchul & Martens,

2002). This is reflected in several ways. First, teachers share physical space and resources, but typically are compartmentalized and work independently within their individual classrooms. Second, due to the multitude of students, teachers focus on the group as opposed to individuals when delivering instruction. Third, schools operate with an established hierarchy of leadership. Collectively, these factors make collaboration among school staff challenging.

Given these challenges it is not surprising that Buck, Polloway, Smith-Thomas, and Cook (2003) noted, “It could be argued that prereferral intervention is one of the most inconsistently applied processes in education” (p. 350). Moreover, research has found that PSTs functioning without external university-based support are implemented with a lower degree of fidelity and are less effective in meeting desired outcomes (Burns & Symington, 2002; Fuchs et al., 1996; Yetter & Doll, 2007). This is because university-based support offers valuable resources to schools to help facilitate implementation of PSTs, such as assisting with training of PST members, as well as providing ongoing feedback and consultation. Thus, without this type of support, schools have had less success in implementing PSTs with fidelity.

PSTs at the Secondary School Level

Given the proliferation of PSTs within schools, it is important to evaluate whether PSTs are helping schools across all levels, including the secondary level, achieve desired outcomes. However, sufficient research on the implementation and effectiveness of PSTs at the secondary level is lacking. This is notable because secondary schools function differently from elementary schools. Mainly, secondary schools are qualitatively different from elementary schools due to factors such as the

size, physical structure, school schedule, student needs, teacher expectations, and overall school functioning (Nagle & Medway, 1982; Safer, 1986). Thus, the limited information regarding the implementation and effectiveness of PSTs at the secondary level calls for specific research that examines PSTs at the secondary level to help inform practice and attain desired outcomes. The purpose of the current investigation is to provide insight on the functioning of one model of PSTs at the secondary level, referred to locally as Kid Talk (KT) teams within one school district in the Mid-Atlantic region. The remainder of this review of literature includes (a) information regarding fidelity of implementation and effectiveness of PSTs, (b) a review of PST studies conducted at the secondary level, and (c) information about the functioning of secondary schools.

Fidelity of Implementation and Effectiveness

Gathering data on the process of implementation of an intervention or a program is critical to evaluating its overall impact (Durlak & DuPre, 2008). One critical component of the implementation process is fidelity. As described by Durlak and DuPre, fidelity refers to "...the extent the innovation corresponds to the originally intended program" (p. 329). There is a direct relationship between fidelity of implementation and effectiveness, such that interventions implemented with high fidelity are more likely to be effective and lead to better student outcomes (Burns, Peters, & Noell, 2008; Durlak & DuPre, 2008; Truscott, Cosgrove, Meyers, & Eidle-Barkman, 2000). Thus, central to achieving desired outcomes from PSTs is the fidelity of implementation of the PST process and of the interventions generated through the PST process.

The extant literature on the implementation of PSTs has identified key components of the problem solving process. Specifically, Flugum and Reschly (1994) identified key quality indicators to evaluate the fidelity of implementation of the problem solving process. This original study has served as the foundation for subsequent research. Specifically, the identified key indicators have been utilized in studies conducted by other researchers to describe and evaluate the problem solving process (McNamara, Rasheed, & Delamatre, 2008; MacLeod, Jones, Somers, & Havey, 2001; Telzrow, McNamara, & Hollinger, 2000). The following overview provides a synopsis of two studies that examined the fidelity of implementation of the problem solving process. Those studies were conducted by Flugum and Reschly (1994) and MacLeod, Jones, Somers, and Havey (2001).

Flugum and Reschly (1994). In their initial study, Flugum and Reschly (1994) investigated the quality of prereferral interventions generated and implemented for 312 identified students who had received a special education evaluation but were not found eligible. Data were collected over a 3-year period. The six quality indicators of the implementation of the problem solving process were identified based upon prior research and were used to assess the quality of prereferral interventions. The six quality indicators were (a) behavioral definition, (b) baseline data, (c) step-by-step plan for implementation, (d) evaluation of implementation, (e) graphing of results, and (f) comparison of post baseline results to baseline data. These quality indicators were measured via a survey administered to a total of 175 teachers and 123 related service providers.

In addition to assessing the quality of the prereferral interventions, the study also included a rating of student outcomes that was administered as a survey to the same teacher and related service provider respondents. The student outcome measure included five indicators (a) improved behavior, (b) degree of improvement, (c) goal attainment, (d) improved student functioning, and (e) degree of overall student functioning. Respondents rated each item on a Likert scale (1 = Much worse to 5 = Much better). Results from this study revealed a low rate of implementation of five out of the six quality indicators as reported by both sets of respondents. Specifically, the only quality indicator reported as occurring by more than half of the respondents (78% of teachers; 71% of related service providers) was *implementing the intervention as planned*. In contrast, the remaining five indicators were reported by less than half of each set of respondents as occurring. The range was from 2% (related service providers) and 7% (teachers) for *graphing of results* to 45% (related service providers) and 41% (teachers) for using a *behavioral definition of the problem*.

Additional results revealed significant positive correlations between ratings of three quality indicators (*step-by-step plan*, *implementing intervention as planned*, and *graphing results*) and ratings of three student outcomes as reported by the related service providers. There were also significant positive correlations between *behavioral definition of the problem*, *intervention implemented as planned*, and student outcomes as reported by the teacher respondents. These results revealed the importance of implementation fidelity in attaining positive student outcomes.

A notable limitation of this study was that the data were based upon self-report and did not examine case documentation that could support the fidelity of implementation or student outcomes. Given the possibility of social desirability effects, it could be that the fidelity of implementation of the problem solving process was actually less than reported, which is discouraging since five out of the six quality indicators were reported by less than half of the respondents as occurring.

MacLeod, Jones, Somers, and Havey (2001). MacLeod et al. (2001) conducted a study that evaluated the fidelity of implementation and effectiveness of the problem solving process on student outcomes. The researchers used various measures including quality indicators of the implementation of the problem solving process identified by Flugum and Reschly (1994). Specifically, the researchers investigated consultant skills, quality of consultation, and teacher ratings of student outcomes. Consultant skills were defined as the ability to use interpersonal skills, utilize the problem solving process, and consultation process skills and ethical and professional practice skills. The quality of consultation was measured by teachers who received consultation services relative to the steps of the problem solving process (e.g. defining a target behavior, designing a step-by-step intervention plan). Student outcomes were defined as the degree the students improved.

Participants included 80 teachers from four Midwestern school districts. The majority of the sample was female teachers who taught the primary elementary grades (K-3). Using the Consultant Effectiveness Scale (CES) developed by Knoff et al. (1999), teacher respondents who had participated in a consultation case within 12 months of the study evaluated the effectiveness of the case in which they participated

as a consultee. The CES was a 75-item questionnaire. Participants used a 5-point Likert scale (1 = not at all; 5 = to a very large degree) to respond to how the consultant exhibited characteristics related to four factors identified as important to consultant effectiveness (interpersonal skills, problem-solving skills, consultation process and application skills, and ethical and professional practice skills). Results revealed mean item ratings of greater than 4.00 across the four factors, suggesting that the teacher respondents perceived the consultant to possess critical consultation skills.

To assess the quality of the consultation process, the teachers were asked to consider their most recent consultation case and respond to six yes or no questions derived from the quality indicators of the implementation of the problem solving process identified by Flugum and Reschly (1994). Responses were calculated as a Quality Index. The index score could range from 0 to 6 with a higher index score equating to higher teacher perceived quality of the consultation process. The results revealed a mean Quality Index score of 3.28, suggesting a neutral perception of the quality of the consultation process. However, the respondents consistently endorsed four of the six indicators as occurring within their most recent consultation case (*behavioral definition, step by step plan, implementation, and evaluation of implementation*).

Respondents also rated student outcomes for those receiving interventions through the consultation problem solving process. A Positive Student Outcome Index was calculated based upon respondents' ratings. The range of the index was 0 to 9, where a higher index equated to higher perceived student outcomes. Results revealed

a mean Positive Outcome Index score of 5.33 suggesting a neutral perception of improved student outcomes. The results also indicated positive significant correlations between three of the six quality indicators (*step-by-step plan, intervention implemented as planned, comparison to baseline data*) and improved student outcomes. This suggests that the perception of improved student outcomes does relate to the fidelity of implementation of the problem solving process. The current investigation differs from both of these studies because it utilized multiple sources of data including case documentation, self-report survey data, and process observations of teams.

Meta-analysis of PSTs. Individual studies of the fidelity of implementation of PSTs have included mixed results on the effectiveness of PSTs on student and or system outcomes. Burns and Symington (2002) completed a meta-analysis of PST research. The inclusion criteria for the meta-analysis included the presentation of quantitative data that could be used to calculate effect sizes along with the incorporation of an outcome measure and at least one between-group comparison. Out of 72 articles initially identified, only nine met all of the established inclusion criteria, and none were based on secondary level PSTs.

The results of the meta-analysis revealed effect size coefficients that fell within the large effect range according to Cohen's classification system. However, randomized studies showed higher effect sizes, almost more than twice the size as compared to nonrandomized studies ($d=1.43$ and $d=.64$, respectively), and studies of PSTs that had university based support demonstrated higher effect sizes ($d=1.32$) as compared to field based studies of PSTs ($d=.54$). Studies of field-based PSTs

revealed that important components of the problem solving process were often omitted, such as not documenting decisions and relying more on anecdotal information as opposed to data to document and monitor student progress (Burns et al., 2008; Burns & Symington, 2002; Fuchs et al., 1996; Yetter & Doll, 2007). In addition, Burns and Symington concluded that there was not a clear difference in effect size when using systemic outcomes versus student outcomes.

Functioning of PSTs. The following overview provides a synopsis of three studies that examined the functioning of PSTs. Those studies were conducted by Telzrow et al. (2000), Doll et al. (2005), and McNamara et al. (2008).

Telzrow, McNamara, and Hollinger (2000). Telzrow et al. (2000) conducted a study investigating the fidelity of implementation of PSTs. They examined the relationship between fidelity of implementation of the problem solving process used by PSTs (referred to locally as Intervention Based Assessment teams or IBA) and student outcomes for 227 PSTs in Ohio. The sample was predominantly elementary schools as less than 10% of the PSTs were secondary schools. The IBA process was a collaborative approach including key components of the problem solving process (e.g. behavioral definition of concern, step-by-step intervention plan).

The researchers evaluated fidelity of implementation of the problem solving process (PSP) through review of case documentation. Specifically, the researchers developed a rubric scored on a 5-point Likert scale (1 = low fidelity, 5 = high fidelity) that consisted of key components of the PSP derived from the quality indicators identified by Flugum and Reschly (1994). Those components were: (a) *behavioral definition of the target behavior*; (b) *direct measure of the student's behavior in the*

natural setting prior to intervention implementation (baseline data); (c) clearly identified goal or target behavior for student; (d) hypothesized reason for the problem; (e) systematic step-by-step intervention plan; (f) evidence that intervention was implemented as designed; (g) data indicating student response to intervention (graphing of data); (h) direct comparison of the student's post intervention performance with baseline data; and (i) student outcome as measured by degree to which student's target behavior was achieved. Each problem solving process component on the rubric was defined and the fidelity of implementation was rated on the 5-point Likert scale.

Results revealed mean ratings of fidelity of implementation across each of the problem solving components that ranged from 2.18 (*hypothesized reason for the problem*) to 4.33 (*behavioral definition of problem*), with the majority of the problem solving components rated between 2.60 (*treatment integrity*) and 3.96 (*clearly identified goal*). This suggests that six of the eight identified components critical in the problem solving process were implemented with a low to moderate degree of fidelity.

There were significant positive correlations between six of the components with student goal attainment that ranged from .13 (*systematic intervention plan*) to .24 (*clearly identified goal*). This suggested a positive, but very modest relationship between the components of the problem solving process and student goal attainment. The importance of this study was that the researchers were able to evaluate “real world” implementation of PSTs on a relatively large scale utilizing actual case documentation as artifacts of PSTs’ implementation of the problem solving process.

The results from this study supported prior research that PSTs functioning without university-based support have been found to have less robust results in terms of fidelity of implementation and impact on desired outcomes (Burns & Symington, 2002; Fuchs et al., 1996; Yetter & Doll, 2007; Yetter, in press).

There were notable limitations of this study. First, this study included PSTs from within the same state that used the same PST process, which limits the generalizability to other PSTs. Second, the sample size included predominantly elementary schools. Third, each of the participating PSTs from the schools submitted “best case” documentation as opposed to randomly selected case documentation resulting in a likely inflation of actual fidelity of implementation. This is significant because if “best case” documentation only yielded modest positive results, it is uncertain as to how many cases actually were implemented with a degree of fidelity that could have even potentially resulted in effective student outcomes.

Doll, Haack, Kosse, Osterloh, Siemers, and Pray (2005). Doll et al. (2005) conducted a study that evaluated PSTs from 13 schools (10 elementary, 3 middle) within one school district in the Midwest. Specifically, the researchers gathered data on the fidelity of implementation of PST procedures and PST member feedback about the PSP process. Fidelity of implementation data was gathered from team self-assessments and evaluation of submitted case documentation data. PST feedback was collected from focus groups to determine factors that enhanced or negatively impacted PST procedures.

Using the PSP rubric developed by Telzrow et al. (2000) to evaluate the submitted case documentation, mean ratings of fidelity for each PSP component

ranged from 2.62 (*clearly identified problem*) to 3.88 (*step-by-step plan*). This indicated low to moderate fidelity of implementation. PSTs rated themselves using a self-assessment scale developed by the researchers. The PSTs rated themselves on the same PSP components on the rubric. Scores ranged from 0.80 to 1.29, indicating that PST members did not perceive they had the skills needed to implement the PSP components.

Information gathered from the focus groups revealed several barriers and reasons for the low level of fidelity of implementation of the PSP components. Those barriers were not having the needed skills to implement the specified PSP components, extensive time demands, procedural complexity, limited intervention resources, and limited administrative support. Limitations of this study were similar to those mentioned in the Telzrow et al. study. Specifically, the PSTs were all from one school district and “best case” documentation was used to evaluate fidelity of implementation.

McNamara, Rasheed, and Delamatre (2008). As an extension to the Telzrow et al. (2000) study, McNamara et al. (2008) examined team member perceptions regarding student outcomes, the IBA process, and team functioning. The purpose of this study was to explore the relationships between team characteristics and functioning with student goal attainment, and with the number of initial special education evaluations conducted. Additionally, ratings by school staff regarding their perceptions about the efficacy and acceptability of the IBA process were also obtained. To assess student goal attainment, participating schools submitted “best case” documentation (one case) as was completed in the Telzrow et al. (2000)

investigation. Only those schools that submitted complete case documentation (e.g. evidence that an intervention had been conducted) were included within the final sample. The final sample included a total of 259 schools (predominantly elementary schools). Secondary schools, including middle schools comprised 13.9% of the total sample.

Surveys were utilized to gather data regarding perceptions of acceptability and effectiveness of team functioning. The Team Meeting Survey (28-item survey, scored on a Likert scale 1-5; 1 = “not at all typical of my team”, 5 = “very typical of my team”) and the Building Survey (two items, scored on a Likert scale, 1 = strongly agree, 5 = strongly disagree) captured team members’ perception of team process and functioning. Three major factors were identified; positive task focus, disenfranchisement, and decorum. Positive task focus related to organization and commitment to the problem solving process (e.g. “we generate and explore multiple solutions...”). Disenfranchisement related to perceptions that the team was inefficient and not collaborative (e.g. “people bring up extraneous or irrelevant matters”). Decorum related to team procedural aspects, such as “people arrive on time to meetings”.

Results revealed significant relationships existed between positive task focus and decorum, and overall perception of positive student outcomes. High respondent ratings relating to positive task focus and decorum resulted in positive ratings for positive student outcomes ($r=-.25$ and $r= -.17$; negative relationship because the rating scale for staff perceptions were 1 = strongly agree, 5 = strongly disagree; Positive Task Focus and Decorum items rated as 1= not typical, 5=very typical). A

significant relationship also existed between Disenfranchisement (perceptions that meetings are inefficient and noncollaborative) and perceptions of positive student outcomes ($r=.36$), such that higher respondent ratings on items related to Disenfranchisement related to lower ratings pertaining to positive student outcomes.

Similar to Telzrow et al. (2000), student goal attainment was evaluated via submitted case documentation; 259 samples of “best case” documentation were evaluated and scored by the researchers. A Likert scale was used, 1 = “there is evidence the student has regressed significantly from baseline level of performance” to 5 = “there is evidence the student’s performance has improved significantly from baseline.” A total mean rating of all cases submitted was 4.2 suggesting positive student goal attainment. However, a relationship did not exist between actual student outcomes (via goal attainment measured through submitted “best case” documentation) with independent ratings of staff perceptions of positive student outcomes or between the three factors of Positive Task focus, Disenfranchisement, and Decorum. The researchers concluded that specific aspects of team functioning that impact actual student outcomes could not be identified.

The advantage of the McNamara et al. (2008) study was that it provided additional information regarding the implementation and functioning of PSTs without university support in a “real world” setting. It also provided information concerning staff perceptions of student outcomes and team functioning. Limitations of this study were similar to those highlighted in the Telzrow et al. (2000) study. Student goal attainment was evaluated using “best case” documentation, and the majority of

schools within the study were elementary schools (79% were elementary schools). In addition, data concerning staff perceptions were collected via self-report surveys.

Summary and findings from PST studies. Previously reviewed studies provided information regarding the implementation and functioning of PSTs without university support in “real world” settings. The Doll et al. (2005) and the Telzrow et al. (2000) studies reported less than desired levels of fidelity of implementation across several PSP components by PSTs. These studies along with McNamara et al. (2008) identified influences affecting the fidelity of implementation and the functioning of PSTs, which included lack of clarity around the PSP model, differing skills needed to implement PSP components, ease of documentation and procedures, inconsistency of training of team members, and limited administrative support. Moreover, McNamara et al. suggested that the functioning of PSTs may be described according to different dimensions, which included the degree to which teams were collaborative, exhibit basic team functions (e.g. team member attendance, demonstrate respect for colleagues), and exhibit general team meeting process functions (e.g. focused, collaborative, productive). However, McNamara et al. found that these factors did not relate to improved student functioning.

Limitations of these studies related to evaluation of student goal attainment using “best case” documentation and staff perceptions collected via self-report surveys. This current investigation seeks to explore the functioning of middle school PSTs using multiple sources of data including a review of case documentation (not best case), feedback from staff via an online survey, and process observations of selected teams. Refer to Table 1 for a review of each PST study.

Table 1**PST Studies**

| <i>Researchers</i> | <i>Focus of Study</i> | <i>Summary of Information</i> |
|---|--|---|
| Burns & Symington, 2002 | Meta-analysis of PST studies | Completed a meta-analysis of 9 studies that evaluated PSTs. Found large effect sizes. Randomized studies showed higher effect sizes, and studies of PSTs that had university based support demonstrated higher effect sizes as compared to field based studies of PSTs. |
| Telzrow, McNamara, & Hollinger, 2000 | Fidelity of implementation of PSTs | Investigated the relationship between fidelity of implementation of the problem solving process used by PSTs and student outcomes for 227 PSTs. All but 10% of PSTs were from elementary level. Problem solving process components were implemented with a low to moderate degree of fidelity. |
| Doll, Haack, Kosse, Osterloh, Siemers, & Pray, 2005 | Fidelity of implementation of PSTs and PST team member perceptions | Conducted a study that evaluated PSTs from 13 schools (10 elementary, 3 secondary) from one school district. Results revealed that the PSTs implemented PSP components with a low to moderate degree fidelity. Factors affecting implementation included lack of skills, extensive time demands, procedural complexity, limited intervention resources, and limited administrative support. |
| McNamara, Rasheed, & Delamatre, 2008 | Fidelity of implementation of PSTs | Investigated the relationship between fidelity of implementation of the problem solving process used by PSTs and student outcomes. Also examined team member perceptions regarding student outcomes, the process, and team functioning. |

PSTs at the Secondary Level

As mentioned previously, little data exist examining the functioning and effectiveness of PSTs at the secondary level. As a whole, secondary schools function differently from elementary schools, which likely influences the implementation of

PSTs. Specifically, middle schools function differently from elementary schools in terms of school operation, teacher expectations, and student needs. Given these differences it makes sense to specifically investigate middle schools.

Middle schools. Middle schools are unique relative to their secondary counterpart, high schools, as well as elementary schools. Specifically, students in middle school must manage rapid changes in physicality and emotionality as young adolescents. During this period, there exists variability between and within individuals relative to the rate and level of maturity, there are transitions and changes in peer groups, and there is an increasing sense of and need for independence from adults.

The stress created from school to achieve and maintain high academic standards offers additional demands and pressures. For example, students transition from the relatively calm and nurturing environment characteristic of elementary school to the much bigger and more chaotic environment often characteristic of middle school (Safer, 1986). As compared to elementary school, middle school students have increased independence, have more teachers, and encounter a more challenging curricula requiring abstract thinking and complex problem-solving abilities. This collectively creates a stressful climate. The increased independence and freedom during unstructured periods (e.g. lunch and walking in the hallways during class changes) can also lead to an increase in behavior problems, such as class cutting, student conflicts, or bullying.

Historically, middle level schooling did not have a clear vision and mission. In fact, many middle level schools were configured to include seventh and eighth

grades or seventh through ninth grades. These schools were named “junior high schools” because they utilized the organization and curriculum of the high school (Villaverde, 2003). Recognizing the isolation and anonymity promoted by the high school model, the “middle level concept” was developed in an attempt to provide a vision and a mission that was congruent with the needs of young adolescents. Specifically, the “middle level concept” vision encompassed the ideals that middle level schools should a) have a smaller, more supportive environment, b) implement a challenging, integrative, and exploratory curriculum and c) use multifaceted guidance services to support the needs of young adolescents (Dickinson, 2001; NMSA, 2003; Villaverde, 2003).

However, not all educational leaders and school personnel wholly embraced the philosophical and pedagogical agenda of the middle level concept. This is evidenced by the commonalities that middle schools continue to share with high schools, such as a greater focus on teaching content as opposed to teaching students and reliance on lecture as the primary method of instruction (Dickinson, 2001). In addition, many middle level schools have undergone cosmetic changes by including middle school in their titles and restructuring to grades six through eight, but have failed to truly implement the middle level concept. For example, such middle schools: (a) have teams, but they do not meet regularly or when they do meet they become stuck in focusing on student difficulties and failures, (b) have advisory programs that function as holding places for students, and (c) lack parent and community involvement (Villaverde, 2003).

Research on PSTs at the secondary level. As mentioned previously research on the implementation and effectiveness of PSTs at the secondary level is lacking. However, the small body of research on secondary PSTs has provided some insight into the functioning of PSTs at the secondary level. The following overview provides a synopsis of three studies that examined PSTs at the secondary level. Those studies were conducted by Rankin and Aksamit (1994), Rubinson (2002), and Eidel, Boyd, Truscott, and Meyers (1998).

Rankin and Aksamit (1994). Rankin and Aksamit (1994) compared the perceptions of 563 teachers and other school personnel from a large Midwestern school district regarding the problem solving process at the elementary, junior high, and high school levels. Specifically, the researchers obtained information from 46 Student Assistant Team (SAT) coordinators, 219 SAT members, and 298 general education teachers randomly sampled across the elementary, junior high, and senior high school levels.

Overall, the researchers obtained the following results. First, elementary and junior high school personnel and teachers rated a higher degree of satisfaction than their high school counterparts. Second, elementary school teachers were better informed about the problem solving process and felt more comfortable referring students to the PST as compared to the junior high and high school teachers. Third, school personnel at all three levels suggested that modifying the operating procedures of the PST would make the process more efficient, such as reducing administrative type tasks (e.g. paperwork) in order to increase the amount of time focused on team problem solving. The researchers concluded that the differences found could be

attributed to the school structure, organization, and philosophy of high school (e.g. teachers focus on content; teachers spend less time per day with students; teachers are responsible for large number of students throughout the school day) versus junior high and elementary school, and PSTs must be designed to work within the confines of those differences. Thus, PSTs at each level may share a common goal, but may function very differently in terms of procedure.

Rubinson (2002). Rubinson (2002) examined the issues impacting the function of interdisciplinary PSTs in 12 urban high schools. Results revealed that the type of collaboration, as well as the process and function of the teams could be classified according to three types of teams. Two of the three types of teams adhered to the consultation models of student-centered consultation or system-centered consultation, whereas the third group was categorized as failure-to-thrive teams. Of the 12 schools, 4 were categorized within the third group. These teams were unable to develop integrated, cohesive, and effective teams.

The six teams that employed student-centered consultation were labeled as direct intervention teams. These were the most prevalent type of team to develop among the 12 schools in the study. The direct intervention teams provided direct services to students that typically occurred outside of the classroom environment, such as mentoring students after school and providing tutorial services. These teams were not able to improve the classroom teachers' ability to work with difficult-to-teach students because the majority of the interventions occurred outside of the classroom.

The second group of teams was labeled as systemic intervention teams. Of the two teams that were identified as systemic intervention teams, one implemented a Saturday program, which provided remedial help in reading and writing to students. Since this intervention was external to the classroom environment, it also did not serve to enhance the classroom teachers' capacity to improve instruction and work with the students exhibiting difficulty. The second team within this category implemented organizational and programmatic changes by implementing block scheduling in English, math, and hygiene for ninth grade students. They also limited class size to 20 students, teachers utilized more individualized and "hands on" instructional tasks, the team met weekly to discuss student progress, and the team considered modifications to the program based upon student progress. This team was the most successful and was able to establish cohesiveness among team members.

Eidel, Boyd, Truscott, and Meyers (1998). Eidel et al. (1998) completed a case study comparing PSTs at the elementary and secondary levels (middle and high school). Specifically, they examined the role of PSTs in prevention and early intervention of social, emotional, and behavioral problems. Their results indicated qualitative differences between the types of referral from elementary and high school. The elementary referrals related mostly to poor peer relations, difficulty focusing, and attendance issues, whereas, the referrals from the secondary level largely were related to behavioral problems impacting school performance related to delinquency within the community and drug abuse. By dealing with issues and concerns external to the school environment, the focus of the secondary teams became much more limited in scope. In addition, the secondary teams tended to examine the source of the referred

student's problems as a "within child" pathology as opposed to using an ecological framework when exploring referred students' presenting problems (Eidel et al., 1998; Rosenfield, 1995). Overall, the prevalence of community-based issues impacting students at the secondary level was consistent with earlier research regarding the differences between elementary and secondary schools (Nagle & Medway, 1982).

Bartels and Mortenson (2002). The middle school PSTs investigated within this current study are from one school district in the Mid-Atlantic region that has implemented PSTs at the elementary and middle school level. In some elementary schools and in all middle schools within this district, the schools have PSTs, referred to locally as Kid Talk (KT) teams. KT teams are grade level teams that are comprised of all teachers within that grade, as well as may include student services personnel (e.g. counselor, school psychologist), specialists (e.g. reading specialist), or administrators. The functioning of the middle school KT teams is based upon a pilot project conducted and reported on by Bartels and Mortenson (2002).

Bartels and Mortensen (2002) asserted that the team consultation approach in this district was most useful at the middle school level because multiple teachers have responsibility for each student. The KT teams address student concerns, either academic or behavior, and derive interventions for referred students as a group using the broad-participation model as opposed to case managers working through the problem solving process with the referring teacher. Essentially, the KT teams are more akin to TATs that utilize a team-based problem solving approach and teachers who provide support to teachers.

The essential operating procedures for the middle school KT teams described by Bartels and Mortenson (2002) involved using standard agendas, operationally defining referral concerns, designing interventions that involved collection of baseline data and post intervention data, presenting the data to the KT team, and using a tracking system to monitor student progress. KT team discussions could include initial student referrals, review of students' progress on previously designed interventions, or sharing of information about relevant student family situations or outcomes from student IEP meetings referred to as "FYI". Student interventions are documented using the Student Documentation Form (SDF) or a team generated Action Plan form.

Summary of findings of PSTs at the secondary level. The aforementioned studies revealed some important information about the functioning of PSTs at the secondary level: (a) there does seem to exist a moderate level of teacher satisfaction with PSTs (Rankin & Aksamit, 1994); (b) secondary level PSTs that function as a means to help teachers modify instruction are hard to implement (Rubinson, 2002), (c) student referrals made by secondary level teachers tend to relate to variables external to the school environment (e.g. drug use), and (d) teachers are likely to view the source of the referred student's problems as a "within child" pathology (Eidel et al., 1998; Rankin & Aksamit, 1994). Refer to Table 2 for a brief review of each study.

Barriers to implementing PSTs at the secondary level. In addition to this information, there are challenges that have been identified that are specific to secondary schools, as well as important variables critical to the successful

implementation of PSTs in secondary schools (Meyers & Kline, 2002). One of the primary challenges that secondary teachers feel is how to help all students at a minimum perform at grade level in order to maintain the integrity of established standards and expected levels of academic rigor (Meyers & Kline).

Table 2

PST Secondary Level Studies

| <i>Researchers</i> | <i>Focus of Study</i> | <i>Summary of Information</i> |
|---------------------------------------|--|--|
| Rankin & Aksamit, 1994 | Satisfaction with problem solving process across elementary and secondary levels | Compared the perceptions of 563 teachers and other school personnel regarding the problem solving process at the elementary, junior high, and high school levels. High school teachers were less satisfied as compared to elementary and junior high teachers. Elementary school teachers were better informed about the problem solving process. School personnel at all levels suggested simplification of the PST procedures to make the process more efficient. |
| Rubinson, 2002 | Issues facing PSTs at the high school level | Examined the issues impacting PSTs in 12 urban high schools. Six teams employed student-centered consultation. These teams were not able to document change in student behavior other than through the use of anecdotal data. One team used system-centered consultation and implemented organizational and program changes. This team was able to establish cohesiveness, had greater teacher involvement, worked to develop individualized and “hands on” instruction (e.g. math instruction), and garnered principal and district level support. Four teams did not develop integrated, cohesive, effective teams and were considered “failure to thrive”. |
| Eidel, Boyd, Truscott, & Meyers, 1998 | Comparison between 1 elementary and 1 secondary PST | Completed a case study comparing PSTs at the elementary and secondary levels. Examined the role of PSTs in prevention and early intervention of social, emotional, behavioral problems. |

Second, support staff (i.e. school psychologist, school counselor, administrators) has a limited knowledge base about instructional strategies and effective interventions. Third, there exists a climate of responding reactively versus proactively to student and school-wide difficulties (Meyers & Kline, 2002; Rankin & Aksamit, 1994; Rubinson, 2002). To combat these challenges, one identified variable critical to implementation of PSTs at the secondary level is administrative support (Meyers & Kline).

Summary

The review of literature presented above provided information about research that has examined the fidelity of implementation of the problem solving process (Flugum & Reschly, 1994; MacLeod et al., 2001), the implementation and challenges faced by PSTs within real world settings (Doll et al., 2005; McNamara et al., 2008; Telzrow et al., 2000), and the implementation of PSTs at the secondary level (Eidel et al., 1998; Rankin & Aksamit, 1994; Rubinson, 2002).

Purpose of Investigation

The purpose of this investigation was to examine the functioning of middle school grade level Problem Solving Teams (PST), referred to locally as Kid Talk (KT) teams, from one school district within the Mid-Atlantic region. Specifically, the fidelity of implementation of key components of the problem solving process (PSP), student goal attainment for students who were referred to and received interventions from the KT team, and KT team members' perception and satisfaction with the KT

team were examined. Similar to the investigations conducted by Telzrow et al. (2000), Doll et al. (2005) and McNamara et al. (2008), this present study examined “real world” implementation of PSTs. A unique feature of this study is the focus on middle school PSTs. Given the paucity of research at the secondary level, this study will add to the literature base and offer insight into the level of functioning and challenges relative to implementation of PSTs at the secondary level.

To address limitations identified in previous studies, this investigation utilized multiple sources of data. The data collected included case documentation, process observations of selected teams, and KT team member ratings of student outcomes and satisfaction of the KT team via an online electronic survey. In addition, to address the issue of bias in using “best case” documentation, this study was designed to randomly collect case documentation from each participating school (two cases for each grade level, 6, 7, 8).

Research Questions

Four research questions guided this study:

- With what degree of fidelity did the middle school KT teams implement identified key components of the problem solving process?
- To what degree did students who were referred to the middle KT teams attain targeted academic or behavioral goals?
- What was the relationship between fidelity of implementation between each of the key components of the problem solving process and student goal attainment?
- What were KT team member ratings of satisfaction of the KT team process and perceptions of student outcomes for students referred to and receiving interventions from the KT team?

Chapter 3: Method

Method

Participants

This study was implemented within a suburban school district in the Mid-Atlantic region. The district serviced a total of approximately 49,734 students across grades pre-kindergarten through twelve. A total of 72 schools included 38 elementary schools, 18 middle schools, 12 high schools, 2 special schools, and 1 kindergarten-through grade eight school. Case documentation was collected from 16 middle schools across grade levels 6, 7, and 8. Additionally, 286 KT team members (general educators, special educators, student service personnel) across 16 middle schools completed an online survey, the KT Team and Student Outcomes Survey. Three KT teams from three different schools (1 sixth grade team and 2 eighth grade teams) were observed as part of a process observation.

The district's student population was approximately 53.5% White, 20.0% African American, 16.4% Asian, 5.8% Hispanic, 0.3% Native American, 4.0% Unidentified. Students receiving special services included: Title I (Elementary only) 2.0%, Limited English Proficient 3.0%, Free/Reduced Lunch 11.3%, and Special Education 8.7%. Of the 72 schools within the district, 7 have been recognized as U.S. Department of Education NCLB Blue Ribbon schools (4 middle schools, 2 elementary schools, 1 high school) between 2007- 2009. Of the 18 middle schools and one K-8 school, one school was designated for school improvement in the 2008-09 school year, based upon NCLB guidelines.

The middle schools collectively served a total of 11,740 students. The student

population was approximately 57.3% White, 21.7% African American, 15.3% Asian, 5.3% Hispanic, and 0.4% Native American. The range of ethnicity across the middle schools was as follows: (a) White students ranged from 23.0% to 80.2%, (b) African American students ranged from 4.3% to 53.5%, (c) Asian students ranged from 5.2% to 26.1%, (d) Hispanic students ranged from 1.1% to 16.6%, and (e) Native American students ranged from 0% to 0.8%. The ranges of students receiving special services within the middle schools were as follows: (a) Students identified as Limited English Proficient ranged from a low of 0% to a high of 6.2%; (b) Students identified as receiving Free / Reduced Meals ranged from a low of 1.6% to 32.0%; and (c) Students identified as receiving special education services ranged from a low of 3.9% to 10.1%.

There were 18 middle schools and 1 kindergarten through 8 school within the district. All 19 schools (18 schools plus the upper school of the K-8) were invited to participate within this investigation. Sixteen out of the 19 schools participated. Three of the schools did not submit case documentation (it was not clear why case documentation was not submitted) and two of the same schools also did not participate in the online survey. The researcher communicated with one principal who reported that her school would not participate in the online survey because of the burden that it would place upon her teachers. A second school wanted to complete the survey at the beginning of the following school year after data collection would have been completed. The researcher was unable to learn why the third school did not participate in the survey, as her inquiry requests were unanswered.

KT Team Process

The district has identified a commitment to providing effective prevention and early intervention services for students, and the PST process was originally based upon the Instructional Consultation Team (IC-Teams) model (Rosenfield & Gravois, 1996). The critical assumptions underlying the IC-Teams model adopted by the district are (a) all students can learn, (b) early intervention is preferable to waiting for failure, (c) the critical arena for intervention is the student-teacher relationship within the general education setting, (d) the focus of problem solving is ensuring that an appropriate instructional match exists, (e) teachers, as professionals, are entitled to consult and collaborate, and (f) change is a process, not an event (Rosenfield & Gravois, 1996). This information has been made available to the staff through training materials and to the public via the district web site.

However, the KT process differs on important components from the IC process. One critical difference is that problem solving in KT occurs within the team instead of a case manager meeting individually with a referring teacher. The designated process is that when teachers have a concern regarding a student's academic performance or behavior, the teachers are encouraged to implement strategies to address these concerns, which could include changing instructional groupings or using a simple behavior support plan. If these informal interventions are successful, the teachers continue to utilize them. If, however, the interventions are not meeting with success, then the teachers can choose to request assistance by referring the student to their KT team.

To document student interventions, the KT teams use the Student Documentation Form (SDF) or a team generated Action Plan form. The SDF is a documentation form utilized within the Instructional Consultation Team (IC-Teams) model (Rosenfield & Gravois, 1996). The SDF requires a statement of the problem, discussion of instructional level, creation of short-term, interim, and long-term goals, description of the intervention, and a graph for the baseline and intervention data. Teams that opt to use an Action Plan form instead of the SDF, must incorporate the same elements included on the SDF.

Each grade-level KT team is mandated to meet regularly, once every two weeks at a minimum. One general education teacher from each KT team agrees to facilitate the KT team, and receives training in systematic problem solving. The identified functions of the KT team facilitator include (a) organizing team meetings; (b) ensuring that critical components of the problem solving process occur, such as operationally defining referral concerns, addressing instructional match, discussing data collection, and interventions; (c) maintaining a KT team notebook with minutes and Student Documentation Forms (SDF) or Action Plans that document student intervention plans; and (d) completing a student tracking form that documents students referred to the KT team.

All participating middle schools within this study utilized KT teams. However, one middle school introduced a modified case management process in the school year in which data were collected. Students were still referred to and discussed by the grade level KT teams, but teachers also had the option of requesting assistance from the building level Instructional Intervention Team (IIT). When a student was

referred to this team, the referring teacher met with an assigned case manager. Together the referring teacher and the case manager worked through the problem solving process and used the SDF to document interventions and student progress.

Instruments

The instruments used within this investigation included a problem solving process (PSP) component and goal attainment rubric (modified from Telzrow et al., 2000), the Student Outcomes and KT Team survey (an online electronic survey), and the Process Observation Form (POF). Table 3 provides a brief description of each instrument.

Table 3

Instruments

| <i>Instrument</i> | <i>Purpose</i> | <i>Description</i> |
|--|---|---|
| PSP components and scoring rubric (modified from Telzrow et al., 2000) | Evaluated fidelity of implementation of PSP components; evaluated student goal attainment from submitted case documentation | 8 PSP components and goal attainment scored on a 5-point Likert scale (1 = low fidelity, 5 = high fidelity) |
| Student Outcomes and KT Team Survey | Gathered KT team member perceptions about student outcomes and feelings of satisfaction with KT team | Online 18-item electronic survey. Multiple-choice items, Likert scale items (1 = strongly disagree - 5 = strongly agree). |
| Process Observation Form (POF) | Evaluated presence or absence of problem solving process steps utilized by KT teams | 13-item form. Items recorded as “yes” or “no”. |

PSP components and goal attainment scoring rubric. Fidelity of implementation of key components of the problems solving process (PSP components) was evaluated from submitted case documentation using a modified version of the rubric developed by Telzrow et al. (2000). The original rubric applied by Telzrow et al. included eight components that have been supported in the literature as key indicators of the problem solving process (Flugum & Reschly, 1994; Telzrow et al., 2000; MacLeod, Jones, Somers, & Havey, 2001). Telzrow et al. reported strong interrater reliability to score case documentation ranging across PSP components. McNamara et al. (2008) also utilized the PSP scoring rubric and reported strong interrater reliability to score case documentation. See Appendix A for the rubric used within this investigation. Components, definitions, and scaling for each component are provided.

Similar to the Telzrow et al. (2000) rubric, the modified rubric contained eight PSP components and goal attainment. However, the modified version of the rubric consisted of five of the original PSP components as identified by Telzrow et al. and three components that were revised from PSP components on the Telzrow et al. rubric. The three PSP components were revised because the district did not ask teams to submit information pertaining to them. The researcher did not want to penalize teams for failing to provide information not required by the district.

The case documentation forms (i.e., SDF and the Action Plan forms) did require teams to delineate specific step-by-step intervention plans and data to demonstrate student response to intervention, but there was not enough evidence to evaluate whether interventions were implemented as planned (treatment integrity) or

the teams' hypothesized reason for the student problem or concern. Determining whether an intervention was implemented and whether it targeted the identified concern are critical to effective problem solving. As a result, the original PSP 4 (*Hypothesized Reason for the Problem*) and PSP 6 (*Evidence that Intervention was Implemented as Designed; Treatment Integrity*) were revised and renamed *Intervention Skill Development* and *Intervention Implementation*. The third PSP component, PSP 7 (*Data Indicating Student Response to Intervention*) was modified to *Appropriate Data Collected Consistently*. This was modified because a key part of the problem solving process is to evaluate whether quantifiable data are collected consistently over time and the Telzrow et al. definition included a description of student response to intervention, which was not documentation required by the district.

Similar to the Telzrow et al. (2000) rubric, each of the PSP components was scored on a Likert scale of one to five. A score of one indicated that no elements of the specific component (e.g. *behavioral definition of problem*) were evident on the case documentation; a score of three indicated that some elements were present; and a score of five indicated that all elements were reflected within the case documentation. Scores of two and four served as intermediate scores. A rating of NI (no information) was used when the case documentation contained no information about a specific PSP component or student goal attainment. Refer to Appendix A for the rubric.

Table 4 provides a definition of each PSP component relative to high fidelity of implementation. Table 4 also defines goal attainment.

Table 4

PSP Components

| <i>Problem Solving Process (PSP) Component (Telzrow et al, 2000)</i> | <i>High Implementation</i> |
|--|--|
| Behavioral Definition (PSP 1) | Concern is described in observable and measurable terms and is related to the student's academic or behavior performance. |
| Baseline data (PSP 2) | Multiple samples of direct measures of student behavior / skill in the natural setting are reported (e.g. 3 baseline measures of reading fluency) |
| Clearly identified goal (PSP 3) | The desired goal has been established with a specific, clearly stated criterion (how much and when). |
| ** Intervention skill development (PSP 4) | Intervention teaches a skill linked to the identified concern with enough details for an unfamiliar person to be able to implement intervention. |
| Systematic plan (PSP 5) | A detailed plan of action is devised that specifies what will occur, who will do it, where the intervention will occur, and when the intervention will be implemented. |
| **Intervention implementation (PSP 6) | Data about implementation of intervention are provided. Clear indication of when plan was implemented (e.g. actual date of implementation). |
| **Appropriate data collected consistently (PSP 7) | Results of the intervention are collected on a consistent schedule over a period of time and are depicted on a graph (e.g. data are collected weekly and graphed). |
| Comparison to baseline data (PSP 8) | Evidence that evaluation data were used for decision-making (e.g. adjustments made) and / or evaluation of the intervention was conducted by reviewing the graphed results (e.g. graph with an |

| | |
|------------------|--|
| *Goal attainment | aim line) and comparing these with the baseline (e.g. baseline and aim line on graph). Interim or long-term goal met and / or exceeded. Short-term goal met and / or exceeded (if only a short-term goal exists). |
|------------------|--|

** PSP components modified, added, and / or differ from Telzrow et al. (2000)

* Goal attainment modified from Telzrow et al. (2000)

KT team perceptions of student outcomes and KT team. Perceptions regarding KT teams and student outcomes for those students referred to and receiving interventions from the KT team were obtained from KT team members across 16 schools. The Student Outcomes and KT Team Survey was an online electronic survey that consisted of a total of 18 items divided into five parts. A relatively recent advance in survey methods is the collection of survey data through self-administered electronic surveys via the Internet (Dillman, 2007; Fowler, 2002; Groves, Fowler, Couper, Lepkowski, Singer, & Tourangeau, 2004). Web-based electronic surveys increase efficiency, as well as eliminate postage and paper. For this study, the researcher chose to utilize a web-based survey because of the relative ease; all teachers in the district have a district issued laptop and have ready access to the Internet.

The online survey took less than 10-minutes to complete. The survey consisted of multiple-choice items, scaled items (e.g. strongly disagree, disagree, neutral, agree, strongly agree), and open response comment items. The survey was designed such that respondents had to answer each question before moving onto the next item with the exception of the comment items (two items) that were optional to

complete. The researcher developed this survey by reviewing existing instruments addressing PSTs. Specifically, the researcher modified items from the Building Survey (McNamara et al., 2008), the Instructional Consultation Satisfaction Survey (Rosenfield & Gravois, 1996) and the Positive Student Outcomes survey (Flugum & Reschly, 1994; MacLeod et al., 2001). See Appendix B for a copy of the Student Outcomes and KT Team Survey.

Part I. Part I consisted of a description of the survey, a statement of confidentiality and voluntary participation, and information about IRB approval. Respondents viewed one item that asked, “Please read the following and indicate your decision to participate”. If respondents selected “agree” the survey continued. If they selected “disagree” then the survey discontinued and automatically skipped to Part V where they were thanked for taking the time to access the survey.

Part II. Part II was titled *Demographic Information*. There were seven multiple-choice items. Each item response was mutually exclusive. Respondents were asked to indicate their professional role, the school where they worked (this was used only for data collection purposes; see coding procedures) and basic demographic items such as gender, grade currently teaching, and content area current teaching. There were also two items that requested information about training relative to the KT team process and whether they had referred a student to their Kid Talk team. If respondents answered “no” to this item, the survey automatically skipped to Part IV, Kid Talk Team (see description below) since the Student Outcomes section was based upon the most recent student they had referred to their KT team.

Part III. Part III was titled, *Student Outcomes*. Respondents were asked, “During your tenure at your current school, please respond to the following questions based upon the most recent student who you have referred to your Kid Talk team and has received interventions.” Five items followed. These items were intended to obtain respondent perceptions about student outcomes for those students who had been referred to and received interventions. The first item asked respondents to select the reason they referred the student to their KT team. This was the only item on the survey that allowed participants to select multiple responses. Specifically, respondents could select all reasons that were applicable (e.g. math, reading, written expression, behavior, attendance, other). Three items asked respondents to respond according the scale of strongly disagree, disagree, neutral, agree, and strongly agree to the presented item (e.g. “The student improved after receiving interventions from the Kid Talk team”). The fifth item allowed respondents to type in comments. This item was optional to complete.

Part IV. Part IV was titled, *Kid Talk Team*. Respondents were asked, “Please indicate your feelings of satisfaction this school year about the Kid Talk team in which you are a member”. Six items followed. These items were intended to obtain information about respondents’ satisfaction with their KT team. Specifically, five items asked respondents to respond whether they strongly disagreed, disagreed, neutral, agreed, or strongly agreed to the presented item (e.g. “The Kid Talk team helps develop useful interventions for students”). The sixth item provided the option for respondents to type in any comments they had about their KT team.

Part V. Part V included a statement thanking participants. There were no items for the respondents to complete.

Process observation form. The Process Observation Form (POF) was a preexisting document utilized by the school district. Specifically, the POF consisted of 13 items intended to assess KT teams' use of the problem solving process. All KT teams within every school (middle and elementary schools) in the district were routinely observed each year by either an observer located within the school or an observer from a different school. A POF was a review of KT team process for one case. See Appendix C for the POF.

The POF contained 13 process steps that were rated as either "yes" or "no". A rating of "yes" indicated that the step was observed or was evident based upon the case documentation reviewed by the KT team. A rating of "no" indicated that the step was not observed or was not evident based upon the KT team's review of the case documentation. Eight of the 13 steps on the POF were included within the PSP scoring rubric (Telzrow et al, 2000) utilized to rate the submitted case documentation. The five process steps on the POF that were not included within the PSP scoring rubric were as follows: (a) *referral concerns are prioritized*, (b) *instructional levels are assessed*, (c) *antecedents discussed and hypothesis developed*, (d) *student strengths discussed*, and (e) *teachers actively involved in planning intervention*.

Procedures

In order to conduct this investigation the researcher obtained IRB approval from the university and the school district. Prior to obtaining IRB approval from the district, the researcher met with the school district's Director of Student Services, the

Coordinator of School Psychologists, and the district Facilitator for PSTs as a group to review the purpose of the investigation and obtain their support. After receiving IRB approval, the researcher worked with the district PST Facilitator to identify strategies to collect the case documentation from participating schools and solicit KT team members to complete the online survey.

Case documentation. The researcher communicated with each school psychologist assigned to the participating middle schools by phone or email. The researcher explained the purpose of the investigation and requested assistance in gathering case documentation and obtaining KT team member responses for the online survey. Specifically, the researcher asked the school psychologist assigned to each middle school to submit case documentation for students, two from each grade level during the 2008-09 school year. District guidelines required schools to submit cases that had progressed to intervention with at least four weeks of intervention data. Thus, to be consistent with district end of year guidelines for submission of case documentation and in order to evaluate all of the PSP components, the researcher asked only for case documentation on cases that had progressed to intervention.

The researcher explained to each psychologist that all data would be coded and the results would be presented as aggregate data in order to protect confidentiality of the schools and individual students. Additionally, the examiner requested that all identifying student information be removed (e.g. student name) from the case documentation prior to submitting it to the researcher. The researcher intended to randomly collect two cases from each grade level in each school in order to avoid only reviewing “best case” documentation. However, this was not possible as the

majority of the schools had too few cases with corresponding documentation to meet this request.

Online survey. In an effort to obtain a high response rate, the researcher and the PST facilitator spoke to the middle school principals and shared information about the survey. The purposes for meeting with the principals were to inform them of the intent of the study and to enlist their support. The PST facilitator initially spoke with the director of middle school principals to explain the researcher's study and to enlist support. The director suggested sharing information directly with principals during a scheduled leadership meeting (the district holds scheduled leadership meetings monthly and all principals are expected to attend each meeting).

The PST facilitator and the researcher spoke to the principals for approximately 20 minutes at a leadership meeting in May 2009. Many of the principals expressed apprehension about asking their school-based personnel to complete the survey. Several expressed an unwillingness to ask their teachers to complete another online survey since the teachers had to complete other online surveys during the school year from the county and from the state. Additionally, a few principals expressed concern that it would be difficult to get their school-based personnel to complete a survey so close to the end of the school year. Despite the apprehension, as a group, the principals agreed to provide their KT team members access to the survey. It was agreed that the best way to get respondents to complete the survey was for the school psychologist to share information about the survey and ask the KT team members to complete it during an already scheduled KT team meeting. As noted above, the researcher informed each psychologist assigned to the

participating schools about the online survey and explained what had been discussed and agreed upon at the principal's meeting.

Process observations. In order to gain additional information about the functioning of the middle school KT teams the researcher completed process observations of three different teams (1 sixth grade team, 2 eighth grade teams) each from a different middle school. Due to the time required to obtain IRB approval from the school district and the university where the researcher was a graduate student, the process observations could not be scheduled until late in the school year (May).

The researcher randomly selected three middle schools (via a drawing) and contacted the school psychologists to schedule an observation of one of the grade level KT teams per school. The researcher was unsuccessful scheduling process observations for two out of the three initially selected schools. Reasons for these difficulties were that the teams had either already been observed by another process observer and did not wish to be observed again, the team had finished meeting for the school year, or they had only one meeting remaining and were using that meeting time to conduct final review of cases and wrap up for the school year. However, the researcher randomly selected two additional schools and was able to schedule process observations for a team within each of those schools.

Data Analysis

Research design. The current study examines the relationship between identified variables that include the fidelity of implementation of components of the problem solving process with student goal attainment, using a correlational research design. The primary advantages of using a correlational design are that (a) a large

number of variables can be studied simultaneously, (b) relationships between variables can be examined, (c) the degree of relationship between the variables can be obtained, (d) predictions can be made about the variables under investigation, and (e) such studies are relatively easy to conduct because the researcher is examining existing variables within the natural context.

The primary limitation of using a correlational research design is that the researcher cannot determine a causal relationship between the variables. While presumed cause and effect are identified and measured a causal inference cannot be made because of the absence of manipulation and control of identified variables (Shadish, Cook, & Campbell, 2002).

Coding. Prior to receiving case documentation and making the online survey available to respondents, the researcher developed a coding system. Schools were randomly assigned a number by the researcher. Once assigned a number, only the researcher had access to the codes and their corresponding schools. Upon receiving the case documentation, the researcher coded each case by school and case number (e.g. 121 = school 12, case 1). The researcher deleted all identifying school information and wrote the code / case number on the case documentation (all identifying student information was removed prior to submission to the researcher per request by the researcher). Within the data analysis, all schools were referred to by their assigned number (e.g. MS 12).

Interrater reliability. The researcher scored all of the submitted case documentation (59 cases from 16 schools) and the district level PST facilitator served as a second rater for purposes of scoring reliability. The district level PST facilitator

has had many years experience working and supporting PSTs, has a strong foundation in the problem solving process (PSP), as well as has had multiple years of experience scoring case documentation. The district PST facilitator has a Ph. D in school psychology; she has worked as a school psychologist since 2000 and has served as the district PST facilitator since 2001. The district PST facilitator was responsible for supporting the PSTs district wide, including providing training to PST members and collaborating with school based personnel (e.g. school psychologists and administrators).

The researcher and the PST facilitator met on multiple occasions to review the original rubric developed by Telzrow et al. (2000), make the revisions noted previously, as well as score several cases (training). The researcher put all cases in order according to their assigned number (e.g. 121, 122) and then randomly selected two cases. The researcher used these cases as training since the PST facilitator was previously unfamiliar with the rubric and had used a different scoring tool per district guidelines to evaluate case documentation (at the end of each school year the district requires schools to submit between three to five cases to be scored). The researcher and the PST facilitator scored these cases together. During the training session, each PSP component was discussed. After the researcher and the PST facilitator agreed upon the scoring rubric, made some edits to the scoring definitions to make the ratings more clear, two additional cases were scored. The researcher and the PST facilitator scored the cases independently but then reviewed and discussed the ratings. Disagreements were discussed regarding the specific case and PSP component until agreement was reached.

After training was completed, the researcher and the PST facilitator independently scored 11 additional cases, which represented 20.3% of the remaining cases. The 11 cases were randomly selected by the researcher in a similar fashion to the cases selected for training. Specifically, all cases were placed in order by case number (the four already scored were removed) and the researcher selected approximately every fifth case until 11 cases were identified. The PST facilitator and the researcher scored these cases independently at different times. The scores were gathered and reliability data were calculated.

Analyses. This study employed similar evaluation and data analysis methods used by Telzrow et al. (2000), Doll et al. (2005), MacLoed et al. (2001), and McNamara et al. (2008). To answer research questions one through three, the PSP components and goal attainment rubric were used to evaluate the submitted cases. A case was defined as documentation (an SDF or Action Plan) for a specific student. When the documentation included more than one identified concern for a student each concern was scored separately and that student's case was an average score calculated across each of the PSP components. All of the cases were aggregated and data were reported as mean ratings and standard deviations across each of the key components of the problem solving process and student goal attainment. For question three, correlations were calculated to examine the relationship between each of the components of the problem solving process with student goal attainment.

To address research question four, KT team members across the 16 participating middle schools completed the Student Outcomes and KT Team Survey.

Data were aggregated by school and reported as a mean ratings and standard deviations for each of the student outcome and KT team items (total of eight items). In addition, descriptive information was also collected from the respondents based upon the demographic data requested (e.g. content area taught, grade level taught, gender, training).

Chapter 4: Results

Results

This study investigated middle school grade level Problem Solving Teams (PST) referred to locally as Kid Talk (KT) teams from one school district within the Mid-Atlantic region. Specifically, this study examined the fidelity of implementation of the problems solving process, student goal attainment for students who were referred to and received interventions from the KT team, and KT team members' perception and satisfaction with the KT team process. To examine the fidelity of implementation of the problem solving process and student goal attainment, case documentation was collected from middle schools within the school district and scored. To examine KT team perceptions of student outcomes and satisfaction with the KT team process, team members completed an online electronic survey.

Interrater Reliability Data

The Problem Solving Process (PSP) and goal attainment rubric was used to score the submitted case documentation. To determine inter-rater reliability between two independent raters, the researcher and the district PST facilitator, Intraclass Correlation Coefficients (ICC) were calculated for each PSP component and goal attainment. Of the 59 total cases, 15 cases were randomly selected and scored by both raters. Four cases were used as training and 11 cases (20.3%) were scored independently. For each of the PSP components and goal attainment, the ICC reflect the degree to which both raters scored the specified PSP component or goal

attainment in the same way across the cases. The ICCs ranged from .73 to .93. This range reflects a strong level of inter-rater reliability for all PSP items and goal attainment (Bartko, 1991; Shrout & Fleiss, 1979; <http://faculty.chass.ncsu.edu/garson/PA765/reliab.htm>). Table 5 presents the ICC for each PSP component and goal attainment.

Table 5 Intraclass Correlation Coefficients

| <i>Problem Solving Process (PSP) Component</i> | <i>Inter-Rater Reliability</i> |
|---|--------------------------------|
| Behavioral Definition (PSP 1) | .73 |
| Baseline data (PSP 2) | .74 |
| Clearly identified goal (PSP 3) | .93 |
| Intervention skill development (PSP 4) | .87 |
| Systematic plan (PSP 5) | .73 |
| Intervention implementation (PSP 6) | .93 |
| Appropriate data collected consistently (PSP 7) | .88 |
| Comparison to baseline data (PSP 8) | .74 |
| Goal Attainment (GA) | .84 |

Descriptive Data on Cases

Case documentation. There were a total of 59 cases from 16 middle schools. Although a minimum of two cases per grade level, or six cases, were requested, the number of cases from each school ranged from two to five and the average number of cases per school was less than four cases ($M = 3.69$). The overall percentage of cases across schools were 42.4%, 33.9%, and 23.7% for grades six, seven, and eight respectively. Table 6 contains the specific number of cases across each middle school.

Notably, eight of the 16 schools did not submit cases from each grade level and no school submitted two cases per grade level.

Table 6
Cases by Grade Level

| <i>School</i> | <i>Cases by Grade Level</i> | | |
|---------------|-----------------------------|----------------|---------------|
| | <u>Sixth</u> | <u>Seventh</u> | <u>Eighth</u> |
| MS 1 | 1 | 1 | 1 |
| MS 2 | 4 | 1 | 0 |
| MS 4 | 1 | 2 | 1 |
| MS 5 | 0 | 2 | 1 |
| MS 6 | 3 | 1 | 0 |
| MS 7 | 1 | 2 | 2 |
| MS 8 | 0 | 3 | 1 |
| MS 9 | 2 | 1 | 1 |
| MS 10 | 3 | 0 | 1 |
| MS 11 | 1 | 0 | 0 |
| MS 12 | 1 | 1 | 2 |
| MS 13 | 2 | 2 | 1 |
| MS 14 | 0 | 1 | 1 |
| MS 16 | 2 | 1 | 1 |
| MS 17 | 2 | 2 | 1 |
| MS 18 | 2 | 0 | 0 |
| Total | 25 | 20 | 14 |

A case was defined as documentation (an SDF or Action Plan) for a specific student. In some instances, the documentation included more than one identified concern for that student. In those situations, each concern was scored separately and that student's case was an average score calculated across each of the PSP components. There were 21 cases (35.5% of cases) that included more than one concern. Of those 21 cases, 19 of them included two concerns and the remaining two cases included three concerns each. See Appendix D for the number of cases and concerns within each school.

Type of case documentation. The type of case documentation varied across and within schools. Of the 16 schools, seven used the Student Documentation Form (SDF), six used the Action Plan form, and the remaining three schools used both the SDF and the Action Plan form. Of the 59 cases, the number of cases where the Student Documentation Form (SDF) was used was 28 (47.5% of cases), the Action Plan was used for 26 cases (44.1% of cases), and there were five cases where both the SDF and the Action Plan forms were used (8.5% of cases).

Type of concerns. Overall, the 59 cases included a total of 82 concerns as some cases contained more than one student concern. Concerns were categorized as general academic, specific academic, behavior, and attendance. A general academic concern was defined as a broad concern related to the student's academic performance, but did not specify an academic skill or target area. General academic concerns included class work completion, homework completion, and tests / quiz scores. A specific academic concern was defined as a target area or skill that the student exhibited difficulty with and/ or needed some type of remediation. Specific academic concerns included skills such as reading comprehension, written expression, math, and vocabulary. A behavioral concern was defined as a concern that affected the student's educational performance or functioning that was not related to a general academic area or skill, as well as did not include attendance since attendance was a separate category. Behavioral concerns included concerns such as inattention (e.g. not remaining focused during instruction), disorganization (e.g. not submitting assignments), and classroom disruption (e.g. calling out, out of seat). Of

these categories, behavior and general academic concerns accounted for the majority (72.0%) of all identified concerns across all three of the grade levels;

Table 7
Concerns and Type of Documentation

| <i>Type of Concern</i> | <i>N</i> | <i>% Total Concerns Grades 6, 7 & 8</i> | <i>Type of Documentation</i> | | |
|---|----------|---|------------------------------|-------------|------|
| | | | SDF | Act Plan | Both |
| Specific Academic Skill (e.g. Math, Reading, Writing) | 17 | 20.7% | 13 | 2 | 2 |
| General Academic Concern (e.g. Work Completion, Test / Quiz scores) | 33 | 40.2% | 6 | 25 | 2 |
| Behavioral Concern (e.g. disruption, inattention, disorganization) | 26 | 31.8% | 17 | 6 | 3 |
| Attendance | 6 | 7.3% | 3 | 3 | 0 |
| Total | 82 | | 39 | 36 | 7 |

Within the General Academic Concern category, work completion (included both class work and homework completion) accounted for 78.8% of the concerns. Test and quiz scores accounted for the remaining 21.2% of concerns within this category.

Within the Specific Academic Skill category, reading, math, and written expression represented 47.0%, 29.0%, and 23.5% of the concerns respectively. Within the Behavioral Concern category, classroom disruption accounted for 53.8%, inattention accounted for 30.7%, and disorganization accounted for the remaining 15.4% of behavioral concerns.

Case documentation across grade levels. When examining the type, number, and percentage of concerns within each grade level (see Tables 7 and 8), behavior accounted for the majority of the concerns for sixth grade cases, whereas general academic concerns accounted for the majority of concerns in eighth grade cases and a significant percentage of seventh grade cases.

Table 8 Type of Concern by Grade Level

| <i>Type</i> | <i>6th grade</i> | | <i>7th grade</i> | | <i>8th grade</i> | |
|---|-----------------------------|----|-----------------------------|----|-----------------------------|----|
| | % | N | % | N | % | N |
| Specific Academic Skill (e.g. Math, Reading, Writing) | 22.6% | 7 | 24.0% | 6 | 12.0% | 3 |
| General Academic Concern (e.g. Work Completion, Test / Quiz scores) | 22.6% | 7 | 40.0% | 10 | 64.0% | 16 |
| Behavior (e.g. disruption, inattention, disorganization) | 51.6% | 16 | 20.0% | 5 | 20.0% | 5 |
| Attendance | 3.3% | 1 | 16.0% | 4 | 4.0% | 1 |

Research Question 1

With what degree of fidelity did the middle school KT teams implement identified key components of the problem solving process?

Table 9 presents the *N*, means and standard deviations of ratings of the problem solving process components and goal attainment. Across the 59 cases, the PSP component with the highest mean rating of fidelity of implementation was, PSP 2 *baseline data*, which had a moderate level of implementation fidelity. Some elements of this PSP component were evident, such as an indirect measure of student performance (e.g. standardized test scores), but other needed elements (e.g. multiple

Table 9 PSP Component Data

| <i>Problem Solving Process (PSP) Component</i> | <i>N</i> | <i>M</i> | <i>SD</i> |
|---|----------|----------|-----------|
| Behavioral Definition (PSP 1) | 58 | 3.00 | 0.82 |
| Baseline data (PSP 2) | 51 | 3.48 | 1.34 |
| Clearly identified goal (PSP 3) | 50 | 3.14 | 0.89 |
| **Intervention skill development (PSP 4) | 53 | 1.78 | 1.21 |
| Systematic plan (PSP 5) | 53 | 2.71 | 1.04 |
| **Intervention implementation (PSP 6) | 48 | 3.08 | 1.88 |
| **Appropriate data collected consistently (PSP 7) | 41 | 2.96 | 1.47 |
| Comparison to baseline data (PSP 8) | 34 | 2.34 | 1.28 |
| Goal attainment | 23 | 3.33 | 1.21 |

For PSP components, 1 = low fidelity; 2 = intermediate (evidence of some elements) ; 3 = moderate fidelity (some elements present, more than rating of 2); 4 = intermediate / good fidelity (most elements were present); 5 = high fidelity (all elements were present).

For goal attainment 1 = student regression, 2 = no progress made, 3 = progress toward goal, 4 = short-term goal met but not interim goal or long-term goal; 5 = long-term goal was achieved or exceeded

of student performance linked to the academic or behavior concern) were not consistently present across all of the cases. The PSP component with the lowest mean rating was *intervention skill development*. This score indicated a low level of fidelity of implementation. Specifically, 75.4% of cases (40 out of 53 cases) had scores of less than three, and a score of one was the mode. A score less than three indicated that there was not an intervention identified that targeted an academic or behavioral skill (e.g. drill sandwich to teach content vocabulary or a self-monitoring chart to teach the student to improve organizational skill); only a list of

accommodations or modifications was provided or a place was indicated where an intervention could take place (intervention not identified), such as Math Core Plus class or Reading class. Commonly identified modifications or accommodations identified included preferential seating, seating next to positive role models, and a reduction of number of problems required for the student to complete.

Of the eight PSP components, four had a mean rating that indicated a moderate level of fidelity of implementation (mean ratings ranged from 3.00 to 3.48). The remaining four PSP components had mean ratings less than 3.00 (range from 1.78 to 2.96), which represented a low to moderate level of fidelity of implementation. Thus, only some of the required elements of the specified component were being implemented consistently across cases.

Research Question 2

To what degree did students who were referred to the middle KT teams attain targeted academic or behavioral goals?

Goal attainment was scored for 23 of the 59 cases (38.9%). Only these cases had enough information or data to determine whether or not the student made progress, achieved the established goal, or did not make progress. The predominant reason that goal attainment could not be scored was because there were no data presented on the documentation (either graphically or numerically). Student goal attainment was scored on a scale of one to five, where one indicated a data trend away from the baseline, two indicated progress consistent with baseline data, three equaled progress toward the goal was made, but the goal was not met, a four indicated that the short-term goal (STG) was met, but not the interim goal (IG) or

long-term goal (LTG) were not met, and a score of five indicated that the IG or LTG were met or exceeded (if only a STG existed then a 5 was scored if the STG was met or exceeded).

Of the 23 cases the overall mean rating score was 3.33 ($SD = 1.21$), indicating positive change towards reaching the established goal, but the targeted goal was not achieved or exceeded. Table 9 contains N , means, and standard deviations for all PSP components and student *goal attainment*. As mentioned previously, Appendix A contains the rubric for *goal attainment*.

Research Question 3

What was the relationship between fidelity of implementation between each of the key components of the problem solving process and student goal attainment?

To address the third research question, the PSP components were correlated with student *goal attainment*. Table 10 presents the Pearson correlation coefficients between mean ratings of fidelity for each of the PSP components with the mean rating of student *goal attainment*. There were significant positive correlations between the ratings of fidelity of implementation for two of the PSP components with student *goal attainment*: PSP 4 *intervention skill development* and PSP 5 *systematic step-by step intervention plan*-were both moderately positively correlated with student *goal attainment*.

Research Question 4

What were KT team member ratings of satisfaction of the KT team process and perceptions of student outcomes for students referred to and receiving interventions from the KT team?

Table 10

Pearson Correlation Coefficients Between PSP Components and Goal Attainment

| <i>Problem Solving Process (PSP) Component</i> | <i>N</i> | <i>Goal Attainment</i> |
|---|----------|------------------------|
| Behavioral Definition (PSP 1) | 58 | .07 |
| Baseline data (PSP 2) | 51 | .14 |
| Clearly identified goal (PSP 3) | 50 | .31 |
| Intervention skill development (PSP 4) | 53 | .46* |
| Systematic plan (PSP 5) | 53 | .47* |
| Intervention implementation (PSP 6) | 48 | -.07 |
| Appropriate data collected consistently (PSP 7) | 41 | .40 |
| Comparison to baseline data (PSP 8) | 34 | .14 |

* $p < .05$ (2-tailed); ** $p < .01$ (2-tailed)

The purpose of research question four was to examine KT team member perceptions of student outcomes and satisfaction with the KT team process. KT team members across middle schools within the school district were asked to complete an online electronic survey. There were three survey items intended to gather respondent perceptions of student outcomes and five items related to respondent perceptions regarding their KT team.

General survey information. There were a total of 286 respondents from 16 middle schools. The overall response rate across all schools was 42.2%. Of the 16 schools, eight schools had a response rate higher than 30.0%, which is considered an average response rate for online electronic surveys (Instructional Assessment Resources, University of Texas; <http://www.utexas.edu/academic/diia/assessment/iar/teaching/gather/method/survey-Response.php>). See Appendix E for response rate within each school.

Demographic information. Survey respondents were asked to provide basic demographic data, which included their professional role (general educator, special educator, other), gender, grade level, content area, and type of training (received training from district PST facilitator, received school-based training, no training). The respondents who selected *other* were typically school counselors and reading specialists. Across all 16 schools the respondents were predominantly general educators (percentage of general educators ranged from a low of 66.7% to a high of 87.5%) and female (low of 60.0% to a high of 85.0%). (Refer to Appendices F, G, and H for respondent demographic information). The percentage of respondents from each grade level (6, 7, 8, multiple grades) was relatively evenly split across schools, with the exception of MS 4 ($N = 8$) and MS 7 ($N = 7$), where 100% and 87.5%, respectively, of the respondents were eighth grade teachers. Similarly, respondents by content area were relatively evenly distributed across areas (e.g. Math, English, Social Studies, Science, Special Education, Multiple Areas, Other).

Training. The survey respondents were also asked to identify the type of training, if any, that they have received in the PST process. Refer to Appendix I for

information regarding training. The type of training opportunities available for teachers across all levels within the school district were either (a) training provided by the district PST facilitator (occurred either over 3 days in the summer or 2 days during the school year) or (b) school-based training provided by various school personnel (e.g. school psychologist) with support as requested by the district PST facilitator. The percentage of respondents who indicated that they had received training (from district PST facilitator or school-based) was over 50% in 15 out of 16 schools. The most common type of training was school-based training: 13 out of 16 schools had more than 30% of the respondents reporting that they received this type of training. However, while more than 50.0% of respondents from 15 of 16 schools reported they had received training, 10 out of 16 schools had less than 30.0% of respondents indicating that they had attended training provided by the district level PST facilitator; three schools reported that 0.0% had received training from the district PST facilitator. In addition seven schools had more than 30.0% of respondents report that they had received no training.

Reason for referral. Appendix J provides respondents' reasons for referral to the KT team. For this item respondents could select multiple responses (math, reading, written expression, behavior, attendance, and other), whereas in the other survey items, choices were mutually exclusive such that only one response was possible. Behavior was selected most frequently as the reason that a student was referred to the KT team within and across schools. Specifically, in 13 out of 16 schools 50.0% or more of respondents selected behavior as a reason that they had referred a student to the KT team.

Survey item ratings. Respondents were asked to respond to eight survey items related to their perceptions of student outcomes and their KT team. The items were rated on a Likert scale where a score of one equaled *strongly disagree*, two equaled *disagree*, three equaled *neutral*, four equaled *agree*, and five equaled *strongly agree*. Tables 11 and 12 report the mean ratings, standard deviations, and *N* by school on the three Student Outcome items and the five KT team items. Data were analyzed and reported by school, not aggregated by respondents due to the variability in response rate across schools.

Student outcome survey items. The following three survey items were related to respondents' perception of student outcomes for those students referred to and receiving interventions from the KT team. Appendices K, L, M report the number and percentage of respondents in each category (strongly disagree, disagree, neutral, agree, strongly agree) by school for the three *student outcome* survey items.

Student improved. In response to the survey item, *The student improved after receiving interventions from the Kid Talk team*, the range of mean ratings were from 1.86 to 3.80. Out of the 16 schools, six schools had a mean rating of 3.00 or less, which indicated that 31.3% of the schools either disagreed or were neutral regarding this statement. The mean ratings of the remaining 11 schools indicated a neutral to moderately positive perception regarding this statement with mean ratings between 3.0 and 3.80. Out of the 16 schools, six schools had a mean rating of 3.00 or less, which indicated that 31.3% of the schools either disagreed or were neutral regarding this statement.

Table 11
Student Outcomes Item Means by School

| | <i>Student Improved</i> | | | <i>Goals Accomplished</i> | | | <i>Process led to Positive Outcomes</i> | | |
|-------|-------------------------|----------|-----------|---------------------------|----------|-----------|---|----------|-----------|
| | <i>N</i> | <i>M</i> | <i>SD</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>N</i> | <i>M</i> | <i>SD</i> |
| MS 1 | 19 | 3.47 | .78 | 19 | 3.32 | .88 | 19 | 3.42 | .97 |
| MS 2 | 7 | 1.86 | 1.07 | 7 | 1.86 | 1.21 | 7 | 2.00 | 1.29 |
| MS 4 | 8 | 3.25 | .71 | 8 | 3.38 | 1.69 | 8 | 3.50 | .76 |
| MS 5 | 37 | 2.92 | 1.04 | 37 | 3.00 | 1.05 | 37 | 3.28 | 1.04 |
| MS 6 | 17 | 3.47 | .80 | 17 | 3.24 | .90 | 17 | 3.71 | .85 |
| MS 7 | 7 | 3.71 | .95 | 7 | 3.29 | 1.11 | 7 | 4.14 | .69 |
| MS 8 | 20 | 3.40 | .60 | 20 | 3.35 | .67 | 20 | 3.60 | .68 |
| MS 9 | 22 | 3.45 | .74 | 22 | 3.54 | .67 | 22 | 3.54 | .67 |
| MS 10 | 5 | 3.80 | .45 | 5 | 3.80 | .45 | 5 | 4.20 | .84 |
| MS 11 | 4 | 2.50 | .58 | 4 | 2.25 | .50 | 4 | 2.75 | 1.50 |
| MS 12 | 32 | 3.13 | .75 | 32 | 3.09 | .82 | 32 | 3.34 | .75 |
| MS 13 | 33 | 3.27 | .80 | 33 | 3.36 | .82 | 33 | 3.54 | .79 |
| MS 14 | 4 | 3.00 | .82 | 4 | 2.75 | .96 | 4 | 4.00 | .00 |
| MS 15 | 21 | 2.71 | .85 | 21 | 2.85 | .79 | 21 | 3.04 | .97 |
| MS 16 | 3 | 2.00 | 1.00 | 3 | 3.33 | 1.15 | 3 | 3.33 | 1.15 |
| MS 17 | 7 | 3.71 | .49 | 7 | 3.71 | .49 | 7 | 4.28 | .76 |

The mean ratings of the remaining 11 schools indicated a neutral to moderately positive perception regarding this statement with mean ratings between 3.0 and 3.80. Further examination of the percentage of responses within each category across schools revealed that four schools had a majority of respondents select *neutral* to this statement. Three schools had a majority of respondents select negative responses (*disagree* or *strongly disagree*) and six schools a majority of respondents report positive responses (*agree* or *strongly agree*). Refer to Appendix K for specific findings related to the survey item *student improved*.

Goals accomplished. The mean ratings on item two, *The goals of the intervention were accomplished*, ranged from 1.86 to 3.80. Five out of the 16 schools had a mean rating of 3.0 or less suggesting that the respondents had a negative to

neutral perception regarding this statement, whereas the remaining eleven schools possessed a neutral to moderately positive perception with mean ratings from 3.0 to 3.80. Further examination of the percentage of respondents across schools revealed three schools that had a majority percentage of negative responses (*strongly disagree* or *disagree*), one school had a majority percentage of *neutral* responses, and seven schools had a majority percentage of positive responses (*agree* or *strongly agree*). There were five schools that did not have a clear majority percentage that was negative, neutral, or positive. Refer to Appendix L for the specific findings related to the survey item *goals accomplished*.

Positive outcomes. The mean ratings on item three, *The Kid Talk team process has resulted in positive outcomes for students in this building*, ranged from 2.00 to 4.28. Two schools had a mean rating of 3.0 or less while four schools had a mean rating of 4.0 or higher. The remaining 10 schools had a mean rating between 3.0 and 4.0 suggesting a moderately positive perception relative to this statement. There were 12 schools that had a majority percentage of positive responses (*agree* or *strongly agree*), one school that had a majority percentage of negative responses (*strongly disagree* or *disagree*), one school with majority of neutral responses, and one school with responses evenly distributed within positive, neutral, and negative categories. Refer to Appendix M for the specific findings related to the survey item *positive outcomes*.

Kid Talk team survey item ratings. The following five survey items were related to respondents' perception of their KT team. Table 12 presents the mean ratings, standard deviations, and *N* by school on the KT team process items.

Appendices N, O, P, Q, R report the number and percentage of respondents in each category (strongly disagree, disagree, neutral, agree, strongly agree) by school for the five KT team survey items.

Positive opportunity. The first KT team survey item, *In my school I believe that Kid Talk team membership is a very positive opportunity for participation in the educational process*, the range of mean ratings were from 1.80 to 4.25. The mean ratings of the remaining 14 schools fell between 3.00 and 3.80 suggesting that the majority of schools had a neutral to positive perception regarding this statement. Examination of the percentage of respondents by school revealed that 13 schools had a majority of the respondents select positive responses (*strongly agree or agree*) to

Table 12
Kid Talk Team Item Means by School

| | <i>Positive Opportunity</i> | | | <i>Comfortable Referring</i> | | | <i>Useful Interventions</i> | | | <i>Learned Interventions</i> | | | <i>Refer in Future</i> | | |
|-------|-----------------------------|----------|-----------|------------------------------|----------|-----------|-----------------------------|----------|-----------|------------------------------|----------|-----------|------------------------|----------|-----------|
| | <i>N</i> | <i>M</i> | <i>SD</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>N</i> | <i>M</i> | <i>SD</i> |
| MS 1 | 20 | 3.80 | 1.01 | 20 | 4.40 | .82 | 20 | 3.65 | .88 | 20 | 3.75 | .85 | 20 | 4.05 | 1.05 |
| MS 2 | 11 | 3.09 | 1.58 | 11 | 4.18 | .60 | 11 | 3.09 | 1.45 | 11 | 3.09 | 1.22 | 11 | 3.72 | 1.27 |
| MS 4 | 8 | 3.75 | .71 | 8 | 4.13 | .35 | 8 | 4.00 | .53 | 8 | 4.13 | .35 | 8 | 4.25 | .71 |
| MS 5 | 40 | 3.43 | 1.01 | 40 | 4.10 | .71 | 40 | 3.60 | .87 | 40 | 3.50 | .75 | 40 | 4.03 | .66 |
| MS 6 | 21 | 3.61 | .67 | 21 | 4.33 | .66 | .87 | 3.57 | .87 | 21 | 3.71 | .90 | 21 | 4.04 | .92 |
| MS 7 | 8 | 4.25 | .71 | 8 | 4.63 | .52 | 8 | 4.00 | .76 | 8 | 4.00 | 1.07 | 8 | 4.25 | .89 |
| MS 8 | 24 | 3.67 | .82 | 24 | 4.13 | .80 | 24 | 3.71 | .69 | 24 | 3.71 | .75 | 24 | 3.83 | .92 |
| MS 9 | 24 | 3.33 | .96 | 24 | 4.20 | .51 | 24 | 3.71 | .62 | 24 | 3.38 | .88 | 24 | 4.00 | .66 |
| MS 10 | 6 | 3.33 | 1.51 | 6 | 4.17 | 1.60 | 6 | 3.33 | 1.21 | 6 | 3.33 | .82 | 6 | 4.17 | .75 |
| MS 11 | 5 | 1.80 | .84 | 5 | 3.00 | 1.22 | 5 | 2.60 | .55 | 5 | 3.00 | 1.58 | 5 | 2.60 | .89 |
| MS 12 | 35 | 3.37 | 1.06 | 35 | 4.00 | .97 | 35 | 3.51 | .92 | 35 | 3.40 | .81 | 35 | 3.77 | .65 |
| MS 13 | 39 | 3.54 | .94 | 39 | 3.69 | .86 | 39 | 3.74 | .72 | 39 | 3.59 | .82 | 39 | 3.62 | .99 |
| MS 14 | 6 | 4.00 | .63 | 6 | 4.17 | .41 | 6 | 4.17 | .41 | 6 | 3.67 | .52 | 6 | 4.17 | .41 |
| MS 15 | 25 | 3.44 | 1.23 | 25 | 3.88 | 1.09 | 25 | 3.32 | 1.18 | 25 | 3.20 | .91 | 25 | 3.76 | 1.16 |
| MS 16 | 3 | 3.00 | 1.73 | 3 | 4.00 | 1.73 | 3 | 3.00 | 1.73 | 3 | 2.67 | 1.15 | 3 | 4.00 | 1.00 |
| MS 17 | 10 | 3.80 | .63 | 10 | 4.40 | .52 | 10 | 4.10 | .74 | 10 | 3.70 | .95 | 10 | 3.80 | .79 |

this statement, two schools had a majority percentage of negative responses (*strongly disagree or disagree*), and one school had responses evenly distributed across

negative, neutral, and positive categories. Refer to Appendix N for the specific findings related to the survey item *positive opportunity*.

Comfortable referring. The second KT team survey item, *I am comfortable referring a student to the Kid Talk team*, the mean ratings ranged from 3.00 to 4.63. The mean ratings from 12 of the remaining 14 schools was 4.00 or higher suggesting that a majority of the schools had a very positive perception regarding their comfort referring a student to their KT team. Examination of the percentage of respondents by school revealed that 15 out of the 16 schools had a majority of the respondents select positive responses (*strongly agree* or *agree*), with all 15 schools having respondents in the *strongly agree* category (8 schools had 30.0% or more respondents in the *strongly agree* category). This survey item had the strongest positive endorsement of all of the survey items. Refer to Appendix O for the specific findings related to the survey item *comfortable referring*.

Useful interventions. The third KT team survey item, *The Kid Talk team helps develop useful interventions for students*, had mean ratings that ranged from 2.60 to 4.17. In the remaining 14 schools, all of them had mean ratings of 3.00 and higher suggesting a neutral to positive perception regarding the development of useful interventions. Three schools had mean ratings of 4.00, 4.00, and 4.10 respectively suggesting a very positive endorsement of this item. The total number of schools with a majority of their respondents in the positive categories (*agree* or *strongly agree*) was 12. Refer to Appendix P for the specific findings related to the survey item *useful interventions*.

Learned interventions. The fourth KT team survey item, *As a result of referring a student to the Kid Talk team I have learned successful interventions to use with future students who may have similar referral concerns*, had mean ratings that ranged from a low of 2.67 to a high mean rating of 4.13. The remaining 14 schools had mean ratings between 3.00 and 4.00. This suggests a neutral to positive perception regarding having learned interventions to use with future students. Examination of the percentage of respondents within and across schools revealed that 12 schools had more than 50.0% of the respondents rate this item positively (*agree* or *strongly agree*), three schools had responses evenly distributed across categories, and MS 16 had a majority percentage of negative responses (*disagree* or *strongly disagree*). Refer to Appendix Q for the specific findings related to the survey item *learned successful interventions*.

Refer in future. The fifth KT team survey item, *Based on my experience this year I am likely to refer a student to the Kid Talk team in the future*, had mean ratings that ranged from a low of 2.60 to a high mean rating of 4.25. In the remaining 14 schools, five schools had mean ratings that ranged from 3.72 to 3.80, and the other nine schools had ratings that ranged from 4.00 to 4.17. This item was rated positively by 50.0% or more of respondents in 15 schools. Refer to Appendix R for the specific findings related to the survey item *likely to refer*.

Respondent comments. There were two opportunities for respondents to add comments during the survey, at the end of the *Student Outcomes* and the *Kid Talk team* sections. There were 59 respondents who included comments in the *Student Outcomes* section and 27 respondents who included comments in the *Kid Talk team*

section. Twenty-one of these respondents provided comments in both sections.

Comments from both sections were analyzed and placed into three categories: *totally positive*, *partially positive*, and *totally negative*. *Totally positive* and *totally negative* comments were those that clearly had either a negative or a positive focus. *Partially positive* comments were those that had an initial positive focus, but were not totally supportive (e.g. pretty good, but...). A fourth category, *not applicable*, was also included. Comments in this category were those related to the survey itself (e.g. “these questions are hard to answer”) as opposed to comments regarding student outcomes or the KT team process.

Respondents from 13 out of 16 schools included comments in the *Student Outcomes* section, with five schools accounting for 69.5% of comments in this section. Appendix R provides the number of respondent comments by school. Respondents from 11 out of 16 schools included comments in the *Kid Talk Team* section, with five schools accounting for 59.3% of all respondent comments in this section. The frequencies and percentage of comments in the *Student Outcomes* survey section and *Kid Talk Team* section by category, *totally positive*, *partially positive*, *totally negative*, and *not applicable* are shown in Table 13.

Table 13
Respondent Comments

| | <i>Comments</i> | <i>Percentage</i> |
|--------------------|-----------------|-------------------|
| Totally positive | 14 | 16.3% |
| Partially positive | 39 | 45.3% |
| Totally negative | 28 | 32.5% |
| Not applicable | 5 | 5.8% |
| Total | 86 | |

The categories, *partially positive* and *totally negative* accounted for the majority of type of respondent comments. An example of a *partially positive* comment is:

“The outcomes of any Kid Talk process depend largely on the dedication of the staff involved and the attitude of the student. Not all outcomes are positive, but overall, I feel the Kid Talk process is beneficial.”

An example of a *totally negative* comment is, “Teachers on my team don’t value Kid Talk, which negatively impacts the process.”

Supplemental Analyses

Supplemental analyses were completed to gather additional information. Specifically, the PSP components from the current investigation were compared to data from the Telzrow et al. (2000) and the Doll et al. (2005) studies and correlations were calculated between items on the Student Outcomes and KT Teams survey. Additional data collected included process observations of selected teams.

Comparison of Five Components with Telzrow et al. (2000) and Doll et al. (2005) data. Ratings of implementation of fidelity of the PSP components and student goal attainment from the current investigation were compared to the same PSP components and student *goal attainment* from the Telzrow et al. (2000) and the Doll et al. (2005) studies. Table 14 presents the PSP components that were compared along with the *N*, mean, and standard deviation.

Table 14
PSP Components Across Studies

| PSP Component | <i>Current Study</i> | | | <i>Telzrow et al. (2000)</i> | | | <i>McNamara et al. (2008)</i> | | |
|-------------------------------------|----------------------|----------|-----------|------------------------------|----------|-----------|-------------------------------|----------|-----------|
| | <i>N</i> | <i>M</i> | <i>SD</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>N</i> | <i>M</i> | <i>SD</i> |
| Behavioral Definition (PSP 1) | 58 | 3.00 | 0.82 | 343 | 4.33 | .84 | 13 | 3.81 | .80 |
| Baseline data (PSP 2) | 51 | 3.48 | 1.34 | 343 | 3.16 | 1.51 | 13 | 3.23 | 1.55 |
| Clearly identified goal (PSP 3) | 50 | 3.14 | 0.89 | 336 | 3.96 | 1.08 | 13 | 3.77 | .53 |
| Systematic plan (PSP 5) | 53 | 2.71 | 1.04 | 341 | 3.40 | .95 | 13 | 3.88 | 1.23 |
| Comparison to baseline data (PSP 8) | 34 | 2.34 | 1.28 | 296 | 3.09 | 1.32 | 13 | 3.19 | 1.20 |
| Goal attainment | 23 | 3.33 | 1.21 | 291 | 4.00 | .77 | 13 | 3.73 | .95 |

Comparison between mean ratings. Ninety percent of the sample of schools within the Telzrow et al. (2000) investigation was elementary schools, and 76.9% were elementary schools in the Doll et al. (2005) study. In contrast, all of the schools in the current study were middle schools. Other major differences were location of the investigations, the total number of submitted case documentation, and type of documentation used. Collectively, these differences make the comparison between these studies challenging. However, general comparisons between the data provide useful information regarding the real-world implementation of PSTs.

Comparison of the data between the studies revealed similarities across several of the PSP components. Specifically, the mean ratings for four out of the five PSP components revealed at best a moderate level of fidelity of implementation for

those steps of the problem solving process. There were differences between the studies. First, the PSP component, *behavioral definition of the target behavior*, in the Telzrow et al. (2000) investigation had a mean rating over 4.00, whereas the mean ratings from the Doll et al. (2005) study and the current investigation were below 4.00. This suggests that schools within the Telzrow et al. (2000) study were on average able to generate definitions of identified concerns, a key first step in the problem solving process, at an acceptable level of fidelity. In contrast, data from the Doll et al. (2005) study and the current investigation revealed a moderate level of acceptable fidelity of implementation.

Second, mean ratings on PSP 5 and PSP 8 within the Telzrow et al. and Doll et al. studies were higher than 3.00, suggesting that on average the components *systematic plan*) and *comparison to baseline data* were implemented at a moderate level of fidelity. In contrast, in the current investigation the mean ratings for both of these components fell below 3.00. Examination of cases by type of documentation did reveal more commensurate mean ratings with the other studies for PSP 5 and PSP 8. Specifically, cases that used both types of documentation had mean ratings of 3.20 and 3.00 respectively on PSP 5 and PSP 8. Action Plan only cases had a mean rating of 3.12 on PSP 8.

In the current study the definition of *goal attainment* was modified from the Telzrow et al. (2000) rubric, but information about student performance in all three studies were examined. Overall, mean ratings across studies indicated that students' performance improved from baseline, but that the target goal was not met or

achieved. Thus, despite moderate level of fidelity of implementation on average students demonstrated progress toward the established goal.

Comparison between type of case documentation and PSP components.

Across all schools, the number of cases that were documented using an Action Plan form was 26, whereas the number of cases that used the SDF was 28. These numbers exclude the five cases that used both an Action Plan form and the SDF. Comparison between the PSP components and the type of documentation, Action Plan only, SDF only, and both SDF and Action Plan revealed no statistically significant differences between mean ratings of fidelity of implementation across the PSP components. However, examination of the data revealed that three components (*baseline data*, *clearly identified goal*, and *intervention implementation*) for SDF only and Action Plan only cases were implemented with a modest level of fidelity (e.g. included some of the required elements) as mean ratings were 3.0 or higher (highest mean rating did not exceed 3.67).

Process observations of selected teams. In an effort to gather additional information regarding the fidelity of implementation of the problem solving process, the researcher observed teams from three different middle schools within the current investigation. The purposes of these observations were to evaluate the KT teams' implementation of the problem solving process during a KT team meeting (real-world setting) and to provide the researcher with information that could assist in interpreting the data obtained from the case documentation and surveys.

The three teams that were observed were the eighth grade KT team from MS 7, the eighth grade team from MS 10, and the sixth grade team from MS 11. The

measure used to complete the process observations was the Process Observation Form (POF), the form used within the school district to conduct KT team observations. All KT teams within every middle school are routinely observed each year by either an observer located within the school or an observer from a different school. The POF contains 13 process steps that are rated as either “yes” (the step was observed or was evident based upon the case documentation reviewed by the KT team) or “no” (the step was not observed or was not evident based upon the KT team’s review of the case documentation).

Process observation of MS 7. The eighth grade KT team was observed in MS 7. This KT team met weekly throughout the school year. Team members included all content teachers on the eighth grade team, the school psychologist, ESOL teacher, school counselor, and special educator. General procedures utilized by this team included assigning a team member to function as the “mentor” for each case, who was responsible for managing the data and presenting the case and data to the team. Before meetings, the mentor submitted the data electronically to the KT team facilitator who was responsible for projecting the data via a laptop and an LCD projector during the meeting. The team used an Action Plan format developed by the team that included general background information about the student (e.g. previous MSA test scores, previous report card data, student strengths), as well as the prioritized concerns, intervention strategies, collected data, and dates for case reviews. Data were presented to the team both in numeric form as well as a graphical display (using Excel software).

Based upon end of year data submitted by MS 7 (all schools within the district must submit end of year PST data to the district PST facilitator), there were nine cases where students had been referred, the KT team completed case documentation, and collected data (at least 4 weeks of post-intervention data) throughout the school year. During the observation the KT team conducted case reviews for three students previously identified and referred to the team.

The meeting began with approximately 15 to 20 minutes of general information sharing or a “FYI” discussion that included updates about students who had recently been suspended from school, students on home and hospital teaching, and discussion among team members about the status of several students. After this discussion, the team began the case reviews.

The first case was a student receiving English as a Second Language Services (ESOL). The concern identified was poor performance on tests and quizzes across multiple classes. The mentor for this case briefly reviewed previously collected baseline data with the team. Baseline data consisted of average test and quiz scores across each class from the previous marking period. The goal for this student was to attain a minimum of 70% average on tests and quizzes across each subject area. Strategies that the team had previously identified to use with this student to help improve test and quiz performance included developing and giving the student study guides before tests and quizzes. While the summary data presented by the mentor indicated that the student had met the established goal of 70% across each class (Math, English, Social Studies, Science), comments made from team members about the student’s progress were that the student appeared to have “confidence and

emotional issues that affect understanding of the content.” Because the student had met the established goal, the team agreed to close the case and indicated that all information and data would be articulated to the high school.

The identified concern for the second case review was homework completion. Strategies that had been previously identified included having the student use a homework folder, daily check-in with an adult, and allowing the student to complete homework during Core Plus class. Monthly data were reviewed regarding the student’s average homework completion percentage for each class. Comments made by the math teacher were that the student had “limited understanding of what he is doing in Math.” However, no further discussion ensued about the specific difficulties or skill deficits in Math. Based upon review the data, the student demonstrated improvement from baseline and the team agreed to close the case and articulate to the high school that this student had benefited from having a daily check-in with an adult to check whether his homework had been completed.

The third case review was very brief due to time constraints. The concern identified for this student was also test and quiz scores. Data from each marking period, including interim and end of marking period average test scores were reviewed. One strategy employed by the team to support this student was to move the student from Algebra to Pre-Algebra due to difficulties in Math. Review of the data indicated that the student had made variable improvement in test and quiz scores across each class. The team meeting concluded and lasted approximately an hour.

The POF was completed for case one. In this case, the prioritized concern was about general academic performance (e.g. test / quiz scores). Although not all of

the process steps were observed several were evident based upon the team discussion and review of the case documentation. For example, process step number two, *referral concerns are prioritized* was not observed during this meeting, but the team had previously identified and prioritized concerns as evidenced on the Action Plan form. The process step that was not observed and not evident from the case documentation was process step three, *instructional levels assessed*. Out of 13 steps, the POF was scored as “yes” for 10 of the 13 steps (76.9%).

Process observation of MS 11. The sixth grade KT team was observed in MS 11. Team members present during the observation included all content teachers on the sixth grade team, the ESOL teacher, special educator, reading specialist, school counselor, and school psychologist, for a total of 16 team members. This KT team met weekly for approximately an hour throughout the school year. The school counselor was the team facilitator. The end of the year PST data submitted by this school indicated that there was one referral case on which the KT team completed case documentation, and collected data (at least 4 weeks of post-intervention data) throughout the school year. The team used an Action Plan form as case documentation.

The meeting began with a general “FYI” discussion about a student who recently transferred to the school. The counselor presented general background information. The team then began discussion about two students who were on the agenda for the meeting. For the first case, the team began with a general review of the student’s grades including reviewing grade sheets and the sixth grade “D and E list” (list of all students in the grade who were in danger of earning Ds or Es for the

marking period). Based on this review of information, the student was performing poorly across all classes. The remaining discussion about this student focused on the student's behavior. Specific behavioral concerns were tardiness to school, calling out during class, poor organization of materials, and not completing assignments and tasks. Previously tried strategies to remediate this student's behavior included lunch detention, Saturday school, and a parent conference. Based upon the team discussion, these strategies had not successfully improved this student's behavior. The school counselor suggested designing and implementing a behavior check sheet where the student could receive daily feedback on his behavior.

Although this observation was conducted towards the end of the school year (beginning of May), it seemed apparent by the frustration expressed from several team members that the student had exhibited challenging behaviors for much of the school year. There was also a sense of exasperation from a team member regarding whether additional, if any, steps could be taken to address this student's behavior. Specifically, one team member stated that the student's "behavior gets in the way", while another team member commented, "What can we do with a kid like this? We've tried everything. We try positive incentives and take data and it doesn't work." The school counselor and two other team members responded to these comments by indicating that using a behavior check sheet was a strategy that had not yet been tried. A team member commented, "Yeah, but we haven't tried this yet."

The team agreed that the school counselor would develop a behavior check sheet that the student would use daily. The school counselor would introduce the behavior sheet to the student and the student would check in and check out with the

counselor daily and the teachers would complete the check sheet throughout the day. The agreed upon target behaviors were appropriate social interactions with peers and adults and organization.

The second student that was discussed also included a general review about academic performance (e.g. review of grade sheets and the D / E list). This student had a daily behavior check sheet that had been previously implemented. Concerns discussed were social and behavior issues, as well as family concerns. The team did address general concerns about the student's reading ability. Specifically, the team member reported that the student had been receiving modified instruction due to low reading ability, and commented that, "This was not really supposed to be provided." One suggestion from a team member was to "look at reading next year" and specifically mentioned using the reading intervention, *Soar to Success*. The team concluded their discussion about this student agreeing to "tweak the student's behavior check sheet" and then review this student again at their next KT team meeting.

The POF was completed for the first case. Seven out of 12 steps, or 58.3% of the process steps, were scored as "yes". Only 12 steps were scored because no data had been collected yet. Although two cases were discussed at this particular meeting only one case was submitted for the school's end of year data (across all three grades). It was not clear if this was the only case that the school had enough documentation (4 weeks of post-intervention data) or whether other cases simply were not reported.

Process observation for MS 10. The eighth grade team was observed in MS 10. As with the other two team observations, this observation was completed towards the end of the school year. The end of year PST data submitted for this school indicated that there were 10 cases referred to the eighth grade team where the KT team completed case documentation and collected data (at least 4 weeks of post-intervention data) throughout the school year. This team used an Action Plan form as their case documentation. This KT team met weekly for approximately one hour throughout the school year. Team members present at the observation were the content teachers, special educator, school counselor, alternative education coordinator, school psychologist, and ESOL teacher for a total of 18 team members. Two of the content teachers co-facilitated the KT team meetings throughout the school year.

The team meeting began with general positive comments and “celebrations” from various team members about student improvement. One team member reported that a student’s attendance had improved; another commented that a student had earned a 78% on a recent test, and a third team member reported that a different student had recently passed an English test. Although case reviews for two students were on the agenda, the team engaged in a “FYI” discussion that lasted the majority of the meeting. Updates were provided about various students including those who recently had received office discipline referrals, students who had upcoming or previously completed 504 or IEP Team meetings (e.g. one recently had been identified with an IDEIA educational disability; one student who had an upcoming 504 Team review meeting), and brief information about a student’s home and hospital

status was discussed. The remaining portion of the meeting was focused on end of year “housekeeping” information such as end of marking period grading and specifics regarding the upcoming grade level field trip. The researcher was unable to complete a POF during this team meeting because the meeting was focused on “FYI” updates and general end of the year “housekeeping” information.

Analyses of demographic variables with KT Team and Student Outcome survey items. Comparison between identified demographic variables (gender, professional role, grade level) and the items on the KT Team and Student Outcomes Survey were conducted. T-tests between gender and the eight survey items and between professional role and the eight survey items did not yield statistically significant differences. However, t-tests between grade level taught and the eight items yielded statistically significant differences ($p = .01$) between grade level and one item *useful interventions*. Specifically, sixth grade teachers’ ($N = 64, M = 3.70, SD = .85$) mean rating on this item was higher than mean ratings provided by eighth grade teachers ($N = 68, M = 3.36, SD = 1.02$). Also, mean ratings of seventh grade teachers ($N = 66, M = 3.83, SD = .83$) were significantly higher than eighth grade teachers ($N = 68, M = 3.36, SD = 1.02$) and respondents reporting that they taught multiple grades ($N = 69, M = 3.46, SD = .77$).

The relationship between the type of training and each of the eight items was also examined. No significant correlations were found between the type of training (training provided by county IIT facilitator, school-based training, no training) and any of the items, although each correlation was in the negative direction suggesting that respondents with more training provided negative responses with each item.

PSP Component Analysis. Given the statistically significant differences between grade taught with one item on the survey, differences between means by grade level (6, 7, 8) were examined for each of the PSP components. There were statistically significant differences between means on PSP 1 (*behavioral definition of the problem*) between sixth grade cases ($N = 24, M = 2.58, SD = .65$) and seventh grade cases ($N = 20, M = 3.45, SD = .88$). Although the seventh grades cases had a higher mean rating as compared to sixth grade cases, the mean rating still fell within a moderate level of fidelity of implementation. There were no statistically significant differences between grades on the other PSP components.

Summary

Case documentation from 16 middle schools was reviewed and evaluated using a modified version of a scoring rubric developed by Telzrow et al. (2000). Data were aggregated from 59 cases and reported as mean ratings and standard deviations across eight PSP components and goal attainment. The data revealed overall low to moderate fidelity of implementation of the PSP components, with mean ratings of the eight PSP components ranging from a low of 1.78 (*intervention skill development*) to a high of 3.48 (*baseline data*). Comparison of the data from the current investigation with similar studies (e.g. Doll et al., 2005; Telzrow et al., 2000) revealed at best a moderate level of fidelity of implementation across similarly measured PSP components.

Less than 39% of all submitted cases had enough information or data to determine whether or not the student made progress on the identified goal. The overall mean rating score for goal attainment across the 23 cases was 3.33 ($SD =$

1.21), indicating an overall positive change towards reaching the established goal, but the targeted goal was not achieved or exceeded. There were significant positive correlations between the ratings of fidelity of implementation for two of the PSP components with student *goal attainment*. The two PSP components, PSP 4 *intervention skill development* ($r = .46, p = .05$) and PSP 5 *systematic step-by step intervention plan* ($r = .47, p = .05$) were both moderately positively correlated with student *goal attainment*.

KT team members across 16 middle schools completed an 18-item online electronic survey. The Student Outcomes and KT Team survey gathered respondent perceptions of student outcomes and satisfaction with their KT team. The mean ratings on the three *student outcome* items collectively were lower than the five *KT team* items. The first two *student outcome* items, the *student improved* and the *goals accomplished* had five and four schools respectively provide mean ratings below 3.0; ratings did not exceed 3.80 across all schools on either of these items, suggesting a neutral to slightly positive perception regarding student improvement and goal attainment. The mean ratings on the five *KT team* items were 3.0 or higher for 14 schools, indicating a neutral to positive perception on all five *KT team* items for these schools. The item, *comfortable referring* had the strongest positive endorsement of all of the survey items (*student outcome* and *KT team*).

Chapter 5: Discussion

Discussion

This study investigated a model of middle school grade level PSTs referred to locally as Kid Talk (KT) teams from one school district within the Mid-Atlantic region. Specifically, this study examined the fidelity of implementation of the problems solving process (PSP), student goal attainment for students who were referred to and received interventions from the KT team, and KT team members' perception and satisfaction with the KT team process. The uniqueness of this current investigation was that it focused entirely on middle schools PSTs. While the middle school PSTs were all from the same school district, this study offers insight into the level of functioning and challenges relative to implementation of PSTs at the secondary level.

In this investigation, the data revealed less than desired levels of fidelity of implementation of key components of the PSP and less than robust teacher satisfaction with student outcomes that was pervasive across schools. There was not any one school that represented high fidelity of implementation of the PSP components, or any one school that could be singled out as the school with a poor level fidelity of implementation. This ubiquitous level of mediocrity presents a discouraging picture of the implementation of PSTs at the middle school level. Moreover, it raises questions whether these teams are really achieving the goals and outcomes that the school district, committed to excellence, has intended for them to achieve. The remainder of this discussion section provides a description of limitations of this study, a brief summary of the results along with interpretation of

findings relative to each of the research questions, implications for educational practice, and suggestions for future research.

Limitations of this Investigation

There are several limitations of this investigation. The identified limitations are related to subjects, availability of data, use of case documentation data, instrumentation, and response bias. Each is discussed below.

Subjects. The middle schools and respondents selected to participate in this investigation represent a convenience sample of schools and staff members from one school district. This affects the generalizability of results across other middle schools outside of the school district where this investigation was conducted. The relatively small sample size ($N = 16$ and 59 cases) also represents a limitation. For the survey, there were 286 respondents. However, the survey data were aggregated by school due to the variability in response rate across schools.

There was considerable variability between schools in regard to response rate to the survey. There were over 280 respondents across 16 schools, but the range of response was from a low of 6.9% to a high of over 97%. This variability in response rate was due in large part to access to the survey. The survey was made available to respondents towards the end of the school year. Thus, reduced response rate could be attributed to time of year. Also, despite commonly used incentive strategies, such as token incentives (e.g., a random drawing for a gift certificate to a local establishment, as recommended by Dillman, 2007), the district discouraged the researcher from using incentives (e.g., gift cards) as a method to increase response rate. Also, despite

agreement from the principals that the KT team members could be provided access to the survey there was mixed support from the principals.

Availability of data. This was a study of “real world” implementation of PSTs, and the researcher experienced challenges gathering the data. There was not the same amount of data collected from each participating school. There were 16 schools that provided data, but the same 16 schools were not represented in both the case documentation data and the online survey data. Specifically, there were 15 schools that provided both survey data and case documentation data.

Case documentation. There were several limitations related to the case documentation: collection of cases, type of documentation used within and across schools, and using case documentation to determine fidelity of implementation. Each of these limitations is discussed briefly below.

Collection of cases. For the case documentation, the researcher had intended to randomly collect six cases from each school, two from each grade level. The purpose for randomly selecting data was to eliminate the bias of “best case” documentation. In the review of previous studies (e.g. Doll et al., 2005; Telzrow et al., 2000), “best case” documentation potentially inflated the results relative to fidelity of implementation. However, once data collection began, it became apparent that random selection of cases was not possible because schools had limited case documentation. Personal communication between the researcher and school-based personnel revealed that the majority of schools had only a few cases in the school (across all three grade levels), thereby eliminating the opportunity to randomly select cases. For most schools, the researcher was unable to get even six cases, as the

average number of cases collected per school was less than four. Three schools did not have any cases to submit.

Type of documentation. Not all middle schools within this study utilized the same forms for case documentation. Of the 16 participating schools, seven schools utilized only the Student Documentation Form (SDF), six schools used only Action Plan forms, and three schools used both forms. In the schools that used both formats for case documentation, one school had all grade level KT teams use both formats; in the other two schools, one grade level KT team used the SDF while a different grade level KT team within the school used an Action Plan form (e.g., grade 6 KT team used the SDF and grades 7 and 8 used the Action Plan form). The criteria established by the district are that the Action Plan forms contain the same elements as the SDF (concern, baseline data, goals, description of intervention, data representing student progress to the intervention). However, there is no standard Action Plan form and individual schools have created their own form.

Case documentation to measure fidelity of implementation. Another limitation was the use of case documentation to determine fidelity of implementation of the PSP. As with other studies that have used case documentation (e.g. Doll et al., 2005; McNamara et al., 2008; Telzrow et al., 2000), the question becomes whether the measure of fidelity is based upon accuracy of the completed documentation or actual implementation of PSP components. Thus, process observations of selected teams were completed in an effort to address this limitation.

Because of the time needed to obtain university and district IRB permission, the researcher was not able to observe teams until towards the end of the school year

(May, 2009). This contributed to the difficulty that the researcher faced when attempting to schedule observations of teams because several teams had finished meeting for the school year. Another challenge that the researcher faced was that some teams did not want to be observed because a process observation had been completed by another outside observer to meet the requirements established by the school district. Ultimately the researcher did complete three observations of three teams from different schools, but the researcher was not able to observe a team from each grade level.

Instrumentation. There were limitations relative to the PSP components and goal attainment rubric and the online survey. The PSP component and goal attainment rubric was modified from the original rubric developed by Telzrow et al. (2000). Of the eight PSP components, three were revised. While these revised components were still critical components of the PSP, they had not been previously examined through other research investigations in the same way that the other PSP components were evaluated. The primary limitation of the Student Outcomes and KT Team survey was that it was designed by the researcher based upon items taken from other surveys.

Response bias. As reported as a limitation in previous studies (e.g. McNamara et al.) the threats of response bias and social desirability exist due to the use of a self-report survey. For example, in some schools the survey respondents could be those who either had a predominantly negative or positive perception of KT teams, which prompted them to complete the survey. Survey response rates varied greatly, which might have been a reflection of response bias in some cases.

Research Question 1

With what degree of fidelity did the middle school KT teams implement identified key components of the problem solving process?

Summary of findings. To examine fidelity of implementation of the PSP components and goal attainment, submitted case documentation from 16 middle schools was reviewed. Specifically, there were a total of 59 cases with the number of cases ranging from two to five from 16 middle schools. The average number of documented cases per middle school was less than four. Across all three grade levels (six, seven, and eight), the majority of identified concerns were behavioral (e.g. classroom disruption, inattention, disorganization) or were general academic concerns, such as work completion and tests / quiz scores. The mean ratings of the eight PSP components ranged from a low of 1.78 (*intervention skill development*) to a high of 3.48 (*baseline data*). Five of the eight components had a mean rating less than 3.0, indicating that only some of the required elements of the specified component were being implemented consistently across cases.

Less than desired fidelity of implementation of PSP components. The overall low to moderate level of fidelity of implementation of the PSP components found within this investigation are discouraging, but not surprising when examined within the context of previously identified studies that investigated the implementation of PSTs. The Doll et al. (2005) and the Telzrow et al. (2000) studies reported less than desired levels of fidelity of implementation across several PSP components by PSTs.

These researchers identified several factors that negatively impacted levels of fidelity of implementation of the PSP components, including lack of clarity around the PSP model, differing skills needed to implement PSP components, and ease of documentation and procedures. Other research has demonstrated that PSTs that function without university or outside support often omit important components of the problem solving process, such as not documenting decisions and relying more on anecdotal information as opposed to data to document and monitor student progress (Fuchs, Fuchs, Harris, & Roberts, 1996; Yetter & Doll, 2007). The extant research on PSTs in conjunction with the results from the current investigation studies highlight the implementation challenges that PSTs have experienced.

Within the current investigation, hypothesized factors that negatively affected fidelity of implementation of the PSP components are similar to those factors noted above. Mainly, there were differing PSP models specified by the district and variations of documentation used within and across schools. These factors in conjunction with varied skill level needed to implement PSP components collectively contributed to the less than desired levels of fidelity of implementation of the PSP components.

Clarity of the PSP model. Information gathered through this investigation highlight a lack of clarity regarding the PSP model utilized by the middle schools in this district. Published materials on the district website and training materials in the school district report a long history of utilizing problem solving processes and prevention models based upon the Instructional Consultation-Teams model (IC-Teams) (Rosenfield & Gravois, 1996). However, the PSP model utilized by the

middle school KT teams is more akin to the TAT model (Teacher Assistance Teams, Chalfant et al., 1979) where a team-based problem solving approach is used and teachers provide support to teachers.

As noted earlier the current procedures utilized by the middle school KT teams in this district are based upon a pilot project conducted and reported on by Bartels and Mortenson (2002). Bartels and Mortensen identified the team consultation approach or the broad participation model as most useful at the middle school level because multiple teachers have responsibility for each student. One way that the team approach recommended by them differs from the IC-Teams model is that the problem solving occurs at the team level, as opposed to a case manager working collaboratively through the stages of the problem solving process with the requesting teacher. There are several challenges associated with team problem solving including the impact of social communication forces that negatively affect team functioning, and the difficulty for teachers to be reflective about instructional practices (Benn, 2004). These challenges are described more in depth below.

Variation of case documentation. The lack of clarity was demonstrated by the variation within and between schools regarding the implementation of the problem solving process. This was most clearly evidenced by the different documentation used for cases. Seven schools utilized only the Student Documentation Form (SDF), six schools used only Action Plan forms, and three schools used both forms. In the schools that used both formats for case documentation, one school had all grade level KT teams use both formats, but in the other two schools one grade level KT team used the SDF while a different grade level KT team within the school

used an Action Plan form. While nine schools used Action Plan forms, these forms were not the same within or across schools. For example, an Action Plan form ranged from a simple list of strategies to a more detailed format that included student strengths, general educational performance data, identified concern, list of strategies to address the concern, and post-intervention data.

Fidelity of implementation and type of documentation. Since mean ratings across types of documentation indicated at best a modest level of fidelity of implementation, it is difficult to draw conclusions as to whether one form of documentation is better than the other. However, there were three common components where SDF only and Action Plan only cases both had mean ratings of 3.0 or higher (highest did not exceed 3.67): PSP 2 (*baseline data*), PSP 3 (*clearly identified goal*), and PSP 6 (*intervention implementation*). This suggests that despite the type of documentation used, teams did a better job of implementing required elements for these components, albeit at a modest level of fidelity and for very few cases.

However, the advantage of using the SDF is that it would be a standard and consistent form of documentation within and across schools. It is also concise and offers space to document each step of the problem solving process. This is important because concise and simplified procedures and documentation have been recommended to improve fidelity of implementation (Doll et al., 2005; Rankin & Aksamit, 1994). Within this study several of the submitted cases documented on school developed Action Plan forms included multiple pages; several were up to 10 pages long, which seemed daunting and cumbersome to complete. Additionally,

several of these cases, in spite of their length, did not include all of the needed PSP components, such as a visual display of the data via a graph. Therefore, documentation via the SDF would streamline the documentation since it includes all of the key components of the PSP (i.e., concern, document baseline data, develop goals, identify an intervention, monitor student progress on the intervention via a graph) within one brief document.

Varied skill level. Previous research has noted that PSTs commonly rely on anecdotal information to monitor student progress or do not document decisions (Fuchs et al., 1996; Yetter & Doll, 2007). Researchers have suggested that the primary reason is that some of the PSP components require a higher degree of skill and more training than other PSP components (Doll et al, 2005; McNamara et al., 2008; Yetter & Doll, 2007). Findings from the Telzrow et al., Doll et al., and the current study also suggest that differing levels of skill are needed to implement various PSP components.

For example, a key step in monitoring student progress, *comparison to baseline data* (PSP 8), had the lowest level of fidelity of implementation across all three studies. Whereas the Telzrow et al. and Doll et al. studies documented that the PSTs used some quantifiable data, in the current study, the low mean rating by the KT teams indicated that they either did not use quantifiable data (e.g. no data at all or provided a general description of progress) or used quantifiable data unrelated to the identified concern (e.g. district assessment scores). These data lead to questions regarding the type and level of skill needed to implement this component. It is likely that PST members need more training on the type of data that should be collected,

how it can be collected, and how it should be reported in order to monitor student progress.

In addition, the current investigation had other components with mean ratings less than 3.0, specifically: PSP 4 (*intervention skill development*), PSP 5 (*systematic intervention plan*), and PSP 7 (*appropriate data collected consistently*). These mean ratings suggest that the KT teams utilized accommodations instead of targeted skill interventions, did not routinely have specific and detailed intervention plans, and tended to use general progress data (e.g. report card grades, standardized test performance) instead of quantifiable data linked to the identified concern. It could be that the skills required to implement these components are more complicated and require more specific training in order to implement them correctly.

Research Question 2

To what degree did students who were referred to the middle KT teams attain targeted academic or behavioral goals?

Summary of findings. Of the 59 total cases, student goal attainment was only evaluated for 23 cases due to an absence of information, data, or both. The overall mean rating score across the 23 cases was 3.33 ($SD = 1.21$), indicating an overall positive change towards reaching the established goal on the few cases documented, but even here, the targeted goal was not achieved or exceeded. However, the effectiveness of the PSP on the student outcome measure of *goal attainment* is difficult to evaluate. It is difficult because the overall data indicated that the PSP components were implemented at best at a moderate level of fidelity and

so few had enough information and data to evaluate whether the students made progress on their established goals.

Low production of cases. The low number of cases that yielded student outcomes is discouraging. However, these data makes sense when viewed within the context that it is difficult to develop, implement, and monitor interventions when there is not initially a well-defined and clear understanding of the identified concern. The mean rating of 3.0 for PSP 1 (*behavioral definition of the problem*) indicated that, on average, teams provided a vague and general definition of the concern. Moreover, the types of concerns described were vague (e.g. inattention, poor class work completion) and only identified the problem at a high level of inference. There was no evidence contained within the case documentation that teams were able to “drill down” beyond this superficial level. It is likely that these concerns are easiest to identify because they are salient and are labeled by teachers across multiple content areas.

For a PST comprised of teachers, like the KT teams, who teach different content areas, surface level concerns may be the only way the team members know how to identify a commonly experienced problem. This unclear description of concerns was also observed during the team process observations. For example, in the process observation of the MS 7 team, comments made by the math teacher were that the student had “limited understanding of what he is doing in Math”. However, no further discussion ensued about the specific difficulties or skill needs in Math.

Given the vague concerns, it is also not surprising that PSP 4 (*intervention skill development*) ($M = 1.78$; $SD = 1.21$) and PSP 5 (*systematic step by step*

intervention plan) ($M = 2.71$; $SD = 1.04$) were among the lowest ratings for the PSP components. As an example, cases that identified work completion as the concern commonly listed interventions that were really accommodations or modifications, such as extended time to complete assignments or reducing the amount of work to be completed, as opposed to actual targeted academic skill interventions. Without an actual intervention it is difficult to have a systematic step-by-step intervention plan. The significant positive correlations between these two components with *goal attainment* highlight the relationship between well-designed and systematic plans with student *goal attainment*.

Accountability of KT teams. While this study only represented a sampling of cases across the 16 participating middle schools, the end of year data submitted by all of the middle schools to the school district revealed that, collectively, teams had a low number of cases that yielded student outcomes. The district required KT teams to submit case documentation at the end of the school year that included three to five cases with at least four weeks of post-intervention data. The end of year data submitted to the district at the end of this study year, obtained from the district PST facilitator, indicated that there were 110 cases across all the middle schools, evenly split across grades six, seven, and eight that met the district standard of having at least four weeks of post-intervention data. Appendix S presents the end of year KT team data. Notably, 79 of the 110 cases (71.8%) came from five schools. The remaining 11 schools had a total of 31 cases (less than 3 cases per school across all three grade level KT teams). Thus, for the majority of the schools with three KT teams per school (grades 6, 7, 8), teams generated on average less than three cases for an entire

school year with at least four weeks of post-intervention data to determine student goal attainment.

Since teams typically meet once weekly or at a minimum bi-weekly, documenting less than three cases across all three grade levels for an entire school year raises questions regarding the accountability of the KT teams from the district. The results of this investigation illuminate the consequences of not having clear accountability for student outcomes. The amount of time and energy invested by staff members in the absence of student outcomes can only increase the level of staff frustration. The results of this investigation bring into question whether the teams have a conceptual understanding of the problem solving process, are clear about the purpose for implementing the problem solving process, and have the skills needed to implement the steps of the problem solving process.

Research Question 3

What was the relationship between fidelity of implementation between each of the key components of the problem solving process and student goal attainment?

Summary of findings. There were significant moderate positive correlations between two of the ratings of fidelity of implementation (*PSP 4 intervention skill development* and *PSP 5 systematic step-by step intervention plan*) and student *goal attainment*. As mentioned above, PSP 4 and PSP 5 were two of the four components that fell below a moderate level of fidelity of implementation (PSP 4 $M = 1.78$; PSP 5 $M = 2.71$).

Impact on student outcomes. The significant positive relationship between PSP 4 and PSP 5 with *goal attainment* suggests that better fidelity of implementation

for each component would positively affect student goal attainment. Therefore, providing more training in the required elements for each of these components may be worthwhile. For example, for PSP 4 the documentation routinely reflected listing of accommodations instead of targeted skill interventions. It is likely that teams believed that they were implementing interventions for students by providing supports such as extra response time or offering a place where a student could get assistance to complete class work.

It may be necessary to provide training regarding the difference between what constitutes an accommodation versus an intervention. Accommodations and modifications are important and useful because they can provide students access to instruction and provide ways for students to complete assignments that may be beyond their instructional level. However, interventions that target a specific skill (e.g. reading comprehension) can help to remediate and enhance student skills. The PSP involves designing appropriate interventions to target student concerns and monitoring student progress on the implemented intervention as opposed to just implementing accommodations. Accommodations and modifications could be provided through a different type of plan.

For the remaining PSP components, it is difficult to draw conclusions or suggest that they do not affect student outcomes, particularly when there is at best a modest level of implementation across the PSP components. Telzrow et al. (2000) had a similar conclusion that it was difficult to suggest that not all PSP components were influential on student outcomes when not all components were implemented at a desired level.

Research Question 4

What were KT team member ratings of satisfaction of the KT team process and perceptions of student outcomes for students referred to and receiving interventions from the KT team?

Summary of findings. There were three survey items intended to gather respondent perceptions of student outcomes and five items related to respondent perceptions regarding their KT team. Overall perceptions were neutral to positive, albeit modestly positive. The mean ratings on the three *student outcome* items collectively as compared to the five *KT team* items were lower. The one item that had the strongest positive endorsement was *I am comfortable referring a student to the KT team*.

There was variability between schools in regards to response rate, with the range from a low of 6.9% to a high of over 97%. This variability in response rate was due in large part to access to the survey. In schools with a high response rate teachers were provided access to the survey during a KT team meeting, as was recommended at the principal's meeting. The schools with a low response rate were given the online link and asked to complete the survey. The differences in response rate may reflect a possible bias in the responses as well.

Goal attainment and survey respondent perceptions. As noted previously, less than 40% of all cases had enough data and / or information in order to even score student goal attainment; of these cases, the mean rating was 3.33 ($N = 23$, $SD = 1.21$), suggesting some positive progress towards the established goal, but goals were not met. These data are consistent with the end of year data submitted by the schools,

where a majority of schools (11 schools) had on average less than three cases with enough post-intervention data to report on student progress. Given these data, it is not surprising that the survey respondents across all schools provided mean ratings that did not exceed 3.80 on the survey student outcome items, the *student improved* and the *goals accomplished*. Moreover, these two items had the most number of schools with mean ratings below 3.0 (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree).

Several respondents commented on the lack of production from their KT teams, as well as expressed a general level of frustration. Specifically, comments from four respondents across different schools were:

- The process seems to be lacking direct intervention. It is not expedited swiftly, measurably and consistently.
- Overall, I find kid talk just talk and very little implementation.
- An extremely slow process and often we go in circles. [The] kid talk process tends to be time consuming based on the results.
- A flawed system. I won't call it a complete waste of time but for all the effort invested, the outcomes don't even come close to providing any satisfaction to the staff or the student involved.

These comments illuminate and offer a good description of the data. There lacks consistent fidelity of implementation of the PSP components, many teams are not implementing the PSP as prescribed, and teams are investing a great deal of time and energy (in most cases teams meet weekly for an entire school year, approximately 36 weeks) with few cases actually yielding outcomes.

The survey respondents overwhelmingly endorsed feeling comfortable referring students to their KT team in spite of reporting mostly neutral feelings of satisfaction about student outcomes (*student improved* and *goals accomplished*). The mostly neutral feelings about student outcomes along with corresponding case documentation data revealing modest, at best, student outcomes, and the positive responses to the survey item, *I feel comfortable referring a student to the KT team*, raise an important question about the reason why respondents are comfortable referring students. If they do not perceive the students as improving as a result of referral and receiving assistance through the KT team, then their “comfort” likely is related to other factors, such as relationships with their colleagues as opposed to attaining actual improved student outcomes.

Types of collaboration. Part of a major emphasis of school reform movements has been on increasing opportunities for teachers to work collaboratively (Fullan & Hargreaves, 1996; Hall & Hord, 2006; Little, 1990). Hall and Hord (2006) identified four indicators of a school culture most conducive to implementing change, one of which is reducing isolation amongst teachers via established policies that foster collaboration and development of collegial relationships. However, as noted by Fullan and Hargreaves (1996), “There is nothing automatically good about collegiality. People can collaborate to do good things, bad things, or nothing at all...[and could] find themselves collaborating for the sake of collaboration” (p. 7).

The major premise behind teams is that people working together as a group can achieve more than those working individually. However, there are weak and strong forms of collaboration, where weak forms of collaboration can actually hinder

progress in schools (Fullan & Hargreaves, 2006). According to Little (1990), weak forms of collegial collaboration include storytelling and advice giving. Within school cultures where weak forms of collaboration exist, discussion regarding the “business of teaching” (Little, 1990, p. 516) is rare and a teacher asking of other teachers is often perceived as demonstrating a lack of professional competence. Moreover, storytelling and advice giving actually promote autonomy and further isolation between teachers. In contrast, true collaboration referred to by Little as “joint work”, consists of teachers engaging in team teaching, co-planning, and sharing accountability for instruction and student progress.

Comfortable collaboration. Fullan and Hargreaves (1996) refer to the superficial level of storytelling and advice giving as comfortable collaboration. True collaboration, “joint work”, is challenging because it requires a level of trust between teachers to engage in reflective discussion and teachers can experience feelings of vulnerability (Puchner & Taylor, 2006).

Without establishment of a collaborative culture and norms regarding discussing the “business of teaching,” teachers will more readily engage in comfortable collaboration, where discussion remains at a superficial level (e.g., storytelling or advice giving) instead of engaging in discourse that could challenge a teacher’s sense of competence and self-efficacy. Comments from survey respondents suggest the existence of comfortable collaboration within KT teams. Specifically, two respondents from different schools reported:

“Too much narration and storytelling takes place, and too little actual consideration of the problem and interventions takes place.”

“Teachers are notorious storytellers. We all want to tell the funny / irritating anecdote. However, KT needs to be more focused on how to fix things.”

The challenge that schools face when teachers engage in comfortable collaboration is that long-term change is unlikely because it does not promote open and honest reflection about instructional practices (Fullan & Hargreaves, 1996).

Implications for Practice

An advantage of this study is that it focused entirely on middle school PSTs, which was different than the other studies investigating PSTs (e.g., Doll et al.; McNamara, et al.; Telzrow et al.). Thus, one question is whether there is something unique about middle schools that make the implementation of PSTs more challenging than at the elementary school level. The data revealed that fidelity of implementation was not, collectively, significantly better or worse compared to the Telzrow et al. and Doll et al. investigations that primarily included elementary schools. This suggests that implementation of the PSP by PSTs may have little to do with the level of school (elementary versus secondary). However, there may be some differences that do affect implementation of PSTs at the secondary level.

Middle schools. Middle schools are unique relative to their secondary counterpart, high schools, as well as are unique from elementary schools. As mentioned previously, students in middle school must manage rapid changes in physicality and emotionality as young adolescents. The stress created from school to achieve and maintain high academic standards offers additional demands and pressures. For example, students transition from the relatively calm and nurturing environment characteristic of elementary school to the much bigger and more chaotic

environment often characteristic of middle school (Safer, 1986). As compared to elementary school, middle school students have increased independence, have more teachers, and the curricula become more challenging requiring more abstract thinking and more complex problem-solving abilities. This collectively creates a more stressful climate.

The pressure for students to meet established grade level expectations and master content has led secondary level teachers to focus on teaching content as opposed to teaching specific skills. Middle school teachers are also less likely to teach basic skills that they feel students should have solidified prior to entering middle school. As reported by one survey respondent, “Elementary schools must do a better of job of ‘actualizing’ the needs of students...” Middle school teachers are also responsible for more students within a school day as compared to elementary school teachers, making it more challenging to focus on individual students. As noted by one survey respondent, “...[this] can often burden a teacher whose primary job is educating 120 + students.” The number of students that teachers are responsible for teaching in a day along with the increased emphasis on teaching content and students meeting expected curricular standards are differences from the elementary level, which likely do have an impact on the implementation of PSTs at the secondary level.

Implications. The findings from this investigation raise significant questions about the efficacy, the accountability, and the ownership of the PST model utilized by the middle schools in this study. There were a remarkably low number of cases that

yielded student outcomes, low fidelity of implementation across the PSP components, and neutral to modest support from survey respondents.

PSP Model. As the data highlight within this study, it is critical for those charged with implementing the PSP to have a clear conceptualization and understanding of what it is they are expected to be doing along with expectations for accountability. Without such specificity, teachers and other personnel who are expected to implement a specific innovation are often not clear about what they are being asked to do (Hall & Hord, 2006). Adaptation, modification, and mutation of innovations occur frequently within schools (Hall & Hord, 2006). The original or “idealized version” of the innovation along with the modified versions of the innovation are referred to as “innovation configurations” (Hall & Hord, 2006, p. 111). When clarity about expectations for implementation of the innovation is lacking, it becomes commonplace that personnel adapt and create their own version based upon their perception of what they think they are expected to do. As a result, the adaptations of an innovation may be named the same, but the operationalization and implementation of the innovation varies within and across settings. Since there was variability of implementation of the KT team model within and across schools, it is difficult to collectively assess the process being used by the KT teams in this study.

Training. The variability among schools regarding KT team member perceptions could be related to training and understanding of the process. Previous research has identified the need for consistent and ongoing training of PST members (Doll et al., 2005; Telzrow et al., 2000). The training of PST members was not a specific focus of this current study. However, some information about KT team

members' training was obtained via self-report from the online survey. That data revealed that more than 50% of respondents from 15 out of 16 schools reported that they had received some type of training, but there were ten schools that had 20% or more of respondents reporting they had received no training.

There are other training issues that should also be considered. Those include increasing teacher knowledge about evidence-based interventions along with training on progress monitoring skills. One survey respondent suggested that more information about interventions may be helpful: "Sometimes (the KT process) feels like just a way to document what we already do, as opposed to trying something new with a student." Other training issues to consider include providing training to building principals to ensure that they have understand the PSP and the components, and providing training for team facilitators in group process so that they can successfully manage the functioning of their team.

In this study, the student population across schools ranged significantly according to ethnicity and special services (e.g. Limited English Proficient, FARMS, Special education). For example, the range of FARMS students was 1.6% to 32.0% and the range of White students was from 23.0% to 80.2%, African American students ranged from 4.3% to 53.5%, Asian students ranged 5.2% to 26.1%, and Hispanic students ranged from 1.1% to 16.6%. Given these variations in student demographics it could be that schools servicing a larger minority student population or students with lower SES may need additional training to ensure understanding of the students they are teaching.

Team based problem solving. The less than desired levels of fidelity of implementation of the PSP process and teacher perceptions about student outcomes and their KT team could be linked to the challenges related to group and team functioning. When groups convene and work together there are powerful social communication forces that can affect the dynamics and functioning of the group. Interpersonal communication inherently involves verifying personal experience. Thus, what ensues within a group when individuals attempt to verify their subjective experiences is the social phenomenon described by Higgins (1999) as creating a “shared reality”. Shared reality is where individuals make personal experiences objective, reliable, and valid by sharing them with others. Additionally, within a group or team setting, team member’s opinions commonly “converge to form a group norm” (p. 43); the shared reality becomes an objective and accurate source of information for the group members.

Benn (2004) completed a qualitative investigation that examined the functioning of one elementary school’s grade level PSTs during their first year of implementation of a newly introduced school district mandated problem solving process. Benn used the “communities of practice theory” (Printy, 2004) as a framework to interpret the implementation challenges faced by these PSTs. The communities of practice theory acknowledges the power of social dynamics that occur within a group, and “...the social experience of learning and participating, while simultaneously recognizing the individual’s role within the community” (p. 9). Within this study, Benn found evidence of the negative impact of social influences (e.g. creating a shared reality) on team functioning, resulting in team members failing

to make needed conceptual shifts (e.g. shift from student deficit thinking) in order to effectively implement the problem solving process.

While the district in this study expects KT teams to examine instructional and environmental factors (e.g., instructional match and setting should be the focus of the problem solving according to district documents), there was little evidence observed in the process observations, information from survey respondents, or data gathered from the case documentation that supported this perspective. Instead, there was evidence of student deficit thinking and discussion regarding the influence of outside factors not related to instruction. For example, during the process observation of a case review, an MS 7 team member reported that the student appeared to have “confidence and emotional issues that affect understanding of the content;” and during the process observation of MS 11, one team member stated that the student’s “behavior gets in the way.” A survey respondent commented that, “[KT team members] focus a lot on the students with weaknesses/needs.” Another survey respondent reported that, “...home situations or lack of parental support prove to be insurmountable barriers.” A challenge associated with a deficit perspective is that it reinforces a negative bias about the student and ignores any strengths that a student may possess that could help the student be more successful (Rashid & Ostermann, 2009). Additionally, the case documentation data revealed identified concerns that were superficial and vague, such as performance on tests and quizzes or behavioral concerns such as inattention.

The power of social dynamics that occur within a group negatively affect team based problem solving because it makes it difficult for teachers to truly engage in

discussions about instructional practices and teaching. Instead, team members often create a “shared reality” that may lack objectivity or may be based on negative thinking (e.g. student deficits). As discussed earlier, it is commonplace within schools, particularly those schools that do not have established collaborative cultures, that questions about instruction or requesting assistance is often perceived as lacking professional competence. Within this climate it would be difficult to openly engage in collaborative discussions about teaching within a group or team format and instead becomes easier to focus on within student pathology or the influence of outside factors external to the classroom environment.

Reconsider PSP model. Given the challenges experienced by PSTs it may be necessary to reconsider how schools provide early intervention support to students. Data from this investigation and from previously identified studies reveal how difficult it is to implement team-based problem solving. The challenges associated with team functioning, the focus on student deficits, along with the skills needed to implement the PSP components, training and ongoing support needed to successfully implement these skills collectively make team based problem solving very difficult to implement with efficacy.

Early intervention services for students are supported through the Individuals with Disabilities Education Improvement Act (IDEIA 2004), but the law does not specifically include language pertaining to the implementation of PSTs. Instead IDEIA emphasizes prevention of academic and behavioral problems through the provision for “early intervening services”, and encourages the use of problem solving processes. Thus, implementation of a single building level PST with members who

are trained in the stages of the problem solving process, case management, and have the skills to work collaboratively with requesting teachers in a consultant-consultee relationship may be one way for schools to consider supporting students and staff. Working collaboratively with a case manager trained in the problem solving process would eliminate the challenges of group problem solving. It would reduce unnecessary meetings for teachers who are not requesting assistance and could lead to better fidelity of implementation of PSP components. Regardless of the model that schools choose to provide early intervention and support to students who are struggling academically and or behaviorally, there should be a clear ownership of the model, support from the district and administrators, and a shared vision, purpose, and understanding of PSTs amongst all stakeholders.

Ownership of PSP model and support. As pointed out by Santangelo (2009) and Fuchs et al. (1996), it is not only about achieving successful fidelity of implementation of the PSP, but also sustaining desired levels of fidelity of implementation. Within their respective studies, both researchers found a positive relationship between district support, implementation, and sustainability of PSTs. In the qualitative study conducted by Santangelo when the district within the investigation no longer provided adequate resources (e.g., staffing to assist in providing early intervention services) to the targeted elementary school, as well as no longer emphasized the priority of implementation of the PSP, commitment to fidelity of implementation of the PSP waned within the school. It also affected team members' willingness to participate in the process. Fuchs et al. (1996) attributed failure to sustain implementation of PSTs and the PSP within the district in their

investigation due to lack of ownership, as well as lack of a shared vision and understanding of the purpose of the PSTs between major stakeholders (e.g. central office personnel, building principals, teachers, student service personnel). These studies highlight the importance of having system resources dedicated to supporting the implementation of PSTs along with a clearly identified vision and conceptualization of the purpose for PSTs that is shared by all stakeholders. There does exist system support for PSTs within this district, but there are some subtle components that are missing.

System change and administrative support. Given the important role that a district has regarding the implementation and sustainability of PSTs, it is important to consider how school districts can support system change. Systemic reform involves modifying the behavior of those responsible for implementing new innovations and change occurs when "...[there is a change in] the behavior of a critical mass of individuals" (Noell & Gansle, 2009, p. 81). Administrator support within the school is paramount to helping facilitate system change.

One of the challenges noted for this district is that there does not seem to be clear ownership over the KT teams within the district. Personal communications between the researcher and the middle school psychologists overwhelmingly revealed a high level of frustration with the implementation of the KT teams in their buildings. Additionally, many of the psychologists noted the difficulty in trying to initiate changes to KT team functioning without administrator and system support.

At the middle school principal's meeting that the researcher attended, several of the principals reported an unwillingness to ask their teachers to complete the online

survey and indicated that the request would have to come from the school psychologist. Despite the message that the data gathered from this survey could offer insight into teacher's perceptions about the KT teams within their respective buildings, the principals collectively agreed to shift this to the school psychologists. It would seem that given the level of time investment (e.g. teams meet weekly or bi-weekly) and involvement of staff (all grade level teachers and support personnel), principals would want to assume ownership of the functioning of the KT teams in their building. This lack of ownership for the survey could be reflective of the support within the schools. Additional examination of the principals' perspective is needed.

Suggestions for Future Research

Implementation of change within schools is not an easy task and there may be issues unique at the secondary level (middle and high school) that warrant specific examination of system issues that support or hinder the change process at this level. There has been a paucity of research at the secondary level in regards to functioning and implementation of PSTs. This investigation provided insight into the functioning of one model of PSTs and challenges experienced by these PSTs at the middle school level. The information gathered from this study will add to the current research base on PSTs at the secondary level.

However, additional research should be conducted that examines fidelity of implementation from a larger and more diverse sample of middle schools. One of the limitations of this study was that it includes a small sample of schools ($N = 16$), all from within the same school district. Research should also be conducted that

examines more closely the concept of early intervention teams and the problem solving model that would best meet the needs of secondary level schools. Specific research should consider ways to support students and staff. Additionally, this study obtained perceptions of PST members, but did not gather information and feedback from building principals regarding their perception and understanding of the PSP and PST models. Given the significant influence of districts and principals have on the implementations of innovations within schools, it makes sense to gather information from all stakeholders including principals and district level staff.

Conclusions

There were several limitations to this investigation relative to challenges collecting data, the subjects, and instruments used. However, this study of “real world” implementation of PSTs offered important insights into the functioning of such teams at the middle school level. The collective data revealed less than desired levels of fidelity of implementation of PSP components stemming from poor clarity of the PSP model as evidenced by variability of practices within and across schools, questionable accountability of the KT teams due to the low number of production of cases with student outcomes, lack of ownership of the KT team model, and evidence of superficial forms of collaboration that have a negative impact on the effectiveness of teams. The major implication for practice learned from this study includes the potential need to reconsider the way schools, particularly secondary schools, provide early intervention supports to teachers whose students are struggling academically and behaviorally.

Appendices

Appendix A: Case Documentation Rubric

Case Documentation Scoring Rubric Telzrow, McNamara, & Hollinger (2000)

| Problem Solving Process Component | Scoring Rubric |
|---|--|
| 1. Behavioral definition of the target behavior | <p>1 Target behavior is not identified.</p> <p>2 Intermediate between 1 and 3 (General area of concern identified, such as reading, math, without further explanation); vague</p> <p>3 General area of concern is identified (e.g. reading, work completion), but concern is defined in non-observable and / or non-measurable terms (e.g. “has trouble with...”; “has a weakness in...”) Vague, include on-task and work completion; HW; tests / quizzes (with specific classes identified & criterion); follow directions (with some measurable criterion); Office discipline referrals (ODRs).</p> <p>4 Intermediate between 3 and 5. (Concern is identified in observable OR measurable terms)</p> <p>5 Concern is described in observable and measurable terms and is related to the student’s academic or behavior performance.</p> |
| 2. Direct measure of the student’s behavior in the natural setting prior to intervention implementation (baseline data) | <p>NI = no baseline data collected</p> <p>1 Estimates or general descriptive information about student’s behavior or using baseline data from previous school year and / or more than 6 months old</p> <p>2 Intermediate between 1 and 3</p> |

| | |
|----------------------------|--|
| | <p>(Information is provided but is not summarized or quantified; data points but it's or not descriptive; unclear about what's being measured)</p> <p>3 Indirect measures of student's behavior are provided (e.g. scores on standardized assessments; ODR data)</p> <p>4 Intermediate between 3 and 5 (Only one measure of baseline OR baseline data 4-6 weeks apart; no dates provided)</p> <p>5 Multiple samples of direct measures of student behavior in the natural setting are reported (e.g. 3 baseline measures of reading fluency) [unless there are 3 data points on graph or reference to median scores for baseline do not assume multiple samples of data]</p> |
| 3. Clearly identified goal | <p>NI = no information provided; no goal listed</p> <p>1 No specific goal or objective is identified; just identifies the concern.</p> <p>2 Intermediate between 1 and 3. (A poorly constructed goal that is not observable or measurable)</p> <p>3 A goal has been identified, but no information is provided about what level of accuracy or by what date it should be accomplished (neither date nor level or date only). Not well defined; no baseline to reference.</p> <ul style="list-style-type: none"> • In 4 to 6 weeks, C will remain on task for at least 65% of each class period. Include on-task and work completion; HW; Test / quizzes; follow directions; demonstrate expected behaviors; attendance. <p>4 Intermediate between 3 and 5. (A criterion level is provided, but no date for estimated completion provided)</p> <p>5 The desired goal has been established with a specific, clearly stated criterion (how much and</p> |

| | |
|-------------------------------------|--|
| | when). |
| **4. Intervention skill development | <p>NI = No information provided at all about intervention</p> <ol style="list-style-type: none"> 1 There is not an intervention identified that targets or teaches a skill. Only includes a list of accommodations or modifications. 2 Intermediate between 1 and 3. (A place for teaching of a target skill (e.g. math core plus; reading class) is mentioned, but no additional information is provided.) 3 Intervention is identified and mentions teaching a skill(s), but no additional information is provided (e.g. self-monitoring chart but no additional information. 4 Intermediate between 3 and 5. (Intervention is identified that targets and teaches a skill(s), but not enough details about the strategies are provided.) 5 Intervention is identified that targets and teaches a skill. It is linked to the identified concern with enough details for an unfamiliar person to be able to implement intervention. |
| 5. Systematic step-by-step plan | <p>NI = No information is provided at all about intervention</p> <ol style="list-style-type: none"> 1 Intervention is identified, but no information about plan provided. 2 Intermediate between 1 and 3. (Vague plan of action is provided; intervention is not systematic or clear and more information about intervention is not attached or included with documentation.) 3 A specific plan of action is devised, but only includes “what” and does not provide other specifics. 4 Intermediate between 3 and 5. (Plan of action includes aspects “what” and |

| | |
|---|---|
| | <p>other aspects, such as who, where, or when); has more details than in level 3.</p> <p>5 A plan of action is devised that specifies what will occur, who will do it, where the intervention will occur, and when the intervention will be implemented. A person unfamiliar with case could pick up plan and know exactly what to do). It can it be replicated; very detailed.</p> |
| <p>**6. Intervention Implementation</p> | <p>NI = no data collected / provided</p> <p>1 No date of when intervention started <u>or</u> more than a month lapsed between baseline and intervention.</p> <p>2 Intermediate between 1 and 3. (Name identified of person(s) providing intervention. Intervention happened between 2 weeks and a month or >2 weeks of baseline date or no specific baseline data provided but happened within 2 weeks of start date listed on case.)</p> <p>3 General statement provided about when intervention started (general assertion that intervention occurred). Intervention implemented 2 weeks from baseline date.</p> <p>4 Intermediate between 3 and 5. (More descriptive anecdotal information about implementation of intervention provided.)</p> <p>5 Data about implementation intervention are provided that includes actual date of implementation and / or less than 2 weeks of baseline date. Exists a clear indication of when plan was implemented.</p> |
| <p>**7. Evidence that appropriate data were collected consistently</p> | <p>NI = no data collected</p> <p>1 No monitoring of intervention is evident (e.g. only 1 data point within 4-6 week period.)</p> <p>2 Intermediate between 1 and 3. (General data are provided, but not related to</p> |

| | |
|--|--|
| | <p>the concern, such as standardized data or report card grades / quarterly assessment data; vague data or very spread out (more than monthly) or less than a month of data, but at least 2 data points.)</p> <p>3 Some quantifiable data are reported about the student’s progress, but the results are not graphed. Data collected with some consistency (less than bi-weekly but not more than monthly). Data collected, but mismatch between data to be collected as identified on plan and actual data recorded (e.g. behavior to be collected daily, but is reported weekly); Provides a summary of data.</p> <p>4 Intermediate between 3 and 5. (Results of the intervention are collected, but not on a consistent schedule, not weekly (on average of bi-weekly). Data collected average of bi-weekly and are graphed.</p> <p>5 Results of the intervention are collected on a consistent schedule over a period of time and are depicted on a graph (e.g. data are collected weekly and graphed).</p> |
| <p>8. Comparison of student’s post intervention performance with baseline data</p> | <p>NI = no data or only 1 data point within 4-6 week period or no baseline data</p> <p>1 No evidence of any comparison is made between the student’s post intervention performance and baseline data and / or no quantifiable baseline data to compare intervention data.</p> <p>2 Intermediate between 1 and 3. (General description of student’s progress provided without quantifiable data).</p> <p>3 The student’s post intervention performance is compared with baseline data through the use of quantifiable data that are not graphed. Evidence of comparison, but did nothing with information; no changes made.</p> |

| | |
|---|--|
| | <p>4 Intermediate between 3 and 5. (Data are graphed, but there are no baseline data to use as a comparison); Made adjustments to goal (data are provided).</p> <p>5 Evidence that evaluation of the intervention was conducted by reviewing the graphed results (e.g. graph with an aim line) and comparing with the baseline (e.g. baseline and aim line on graph); and / or made comparison and changes beyond adjusting criterion of goal.</p> |
| <p>*Student Outcome: Degree to which the student's target goal was achieved (goal attainment)</p> | <p>NI = no goal / no data or not enough data (less than 4 weeks of data)</p> <p>1 Trend away from baseline</p> <p>2 Progress consistent with baseline</p> <p>3 Progress toward goal but not met</p> <p>4 Short-term goal (STG) met, but not interim goal (IG) or long-term goal (LTG)</p> <p>5 IG or LTG met or exceeded (if only STG exists then 5 scored if STG met or exceeded)</p> |

** PSP components modified, added, and / or differ from Telzrow et al. (2000)

* Goal attainment definition modified from Telzrow et al. (2000).

Appendix B: Student Outcomes and KT Team Survey

1. Student Outcomes and Kid Talk Team Survey Consent

Dear Teacher,

Thank you for considering participation in this web-based study of Student Outcomes and Kid Talk Teams. This is a research project being conducted by Nicole Meshbesher, under the supervision of Sylvia Rosenfield at the University of Maryland, College Park. We are inviting you to participate in this research project because you are a middle school teacher and a participant of your grade level Kid Talk team. The purposes of this survey are twofold. The first purpose is to examine your perception of student outcomes for those students who you have referred to your Kid Talk Team and have received interventions. The second purpose is to examine your feelings of satisfaction about the Kid Talk team in which you are a member. This information can provide knowledge about the functioning of problem-solving teams at the middle school level.

You will be asked to complete an 18-item online electronic survey, which should take less than ten minutes to complete. The items on the survey are divided into three parts. Part I requests demographic information. Part II requests your perception about student outcomes for a student who you referred to and has received an intervention from the Kid Talk team. Part III requests your perception of the Kid Talk team. This research is not designed to help you personally, but the results may help to provide more information about the functioning of middle school problem-solving teams.

To help protect your confidentiality the survey that you will complete is confidential and will not contain information that may personally identify you. A code for each school will be placed on the survey and other collected data. Through the use of an identification key, the researcher will be able to link your survey to the school where you currently teach; and only the researcher will have access to the identification key.

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time and withdraw without penalty.

If you have questions about your rights as a research subject or wish to report a research-related injury, please contact: Institutional Review Board Office, University of Maryland, College Park, Maryland, 20742; (e-mail) irb@deans.umd.edu; (telephone) 301-405-0678. You may also contact the researchers: Nicole Meshbesher, Nicole_Meshbesher@hcpss.org
Sylvia Rosenfield, Ph.D, srosenf@umd.edu

This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.

1. Please read the following and indicate your decision to participate:

I have read the consent information and **AGREE** to participate in the Student Outcomes and Kid Talk Team Survey.

I have read the consent information and **DO NOT AGREE** to participate in the Student Outcomes and Kid Talk Team Survey and understand that there will be no negative consequences for this decision.

2. Demographic Information

1. Please select the school where you currently teach

2. What is your current professional role?

- General Education Teacher
- Special Education Teacher
- Other

Other (please specify)

3. Please select your gender

- Male
- Female

4. Please select the grade that you currently teach

- 6th
- 7th
- 8th
- multiple grades
- other

Other (please specify)

5. Please select your content area

- Math
- English
- Social Studies
- Science
- Art
- Music
- Physical Education
- Technology
- Foreign Language
- ESOL
- Special Education
- Multiple areas
- Other

Other (please specify)

6. Describe the training that you have had as a Kid Talk team member

- Attended level 1 summer training
- Attended level 1 training during the school year
- Received training at current school from school-based personnel (e.g. school psychologist, Kid Talk facilitator)
- Received training at a different school from school-based personnel
- Have not received any training
- Other

Other (please specify)

7. In your tenure at your current school, have you ever referred a student to the Kid Talk team?

- Yes
- No

3. Student Outcomes

During your tenure at your current school, please respond to the following questions based upon the most recent student who you have referred to your Kid Talk team and has received interventions.

1. In your tenure in your current school, if you have referred a student to the Kid Talk team what was the reason for the referral?

(Please select all that apply)

- Math
- Reading
- Written Expression
- Behavior
- Attendance
- Other

Other (please specify)

2. The student improved after receiving intervention(s) from the Kid Talk team.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

3. The goals of the intervention were accomplished.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

4. The Kid Talk team process has resulted in positive outcomes for students in this building.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

5. Comments

4. Kid Talk Team

Please indicate your feelings of satisfaction this school year about the Kid Talk team in which you are a member.

1. In my school, I believe that Kid Talk team membership is a very positive opportunity for participation in the educational process

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

2. I am comfortable referring a student to the Kid Talk team.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

3. The Kid Talk team helps develop useful interventions for students.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

4. As a result of referring a student to the Kid Talk team I have learned successful interventions to use with future students who may have similar referral concerns.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

5. Based on my experience this year I am likely to refer a student to the Kid Talk team in the future.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

6. Comments

5. Thank You

Thank you for your time and effort!



Appendix C: Process Observation Form

Process Observation Form (POF)

Date: _____ School: _____ Team: _____

Student Initials: _____ Observer: _____

B, A, C = Behavioral, Academic, or Combined (Circle whichever applies)

| Process Observation Steps | | B | A | C |
|--------------------------------|---|---|---|--|
| 1. | Referral concerns described in observable terms: | Y | N | |
| 2. | Referral concerns are prioritized: | Y | N | |
| 3. | Instructional levels assessed (See below) If not, plans are made to assess instructional level | Y | N | |
| 4. | Baseline data are presented that relate to concern CBA Percent work completed Test/Quiz Scores Other If no baseline, specific plans made to collect baseline data | Y | N | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 5. | Antecedents discussed (setting, time, task demands) and hypothesis developed related to the referral concern | Y | N | |
| 6. | Observable, measurable goal is set (prior to implementing intervention) | Y | N | |
| 7. | Student strengths are discussed | Y | N | |
| Interventions outlined: | | | | |
| 8. | Teacher(s) actively involved in planning intervention | Y | N | |
| 9. | Intervention is clearly matched with area of concern | Y | N | |
| 10. | Intervention is clearly described including: What will be implemented, who is responsible, how often (note: an intervention is NOT a person or a place - it is a set of instructional or behavioral strategies) | Y | N | |
| 11. | Data to monitor the intervention effectiveness is selected | Y | N | |
| 12. | Data are graphed/charted | Y | N | |
| 13. | Follow-up date for review is determined | Y | N | |

Instructional level is assessed:

| Subject | How assessed? |
|---------|---------------|
| 1. | _____ |
| 2. | _____ |
| 3. | _____ |

Appendix D: Number of Cases and Concern by School

Number of Cases and Concerns by School

| <i>School</i> | <i>Cases</i> | <i>Grade</i> | <i>Number of Concerns</i> |
|---------------|--------------|-----------------|---------------------------|
| MS 1 | One | 6 th | 2 |
| | Two | 8 th | 1 |
| | Three | 7 th | 1 |
| MS 2 | One | 6 th | 3 |
| | Two | 6 th | 1 |
| | Three | 6 th | 1 |
| | Four | 6 th | 1 |
| | Five | 7 th | 1 |
| MS 4 | One | 7 th | 1 |
| | Two | 8 th | 2 |
| | Three | 7 th | 2 |
| | Four | 6 th | 2 |
| MS 5 | One | 8 th | 2 |
| | Two | 7 th | 2 |
| | Three | 7 th | 1 |
| MS 6 | One | 6 th | 1 |
| | Two | 6 th | 1 |
| | Three | 6 th | 1 |
| | Four | 7 th | 1 |
| MS 7 | One | 8 th | 2 |
| | Two | 8 th | 2 |
| | Three | 6 th | 1 |
| | Four | 7 th | 1 |
| | Five | 7 th | 1 |
| MS 8 | One | 7 th | 1 |
| | Two | 7 th | 1 |
| | Three | 8 th | 1 |
| | Four | 8 th | 2 |
| MS 9 | One | 6 th | 1 |
| | Two | 6 th | 2 |
| | Three | 7 th | 1 |
| | Four | 8 th | 2 |
| MS 10 | One | 6 th | 1 |
| | Two | 6 th | 2 |
| | Three | 8 th | 2 |
| MS 11 | Four | 6 th | 1 |
| | One | 6 th | 1 |

| | One | 8th | 2 |
|-------|------------|-----------------------|----------|
| MS 12 | Two | 8 th | 1 |
| | Three | 7 th | 2 |
| | Four | 6 th | 1 |
| | One | 6 th | 1 |
| MS 13 | Two | 6 th | 1 |
| | Three | 7 th | 1 |
| | Four | 8 th | 2 |
| MS 14 | Five | 7 th | 1 |
| | One | 8 th | 2 |
| | Two | 7 th | 1 |
| MS 16 | One | 8 th | 1 |
| | Two | 6 th | 1 |
| | Three | 7 th | 2 |
| | Four | 6 th | 1 |
| MS 17 | One | 8 th | 1 |
| | Two | 7 th | 3 |
| | Three | 6 th | 2 |
| | Four | 6 th | 1 |
| MS 18 | Five | 7 th | 1 |
| | One | 6 th | 1 |
| | Two | 6 th | 1 |

Appendix E: Percentage of Survey Respondents by School

Percentage of Survey Respondents within each School

| <i>School</i> | <i>N</i> | <i>Percentage of Possible Respondents within School (KT Team Members Grades 6-8)</i> |
|-----------------------|----------|--|
| MS 1 | 20 | 45.4% |
| MS 2 | 11 | 20.0% |
| MS 4 | 8 | 17.4% |
| MS 5 | 40 | 88.8% |
| MS 6 | 21 | 47.7% |
| MS 7 | 8 | 16.6% |
| MS 8 | 24 | 58.5% |
| MS 9 | 24 | 61.5% |
| MS 10 | 6 | 15.0% |
| MS 11 | 5 | 10.6% |
| MS 12 | 36 | 97.2% |
| MS 13 | 39 | 95.1% |
| MS 14 | 6 | 16.2% |
| MS 15 | 25 | 64.1% |
| MS 16 | 3 | 6.9% |
| MS 17 | 10 | 29.4% |
| Total # Respondents | 286 | |
| Overall response rate | | 42.2% |

Appendix F: Survey Respondents by School and Professional Role

Respondents by Professional Role

| <i>School</i> | <i>General Educator</i> | | <i>Special Educator</i> | | <i>Other</i> | |
|-------------------|-------------------------|----------|-------------------------|----------|--------------|----------|
| | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> |
| MS 1 (N = 20) | 15 | 75.0 | 2 | 10.0 | 3 | 15.0 |
| MS 2 (N = 11) | 9 | 81.8 | 1 | 9.1 | 1 | 9.1 |
| MS 4 (N = 8) | 7 | 87.5 | 1 | 12.5 | 0 | 0.00 |
| MS 5 (N = 40) | 30 | 75.0 | 3 | 7.5 | 7 | 17.5 |
| MS 6 (N = 21) | 15 | 71.4 | 3 | 14.3 | 3 | 14.3 |
| MS 7 (N = 8) | 7 | 87.5 | 1 | 12.5 | 0 | 0.00 |
| MS 8 (N = 24) | 21 | 87.5 | 2 | 8.3 | 1 | 4.2 |
| MS 9 (N = 24) | 20 | 83.3 | 1 | 4.2 | 3 | 12.5 |
| MS 10 (N = 6) | 4 | 66.7 | 1 | 16.7 | 1 | 16.7 |
| MS 11 (N = 5) | 4 | 80.0 | 1 | 20.0 | 0 | 0.0 |
| MS 12 (N = 35) | 31 | 86.1 | 2 | 5.6 | 3 | 8.3 |
| MS 13 (N = 39) | 26 | 66.7 | 4 | 10.3 | 9 | 23.1 |
| MS 14 (N = 6) | 4 | 66.7 | 2 | 33.3 | 0 | 0.0 |
| MS 15 (N = 25) | 21 | 84.0 | 0 | 0.0 | 4 | 16.0 |
| MS 16 (N = 3) | 2 | 66.7 | 0 | 0.0 | 1 | 33.3 |
| MS 17 (N = 10) | 7 | 70.0 | 2 | 20.0 | 1 | 10.0 |

Other = Administrator, Paraprofessional, School Psychologist, Reading Specialist, School Counselor, Speech / Language Pathologist, Cluster Nurse, PPW, Alt. Ed

Appendix G: Survey Respondents by School and Gender

Respondents by Gender

| School | Male | | Female | |
|-------------------|----------|------|----------|------|
| | <i>N</i> | % | <i>N</i> | % |
| MS 1 (N = 20) | 3 | 15.0 | 17 | 85.0 |
| MS 2 (N = 11) | 4 | 36.4 | 7 | 63.6 |
| MS 4 (N = 8) | 2 | 25.0 | 6 | 75.0 |
| MS 5 (N = 40) | 13 | 32.5 | 27 | 67.5 |
| MS 6 (N = 21) | 3 | 14.3 | 18 | 85.7 |
| MS 7 (N = 8) | 2 | 25.0 | 6 | 75.0 |
| MS 8 (N = 24) | 3 | 12.5 | 21 | 87.5 |
| MS 9 (N = 24) | 2 | 8.3 | 22 | 91.7 |
| MS 10 (N = 6) | 1 | 16.7 | 5 | 83.3 |
| MS 11 (N = 5) | 2 | 40.0 | 3 | 60.0 |
| MS 12 (N = 35) | 10 | 27.8 | 26 | 72.2 |
| MS 13 (N = 39) | 7 | 17.9 | 32 | 82.1 |
| MS 14 (N = 6) | 2 | 33.3 | 4 | 66.7 |
| MS 15 (N = 25) | 10 | 40.0 | 15 | 60.0 |
| MS 16 (N = 3) | 1 | 33.3 | 2 | 66.7 |
| MS 17 (N = 10) | 4 | 40.0 | 6 | 60.0 |

Appendix H: Survey Respondents by School and Grade Level Taught

Respondents by Grade Level Taught

| <i>School</i> | <i>Grade 6</i> | | <i>Grade 7</i> | | <i>Grade 8</i> | | <i>Multiple Grades</i> | | <i>Other</i> | |
|-------------------|----------------|----------|----------------|----------|----------------|----------|------------------------|----------|--------------|----------|
| | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> |
| MS 1 (N = 20) | 5 | 25.0 | 2 | 10.0 | 1 | 5.0 | 11 | 55.0 | 1 | 5.0 |
| MS 2 (N = 11) | 3 | 27.3 | 2 | 18.2 | 5 | 45.5 | 1 | 9.1 | 0 | 0.0 |
| MS 4 (N = 8) | 0 | 0.0 | 0 | 0.0 | 8 | 100.0 | 0 | 0.0 | 0 | 0.0 |
| MS 5 (N = 40) | 9 | 22.5 | 9 | 22.5 | 10 | 25.0 | 10 | 25.0 | 2 | 5.0 |
| MS 6 (N = 21) | 7 | 33.3 | 6 | 28.6 | 0 | 0.00 | 6 | 28.6 | 2 | 9.5 |
| MS 7 (N = 8) | 0 | 0.0 | 0 | 0.0 | 7 | 87.5 | 1 | 12.5 | 0 | 0.0 |
| MS 8 (N = 24) | 5 | 20.8 | 4 | 16.7 | 8 | 33.3 | 5 | 20.8 | 2 | 8.3 |
| MS 9 (N = 24) | 5 | 20.8 | 4 | 16.7 | 6 | 25.0 | 8 | 33.3 | 1 | 4.2 |
| MS 10 (N = 6) | 2 | 33.3 | 4 | 66.7 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| MS 11 (N = 5) | 3 | 60.0 | 0 | 0.0 | 1 | 20.0 | 1 | 20.0 | 0 | 0.0 |
| MS 12 (N = 35) | 7 | 19.4 | 6 | 16.7 | 10 | 27.8 | 9 | 25.0 | 4 | 11.1 |
| MS 13 (N = 39) | 8 | 20.5 | 10 | 25.6 | 10 | 25.6 | 7 | 17.9 | 4 | 10.3 |
| MS 14 (N = 6) | 1 | 16.7 | 2 | 33.3 | 2 | 33.3 | 1 | 16.7 | 0 | 0.0 |
| MS 15 (N = 25) | 6 | 24.0 | 5 | 20.0 | 6 | 24.0 | 7 | 28.0 | 1 | 4.0 |
| MS 16 (N = 3) | 1 | 33.3 | 0 | 0.0 | 1 | 33.3 | 0 | 0.0 | 1 | 33.3 |
| MS 17 (N = 10) | 2 | 20.0 | 4 | 40.0 | 2 | 20.0 | 2 | 20.0 | 0 | 0.0 |

Other = Reading, Administration, School Psychologist, Cluster Nurse

Appendix I: Survey Respondents by School and Training

| Type of Training | | | | | | | | |
|-------------------|---|----------|------------------------------|----------|--------------------|----------|--------------|----------|
| <i>School</i> | <i>Training from district PST facilitator</i> | | <i>School-based training</i> | | <i>No training</i> | | <i>Other</i> | |
| | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> |
| MS 1 (N = 20) | 8 | 40.0 | 7 | 35.0 | 4 | 20.0 | 1 | 5.0 |
| MS 2 (N = 11) | 3 | 27.3 | 6 | 54.6 | 2 | 18.2 | 0 | 0.00 |
| MS 4 (N = 8) | 2 | 25.0 | 3 | 37.5 | 3 | 37.5 | 0 | 0.00 |
| MS 5 (N = 40) | 2 | 10.0 | 22 | 55.0 | 14 | 35.0 | 0 | 0.00 |
| MS 6 (N = 21) | 3 | 14.3 | 8 | 38.1 | 8 | 38.1 | 2 | 9.5 |
| MS 7 (N = 8) | 2 | 25.0 | 6 | 75.0 | 0 | 0.0 | 0 | 0.0 |
| MS 8 (N = 24) | 16 | 66.6 | 4 | 16.7 | 3 | 12.5 | 1 | 4.2 |
| MS 9 (N = 24) | 5 | 20.9 | 12 | 50.0 | 6 | 25.0 | 1 | 4.2 |
| MS 10 (N = 6) | 0 | 0.0 | 5 | 83.3 | 1 | 16.7 | 0 | 0.0 |
| MS 11 (N = 5) | 0 | 0.0 | 2 | 40.0 | 3 | 60.0 | 0 | 0.0 |
| MS 12 (N = 35) | 13 | 36.1 | 15 | 41.6 | 7 | 19.4 | 1 | 2.3 |
| MS 13 (N = 39) | 15 | 38.5 | 11 | 28.2 | 13 | 33.3 | 0 | 0.0 |
| MS 14 (N = 6) | 1 | 16.7 | 3 | 50.0 | 2 | 33.3 | 0 | 0.0 |
| MS 15 (N = 25) | 10 | 40.0 | 8 | 32.0 | 7 | 28.0 | 0 | 0.0 |
| MS 16 (N = 3) | 0 | 0.0 | 2 | 66.7 | 0 | 0.0 | 1 | 33.3 |
| MS 17 (N = 10) | 5 | 50.0 | 1 | 10.0 | 4 | 40.0 | 0 | 0.0 |

Other = Don't remember, No response, Provided training

Appendix J: Survey Respondents by School and Reason for Referral

Reason for Referral to Kid Talk Team

| <i>School</i> | <i>Math</i> | | <i>Reading</i> | | <i>Written Expression</i> | | <i>Behavior</i> | | <i>Attendance</i> | | <i>Other</i> | |
|-------------------|-------------|----------|----------------|----------|---------------------------|----------|-----------------|----------|-------------------|----------|--------------|----------|
| | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> |
| MS 1 (N = 20) | 3 | 15.8 | 8 | 42.1 | 6 | 31.6 | 17 | 89.5 | 9 | 47.4 | 2 | 10.5 |
| MS 2 (N = 11) | 4 | 57.1 | 2 | 28.6 | 1 | 14.3 | 6 | 85.7 | 3 | 42.9 | 0 | 0.00 |
| MS 4 (N = 8) | 2 | 25.0 | 3 | 37.5 | 4 | 50.0 | 4 | 50.0 | 1 | 12.5 | 1 | 12.5 |
| MS 5 (N = 40) | 6 | 16.2 | 13 | 35.1 | 14 | 37.8 | 32 | 46.5 | 16 | 43.2 | 5 | 13.5 |
| MS 6 (N = 21) | 2 | 11.8 | 7 | 41.2 | 6 | 35.3 | 16 | 94.1 | 8 | 47.1 | 3 | 17.6 |
| MS 7 (N = 8) | 3 | 42.9 | 4 | 57.1 | 5 | 71.4 | 2 | 28.6 | 2 | 28.6 | 2 | 28.6 |
| MS 8 (N = 24) | 5 | 25.0 | 9 | 45.0 | 7 | 35.0 | 15 | 75.0 | 1 | 5.0 | 1 | 5.0 |
| MS 9 (N = 24) | 3 | 14.3 | 8 | 38.1 | 9 | 42.9 | 15 | 71.4 | 9 | 42.9 | 3 | 14.3 |
| MS 10 (N = 6) | 2 | 40.0 | 1 | 20.0 | 1 | 20.0 | 4 | 80.0 | 4 | 80.0 | 3 | 60.0 |
| MS 11 (N = 5) | 0 | 0.0 | 1 | 25.0 | 1 | 25.0 | 3 | 75.0 | 1 | 25.0 | 1 | 25.0 |
| MS 12 (N = 35) | 5 | 16.8 | 8 | 25.8 | 10 | 32.3 | 23 | 74.2 | 12 | 38.7 | 15 | 48.4 |
| MS 13 (N = 39) | 5 | 15.6 | 14 | 43.8 | 10 | 31.3 | 23 | 71.9 | 13 | 40.6 | 5 | 15.6 |
| MS 14 (N = 6) | 1 | 25.0 | 1 | 25.0 | 3 | 75.0 | 4 | 100.0 | 2 | 50.0 | 0 | 0.0 |
| MS 15 (N = 25) | 4 | 19.0 | 11 | 52.4 | 7 | 33.3 | 19 | 90.5 | 4 | 19.0 | 1 | 4.8 |
| MS 16 (N = 3) | 2 | 66.7 | 2 | 66.7 | 1 | 33.3 | 1 | 33.3 | 0 | 0.0 | 0 | 0.0 |
| MS 17 (N = 10) | 1 | 14.3 | 3 | 42.9 | 2 | 28.6 | 5 | 71.4 | 3 | 42.9 | 0 | 0.0 |

Other = emotional, attitude / motivation, testing, social skills, organization, general academic concerns (work completion, tests / quizzes)

Appendix K: Survey Item Student Improved

The student improved after receiving interventions from the Kid Talk team.

Number of Respondents and Percentage

| <i>School</i> | <i>Strongly Disagree</i> <i>1</i> | | <i>Disagree</i> <i>2</i> | | <i>Neutral</i> <i>3</i> | | <i>Agree</i> <i>4</i> | | <i>Strongly Agree</i> <i>5</i> | | <i>Skipped Question</i> <i>N</i> |
|-------------------|--------------------------------------|----------|-----------------------------|----------|----------------------------|----------|--------------------------|----------|-----------------------------------|----------|-------------------------------------|
| | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | |
| MS 1 (N = 19) | 0 | 0.0 | 3 | 15.8 | 4 | 21.1 | 12 | 63.2 | 0 | 0.0 | 1 |
| MS 2 (N = 7) | 4 | 57.1 | 0 | 0.0 | 3 | 42.9 | 0 | 0.0 | 0 | 0.0 | 4 |
| MS 4 (N = 8) | 0 | 0.0 | 1 | 12.5 | 4 | 50.0 | 3 | 37.5 | 0 | 0.0 | 0 |
| MS 5 (N = 37) | 5 | 13.5 | 6 | 16.2 | 13 | 35.1 | 13 | 35.1 | 0 | 0.0 | 3 |
| MS 6 (N = 17) | 0 | 0.0 | 2 | 11.8 | 6 | 35.3 | 8 | 47.1 | 1 | 5.9 | 4 |
| MS 7 (N = 7) | 0 | 0.0 | 1 | 14.3 | 1 | 14.3 | 4 | 57.1 | 1 | 14.3 | 1 |
| MS 8 (N = 20) | 0 | 0.0 | 1 | 5.0 | 10 | 50.0 | 9 | 45.0 | 0 | 0.0 | 4 |
| MS 9 (N = 22) | 0 | 0.0 | 3 | 13.6 | 6 | 27.3 | 13 | 59.1 | 0 | 0.0 | 2 |
| MS 10 (N = 5) | 0 | 0.0 | 0 | 0.0 | 1 | 20.0 | 4 | 80.0 | 0 | 0.0 | 1 |
| MS 11 (N = 4) | 0 | 0.0 | 2 | 50.0 | 2 | 50.0 | 0 | 0.0 | 0 | 0.0 | 1 |
| MS 12 (N = 32) | 2 | 6.3 | 1 | 3.1 | 20 | 62.5 | 9 | 28.0 | 0 | 0.0 | 4 |
| MS 13 (N = 33) | 1 | 3.0 | 4 | 12.1 | 13 | 39.4 | 15 | 45.5 | 0 | 0.0 | 6 |
| MS 14 (N = 4) | 0 | 0.0 | 1 | 25.0 | 2 | 50.0 | 1 | 25.0 | 0 | 0.0 | 2 |
| MS 15 (N = 21) | 1 | 4.8 | 8 | 38.1 | 8 | 38.1 | 4 | 19.0 | 0 | 0.0 | 4 |
| MS 16 (N = 3) | 1 | 33.3 | 1 | 33.3 | 1 | 33.3 | 0 | 0.0 | 0 | 0.0 | 0 |
| MS 17 (N = 7) | 0 | 0.0 | 0 | 0.0 | 2 | 28.6 | 5 | 71.4 | 0 | 0.0 | 3 |

Appendix L: Survey Item Goals Accomplished

The goals of the intervention were accomplished.

Number of Respondents and Percentage

| <i>School</i> | <i>Strongly Disagree</i> <i>1</i> | | <i>Disagree</i> <i>2</i> | | <i>Neutral</i> <i>3</i> | | <i>Agree</i> <i>4</i> | | <i>Strongly Agree</i> <i>5</i> | | <i>Skipped Question</i> <i>N</i> |
|-------------------|--------------------------------------|----------|-----------------------------|----------|----------------------------|----------|--------------------------|----------|-----------------------------------|----------|-------------------------------------|
| | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | |
| MS 1 (N = 19) | 1 | 5.3 | 2 | 10.5 | 6 | 31.6 | 10 | 52.6 | 0 | 0.0 | 1 |
| MS 2 (N = 7) | 4 | 57.1 | 1 | 14.3 | 1 | 14.3 | 1 | 14.3 | 0 | 0.0 | 4 |
| MS 4 (N = 8) | 0 | 0.0 | 1 | 12.5 | 3 | 37.5 | 4 | 50.0 | 0 | 0.0 | 0 |
| MS 5 (N = 37) | 5 | 13.5 | 5 | 13.5 | 12 | 32.4 | 15 | 40.5 | 0 | 0.0 | 3 |
| MS 6 (N = 17) | 0 | 0.0 | 5 | 29.4 | 3 | 17.6 | 9 | 52.9 | 0 | 0.0 | 4 |
| MS 7 (N = 7) | 0 | 0.0 | 2 | 28.6 | 2 | 28.6 | 2 | 28.6 | 1 | 14.3 | 1 |
| MS 8 (N = 20) | 0 | 0.0 | 2 | 10.0 | 9 | 45.0 | 9 | 45.0 | 0 | 0.0 | 4 |
| MS 9 (N = 22) | 0 | 0.0 | 2 | 9.1 | 6 | 27.3 | 14 | 63.6 | 0 | 0.0 | 2 |
| MS 10 (N = 5) | 0 | 0.0 | 0 | 0.0 | 1 | 20.0 | 4 | 80.0 | 0 | 0.0 | 1 |
| MS 11 (N = 4) | 0 | 0.0 | 3 | 75.0 | 1 | 25.0 | 0 | 0.0 | 0 | 0.0 | 1 |
| MS 12 (N = 32) | 2 | 6.3 | 3 | 9.4 | 17 | 53.1 | 10 | 31.3 | 0 | 0.0 | 4 |
| MS 13 (N = 33) | 1 | 3.0 | 4 | 12.1 | 10 | 30.3 | 18 | 54.5 | 0 | 0.0 | 6 |
| MS 14 (N = 4) | 0 | 0.0 | 2 | 50.0 | 1 | 25.0 | 1 | 25.0 | 0 | 0.0 | 2 |
| MS 15 (N = 21) | 0 | 0.0 | 8 | 38.1 | 8 | 38.1 | 5 | 23.8 | 0 | 0.0 | 4 |
| MS 16 (N = 3) | 0 | 0.0 | 1 | 33.7 | 0 | 0.0 | 2 | 66.7 | 1 | 33.3 | 0 |
| MS 17 (N = 7) | 0 | 0.0 | 0 | 0.0 | 2 | 28.6 | 5 | 71.4 | 0 | 0.0 | 3 |

Appendix M: Survey Item *Positive Outcomes*

The Kid Talk team process has resulted in positive outcomes for students in this building.

Number of Respondents and Percentage

| <i>School</i> | <i>Strongly Disagree</i> <i>1</i> | | <i>Disagree</i> <i>2</i> | | <i>Neutral</i> <i>3</i> | | <i>Agree</i> <i>4</i> | | <i>Strongly Agree</i> <i>5</i> | | <i>Skipped Question</i> <i>N</i> |
|-------------------|--------------------------------------|----------|-----------------------------|----------|----------------------------|----------|--------------------------|----------|-----------------------------------|----------|-------------------------------------|
| | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | |
| MS 1 (N = 19) | 1 | 5.3 | 2 | 10.5 | 5 | 26.3 | 10 | 52.6 | 1 | 5.3 | 1 |
| MS 2 (N = 7) | 4 | 57.1 | 0 | 0.0 | 2 | 28.6 | 1 | 14.3 | 0 | 0.0 | 4 |
| MS 4 (N = 8) | 0 | 0.0 | 1 | 12.5 | 2 | 25.0 | 5 | 62.5 | 0 | 0.0 | 0 |
| MS 5 (N = 37) | 4 | 10.8 | 3 | 8.1 | 10 | 27.0 | 19 | 51.4 | 1 | 2.7 | 3 |
| MS 6 (N = 17) | 0 | 0.0 | 2 | 11.8 | 3 | 17.6 | 10 | 58.8 | 2 | 11.8 | 4 |
| MS 7 (N = 7) | 0 | 0.0 | 0 | 0.0 | 1 | 14.3 | 4 | 57.1 | 2 | 28.6 | 1 |
| MS 8 (N = 20) | 0 | 0.0 | 1 | 5.0 | 7 | 35.0 | 11 | 55.0 | 1 | 5.0 | 4 |
| MS 9 (N = 22) | 0 | 0.0 | 2 | 9.1 | 6 | 27.3 | 14 | 63.6 | 0 | 0.0 | 2 |
| MS 10 (N = 5) | 0 | 0.0 | 0 | 0.0 | 1 | 20.0 | 2 | 40.0 | 2 | 40.0 | 1 |
| MS 11 (N = 4) | 1 | 25.0 | 1 | 25.0 | 0 | 0.0 | 2 | 50.0 | 0 | 0.0 | 1 |
| MS 12 (N = 32) | 1 | 3.1 | 1 | 3.1 | 17 | 53.1 | 12 | 37.5 | 1 | 3.1 | 4 |
| MS 13 (N = 33) | 1 | 3.0 | 2 | 6.1 | 9 | 27.3 | 20 | 60.6 | 1 | 3.0 | 6 |
| MS 14 (N = 4) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 4 | 100.0 | 0 | 0.0 | 2 |
| MS 15 (N = 21) | 1 | 4.8 | 5 | 23.8 | 8 | 38.1 | 6 | 28.6 | 1 | 4.8 | 4 |
| MS 16 (N = 3) | 0 | 0.0 | 1 | 33.3 | 0 | 0.0 | 2 | 66.7 | 0 | 0.0 | 0 |
| MS 17 (N = 7) | 0 | 0.0 | 0 | 0.0 | 1 | 14.3 | 3 | 42.9 | 3 | 42.9 | 3 |

Appendix N: Survey Item *Positive Opportunity for Participation*

In my school, I believe that Kid Talk team membership is a very positive opportunity for participation in the educational process.

Number of Respondents and Percentage

| <i>School</i> | <i>Strongly Disagree</i> 1 | | <i>Disagree</i> 2 | | <i>Neutral</i> 3 | | <i>Agree</i> 4 | | <i>Strongly Agree</i> 5 | | <i>Skipped Question</i> <i>N</i> |
|-------------------|-------------------------------|----------|----------------------|----------|---------------------|----------|-------------------|----------|----------------------------|----------|-------------------------------------|
| | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | |
| MS 1 (N = 20) | 1 | 5.0 | 1 | 5.0 | 3 | 15.0 | 11 | 55.0 | 4 | 20.0 | 0 |
| MS 2 (N = 11) | 3 | 27.3 | 1 | 9.1 | 1 | 9.1 | 4 | 36.4 | 2 | 18.2 | 0 |
| MS 4 (N = 8) | 0 | 0.0 | 0 | 0.0 | 3 | 37.5 | 4 | 50.0 | 1 | 12.5 | 0 |
| MS 5 (N = 40) | 3 | 7.5 | 5 | 12.5 | 5 | 12.5 | 26 | 65.0 | 1 | 2.5 | 0 |
| MS 6 (N = 21) | 0 | 0.0 | 2 | 9.5 | 4 | 19.0 | 15 | 71.4 | 0 | 0.0 | 0 |
| MS 7 (N = 8) | 0 | 0.0 | 0 | 0.0 | 1 | 12.5 | 4 | 50.0 | 3 | 37.5 | 0 |
| MS 8 (N = 24) | 0 | 0.0 | 2 | 8.3 | 7 | 29.2 | 12 | 50.0 | 3 | 12.5 | 0 |
| MS 9 (N = 24) | 1 | 4.2 | 3 | 12.5 | 9 | 37.5 | 9 | 37.5 | 2 | 8.3 | 0 |
| MS 10 (N = 6) | 1 | 16.7 | 1 | 6.7 | 0 | 0.0 | 3 | 50.0 | 1 | 16.7 | 0 |
| MS 11 (N = 5) | 2 | 40.0 | 2 | 40.0 | 1 | 20.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| MS 12 (N = 35) | 3 | 8.6 | 3 | 8.6 | 10 | 28.6 | 16 | 45.7 | 3 | 8.6 | 1 |
| MS 13 (N = 39) | 1 | 2.6 | 4 | 10.3 | 12 | 30.8 | 18 | 46.2 | 5 | 12.8 | 0 |
| MS 14 (N = 6) | 0 | 0.0 | 0 | 0.0 | 1 | 16.7 | 4 | 66.7 | 1 | 16.7 | 0 |
| MS 15 (N = 25) | 3 | 12.0 | 2 | 8.0 | 5 | 20.0 | 11 | 44.0 | 4 | 16.0 | 0 |
| MS 16 (N = 3) | 0 | 0.0 | 2 | 66.7 | 0 | 0.0 | 0 | 0.0 | 1 | 33.3 | 0 |
| MS 17 (N = 10) | 0 | 0.0 | 0 | 0.0 | 3 | 30.0 | 6 | 60.0 | 1 | 10.0 | 0 |

Appendix O: Survey Item *Comfortable Referring*

I am comfortable referring a student to the Kid Talk team.

Number of Respondents and Percentage

| <i>School</i> | <i>Strongly Disagree</i> 1 | | <i>Disagree</i> 2 | | <i>Neutral</i> 3 | | <i>Agree</i> 4 | | <i>Strongly Agree</i> 5 | | <i>Skipped Question</i> <i>N</i> |
|-------------------|-------------------------------|----------|----------------------|----------|---------------------|----------|-------------------|----------|----------------------------|----------|-------------------------------------|
| | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | |
| MS 1 (N = 20) | 0 | 0.0 | 1 | 5.0 | 1 | 5.0 | 7 | 35.0 | 11 | 55.0 | 0 |
| MS 2 (N = 11) | 0 | 0.0 | 0 | 0.0 | 1 | 9.1 | 7 | 63.6 | 3 | 27.3 | 0 |
| MS 4 (N = 8) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 7 | 87.5 | 1 | 12.5 | 0 |
| MS 5 (N = 40) | 1 | 2.5 | 0 | 0.0 | 2 | 5.0 | 28 | 70.0 | 9 | 22.5 | 0 |
| MS 6 (N = 21) | 0 | 0.0 | 0 | 0.0 | 2 | 9.5 | 10 | 47.6 | 9 | 42.9 | 0 |
| MS 7 (N = 8) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 3 | 37.5 | 5 | 62.5 | 0 |
| MS 8 (N = 24) | 0 | 0.0 | 1 | 4.2 | 3 | 12.5 | 12 | 50.0 | 8 | 35.3 | 0 |
| MS 9 (N = 24) | 0 | 0.0 | 0 | 0.0 | 1 | 4.2 | 17 | 70.8 | 6 | 25.0 | 0 |
| MS 10 (N = 6) | 1 | 16.7 | 0 | 0.0 | 0 | 0.0 | 1 | 16.7 | 4 | 66.7 | 0 |
| MS 11 (N = 5) | 1 | 20.0 | 0 | 0.0 | 2 | 40.0 | 2 | 40.0 | 0 | 0.0 | 0 |
| MS 12 (N = 35) | 1 | 2.9 | 2 | 5.7 | 4 | 11.4 | 17 | 48.6 | 11 | 31.4 | 1 |
| MS 13 (N = 39) | 0 | 0.0 | 5 | 12.8 | 7 | 17.9 | 23 | 59.0 | 5 | 12.8 | 0 |
| MS 14 (N = 6) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 5 | 83.3 | 1 | 16.7 | 0 |
| MS 15 (N = 25) | 1 | 4.0 | 3 | 12.0 | 1 | 4.0 | 13 | 52.0 | 7 | 28.0 | 0 |
| MS 16 (N = 3) | 0 | 0.0 | 1 | 33.3 | 0 | 0.0 | 0 | 0.0 | 2 | 66.7 | 0 |
| MS 17 (N = 10) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 6 | 60.0 | 4 | 40.0 | 0 |

Appendix P: Survey Item *Useful Interventions*

The Kid Talk team helps develop useful interventions for students.

Number of Respondents and Percentage

| <i>School</i> | <i>Strongly Disagree</i> 1 | | <i>Disagree</i> 2 | | <i>Neutral</i> 3 | | <i>Agree</i> 4 | | <i>Strongly Agree</i> 5 | | <i>Skipped Question</i> <i>N</i> |
|-------------------|-------------------------------|----------|----------------------|----------|---------------------|----------|-------------------|----------|----------------------------|----------|-------------------------------------|
| | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | |
| MS 1 (N = 20) | 0 | 0.0 | 3 | 15.0 | 3 | 15.0 | 12 | 60.0 | 2 | 10.0 | 0 |
| MS 2 (N = 11) | 2 | 18.2 | 2 | 18.2 | 2 | 18.2 | 3 | 27.3 | 2 | 18.2 | 0 |
| MS 4 (N = 8) | 0 | 0.0 | 0 | 0.0 | 1 | 12.5 | 6 | 75.0 | 1 | 12.5 | 0 |
| MS 5 (N = 40) | 1 | 2.5 | 3 | 7.5 | 11 | 27.5 | 21 | 52.5 | 4 | 10.0 | 0 |
| MS 6 (N = 21) | 1 | 4.8 | 1 | 4.8 | 5 | 23.8 | 13 | 61.9 | 1 | 4.8 | 0 |
| MS 7 (N = 8) | 0 | 0.0 | 0 | 0.0 | 2 | 25.0 | 4 | 50.0 | 2 | 25.0 | 0 |
| MS 8 (N = 24) | 0 | 0.0 | 1 | 4.2 | 7 | 29.2 | 14 | 58.3 | 2 | 8.3 | 0 |
| MS 9 (N = 24) | 0 | 0.0 | 1 | 4.2 | 6 | 25.0 | 16 | 66.7 | 1 | 4.2 | 0 |
| MS 10 (N = 6) | 1 | 16.7 | 0 | 0.0 | 1 | 16.7 | 4 | 66.7 | 0 | 0.0 | 0 |
| MS 11 (N = 5) | 0 | 0.0 | 2 | 40.0 | 3 | 60.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| MS 12 (N = 35) | 2 | 5.7 | 2 | 5.7 | 9 | 25.7 | 20 | 57.1 | 2 | 5.7 | 1 |
| MS 13 (N = 39) | 0 | 0.0 | 3 | 7.7 | 7 | 17.9 | 27 | 69.2 | 3 | 7.7 | 0 |
| MS 14 (N = 6) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 5 | 83.3 | 1 | 16.7 | 0 |
| MS 15 (N = 25) | 2 | 8.0 | 4 | 16.0 | 7 | 28.0 | 8 | 32.0 | 4 | 16.0 | 0 |
| MS 16 (N = 3) | 1 | 33.3 | 0 | 0.0 | 0 | 0.0 | 2 | 66.7 | 0 | 0.0 | 0 |
| MS 17 (N = 10) | 0 | 0.0 | 0 | 0.0 | 2 | 20.0 | 5 | 50.0 | 3 | 30.0 | 0 |

Appendix Q: Survey Item *Learned Successful Interventions*

As a result of referring a student to the Kid Talk team I have learned successful interventions to use with future students who may have similar referral concerns.

Number of Respondents and Percentage

| <i>School</i> | <i>Strongly Disagree</i> 1 | | <i>Disagree</i> 2 | | <i>Neutral</i> 3 | | <i>Agree</i> 4 | | <i>Strongly Agree</i> 5 | | <i>Skipped Question</i> <i>N</i> |
|-------------------|-------------------------------|----------|----------------------|----------|---------------------|----------|-------------------|----------|----------------------------|----------|-------------------------------------|
| | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | |
| MS 1 (N = 20) | 0 | 0.0 | 3 | 15.0 | 1 | 5.0 | 14 | 70.0 | 2 | 10.0 | 0 |
| MS 2 (N = 11) | 2 | 18.2 | 1 | 9.1 | 2 | 18.2 | 6 | 54.5 | 0 | 0.0 | 0 |
| MS 4 (N = 8) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 7 | 87.5 | 1 | 12.5 | 0 |
| MS 5 (N = 40) | 0 | 0.0 | 4 | 10.0 | 14 | 35.0 | 20 | 50.0 | 2 | 5.0 | 0 |
| MS 6 (N = 21) | 0 | 0.0 | 3 | 14.3 | 3 | 14.3 | 12 | 57.1 | 3 | 14.3 | 0 |
| MS 7 (N = 8) | 0 | 0.0 | 1 | 12.5 | 1 | 12.5 | 3 | 37.5 | 3 | 37.5 | 0 |
| MS 8 (N = 24) | 0 | 0.0 | 2 | 8.3 | 5 | 20.8 | 15 | 62.5 | 2 | 8.3 | 0 |
| MS 9 (N = 24) | 1 | 4.2 | 3 | 12.5 | 6 | 25.0 | 14 | 58.3 | 0 | 0.0 | 0 |
| MS 10 (N = 6) | 0 | 0.0 | 1 | 16.7 | 2 | 33.3 | 3 | 50.0 | 0 | 0.0 | 0 |
| MS 11 (N = 5) | 1 | 20.0 | 1 | 20.0 | 1 | 20.0 | 1 | 20.0 | 1 | 20.0 | 0 |
| MS 12 (N = 35) | 1 | 2.9 | 4 | 11.4 | 10 | 28.6 | 20 | 57.1 | 0 | 0.0 | 1 |
| MS 13 (N = 39) | 0 | 0.0 | 4 | 10.3 | 12 | 30.8 | 20 | 51.3 | 4 | 10.3 | 0 |
| MS 14 (N = 6) | 0 | 0.0 | 0 | 0.0 | 2 | 33.3 | 4 | 66.7 | 0 | 0.0 | 0 |
| MS 15 (N = 25) | 1 | 4.0 | 5 | 20.0 | 7 | 28.0 | 12 | 48.0 | 0 | 0.0 | 0 |
| MS 16 (N = 3) | 0 | 0.0 | 2 | 66.7 | 0 | 0.0 | 1 | 33.3 | 0 | 0.0 | 0 |
| MS 17 (N = 10) | 0 | 0.0 | 1 | 10.0 | 3 | 30.0 | 4 | 40.0 | 2 | 20.0 | 0 |

Appendix R: Survey Item *Likely to Refer*

Based on my experience this year I am likely to refer a student to the Kid Talk team in the future.

Number of Respondents and Percentage

| <i>School</i> | <i>Strongly Disagree</i> 1 | | <i>Disagree</i> 2 | | <i>Neutral</i> 3 | | <i>Agree</i> 4 | | <i>Strongly Agree</i> 5 | | <i>Skipped Question</i> <i>N</i> |
|-------------------|-------------------------------|----------|----------------------|----------|---------------------|----------|-------------------|----------|----------------------------|----------|-------------------------------------|
| | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | <i>N</i> | <i>%</i> | |
| MS 1 (N = 20) | 1 | 5.0 | 1 | 5.0 | 1 | 5.0 | 10 | 50.0 | 7 | 35.0 | 0 |
| MS 2 (N = 11) | 1 | 9.1 | 1 | 9.1 | 1 | 9.1 | 5 | 45.5 | 3 | 27.3 | 0 |
| MS 4 (N = 8) | 0 | 0.0 | 0 | 0.0 | 1 | 12.5 | 4 | 50.0 | 3 | 37.5 | 0 |
| MS 5 (N = 40) | 0 | 0.0 | 1 | 2.5 | 5 | 12.5 | 26 | 65.0 | 8 | 20.0 | 0 |
| MS 6 (N = 21) | 0 | 0.0 | 1 | 4.8 | 5 | 23.8 | 7 | 33.3 | 8 | 38.1 | 0 |
| MS 7 (N = 8) | 0 | 0.0 | 0 | 0.0 | 2 | 25.0 | 2 | 25.0 | 4 | 50.0 | 0 |
| MS 8 (N = 24) | 0 | 0.0 | 2 | 8.3 | 6 | 25.0 | 10 | 41.7 | 6 | 25.0 | 0 |
| MS 9 (N = 24) | 0 | 0.0 | 1 | 4.2 | 2 | 8.3 | 17 | 70.8 | 4 | 16.7 | 0 |
| MS 10 (N = 6) | 0 | 0.0 | 0 | 0.0 | 1 | 16.7 | 3 | 30.0 | 2 | 33.3 | 0 |
| MS 11 (N = 5) | 1 | 20.0 | 0 | 0.0 | 4 | 80 | 0 | 0.0 | 0 | 0.0 | 0 |
| MS 12 (N = 35) | 0 | 0.0 | 1 | 2.9 | 9 | 25.7 | 22 | 62.9 | 3 | 8.6 | 1 |
| MS 13 (N = 39) | 2 | 5.1 | 3 | 7.7 | 8 | 20.5 | 22 | 56.4 | 5 | 12.8 | 0 |
| MS 14 (N = 6) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 5 | 83.3 | 1 | 16.7 | 0 |
| MS 15 (N = 25) | 2 | 8.0 | 2 | 8.0 | 2 | 8.0 | 13 | 52.0 | 6 | 24.0 | 0 |
| MS 16 (N = 3) | 0 | 0.0 | 0 | 0.0 | 1 | 33.3 | 1 | 33.3 | 1 | 33.3 | 0 |
| MS 17 (N = 10) | 0 | 0.0 | 0 | 0.0 | 4 | 40.0 | 4 | 40.0 | 2 | 20.0 | 0 |

Appendix S: End of Year KT Case Information

End of Year KT Cases (with at least 4 weeks of post intervention data) Submitted to District

| <i>School</i> | <i>Cases by Grade</i> | | | <i>Number Referred for IDEIA Eval</i> | <i>Percentage IDEIA Eligible</i> |
|---------------|-----------------------|----|----|---------------------------------------|----------------------------------|
| | 6 | 7 | 8 | | |
| MS 1 | 1 | 3 | 1 | 0 | N/A |
| MS 2 | 4 | 2 | 0 | 1 | 100.0% |
| MS 4 | 2 | 2 | 3 | 1 | 0.0% |
| MS 5 | 5 | 4 | 5 | 5 | 60.0% |
| MS 6 | 0 | 0 | 0 | NI | NI |
| MS 7 | 2 | 5 | 9 | 1 | 100.0% |
| MS 8 | 0 | 3 | 3 | 2 | 50.0% |
| MS 9 | 3 | 6 | 8 | 5 | 40.0% |
| MS 10 | 4 | 2 | 10 | 2 | 0.0% |
| MS 11 | 1 | NI | NI | NI | NI |
| MS 12 | 7 | 7 | 2 | 1 | 100.0% |
| MS 13 | 2 | 3 | 1 | 1 | 100.0% |
| MS 14 | 0 | 1 | 1 | 0 | N/A |
| MS 15 | NI | NI | NI | NI | NI |
| MS 16 | 2 | 1 | 1 | 1 | NI |
| MS 17 | 2 | 2 | 1 | NI | NI |
| MS 18 | 2 | 0 | 0 | 0 | N/A |
| Total | 36 | 33 | 35 | | |

(NI = No Information
N/A = Not Applicable)

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