4-1-1998

Student assistance teams: An examination of accommodations developed for academic and behavior problems.

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Student Assistance Teams: An Examination of Accommodations Developed for Academic and Behavior Problems

An EdS Field Project

Presented to the

Department of Psychology

and the

Faculty of the Graduate College

University of Nebraska

In Partial Fulfillment

of the Requirements for the Degree

Education Specialist

University of Nebraska at Omaha

by

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April, 1998

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EDS FIELD PROJECT ACCEPTANCE

Acceptance for the faculty of the Graduate College, University of Nebraska, in partial fulfillment of the requirements for the degree Education Specialist, University of Nebraska at Omaha

Committee

Chairperson Lisa Kelly-Vance

Date 4/23/98

Acknowledgments

I would like to extend a special thank you to my supervisor, Lisa Kelly-Vance, for her ongoing guidance and assistance without whose support this project would not have been possible. I would also like to thank the fellow graduate students who assisted in the coding of my data. In addition, to my family and friends, for their encouragement as I pursued my graduate studies. Finally, for my committee, who continuously pushed me to succeed, not only professionally, but also personally.

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Abstract

Accommodations utilized by SAT teams have been explored in order to determine the success of the problem-solving, pre-referral intervention process as an alternative to special education referrals and placement. The results of the current study reflect insignificant results in the decline of special education referrals. In addition, chi square results looking at the use of specific accommodations as well as interventions that match the reason for referral was not significant. A decline in behavior referrals, slightly lower or consistent academic referrals, and consistent combination academic/behavior referrals was also not supported. Pre-referral intervention teams did not produce well-designed interventions. Previous research, in addition to the current study, support the need for ongoing education in providing teams with assistance in utilizing the problem-solving process in order for success in remediating student academic and behavior problems.

Student Assistance Teams: An Examination of Accommodations Developed for Academic and Behavior Problems

Statement of the Problem

Special education practices are changing and constantly being scrutinized. The growth of special education referrals leads to a suspicion that too many students are being identified as handicapped and the misidentification or overidentification may result from the failure of general education to meet the needs of these students (Fuchs & Fuchs, 1989). Public pressures such as the enactment of P. L. 94-142, reduced spending for special education services, and heightened parental involvement have led to the need for practical approaches to planning and evaluating special education services. As part of an outcome-based focus in schools, professionals are increasingly concerned with improving the quality of educational services for children (Maher & Bennett, 1984). Previously, only the referral-placement process helped determine students who may need modifications in their education programs. Currently, programs which focus on pre-referral interventions are utilized to provide assistance for students proactively, that is, prior to placement in special education. The student assistance team (SAT) process helps determine accommodations for students who may need modifications in their education program in order to be successful in school.

The use of student assistance teams as an alternative to placement in special education has been in existence for over twenty years, but only recently have schools use this problem-solving process to help meet the academic and behavioral needs of all students. Student assistance teams originated as a process that may assist in student

success but since its creation, special educators may question whether the team process is helping students. If the student's educational needs are being met and there is a reduction in referrals to special education, this alternative approach should be found effective. If not, should this process be continued as an appropriate alternative to the traditional referral-placement system? Are the student assistance teams necessary as a means of providing appropriate accommodations for students? Is helpful information coming from this process?

The current study attempts to explore the reason for special education referrals to a student assistance team and the accommodations that are generated from the team. In addition, when students proceed through the referral placement process and are involved in a multidisciplinary team meeting in order to provide special education services, are the accommodations that result from this process similar to those generated at the time of the SAT or are they different? Does the quality or quantity of the accommodations differ? If not, are both necessary? Is it time and cost effective to continue this alternative to special education services? Information obtained from this study will assist psychologists, teachers, and school administrators in understanding what was done for all students, regardless of special education qualification. While students with educational needs were identified primarily when the problems had become so severe that special education alternatives appeared to be warranted, perhaps, using the SAT process resolves identified problems. In addition, since little research had been done looking specifically at accommodations, schools need to know what results from team meetings. Specifically, school psychologists can benefit from this information by the validation of effectiveness of

this problem-solving process as an alternative to a traditional assessment for special education placement.

Literature Review

The following section will review information about what has been done in the past regarding special education referrals, including data on reasons for referral, placements, traditional assessment information, and, the current trend in gathering information on students for the purpose of educational assistance.

Special Education Referrals

Referrals to special education result in variable rates of certification for assistance and often lead to a high probability of placement in special education. This result is driven by teacher assessment to determine what is "wrong" with the students rather than to provide intervention services to assist these students in the classroom. Ysseldyke, Algozzine, Regan, and McGue (1981) claimed that as many as 95% of those referred for an evaluation were declared eligible for special education services. In general, 3% to 5% of the school-age population are referred for special education services in any given year. Of those referred, 92% are tested; and of those tested, 74% are placed in special education (Hocutt, 1996). Approximately, 69% of referrals for special education were for boys (Fugate, Clarizio, & Phillips, 1993).

Lloyd, Kauffman, Landrum, and Roe (1991) examined referral records of 382 students to analyze the reason for the referral for special education service and the influence of pupil age, gender, and the individual making the referral on the types of problems identified. Results indicated that regular classroom teachers independently

initiated 74% of the referrals. This may be compared to teachers who collaborate with parents, specialists, or children, which includes only another 5% of cases. Independently, specialists made 10.6% of referrals, parents made 5.6% of referrals and administrators made 4.7% of referrals. Most of the referrals were for children in first grade (26%), kindergarten (16%), and second grade (15%). The fewest referrals occurred in preschool or the high school years. Most of the referrals identified one (39%) or two (35%) concerns. The actual number of referrals varies from 52% to a high of 73% depending on population examines, definition of disability, or qualification criteria (Algozzine, Ysseldyke, & Christenson, 1983; Furlong & Yanagida, 1985; Payette, Clarizio, Phillips, & Bennett, 1991; Ward, Ward, & Clark, 1991).

In a survey of school district directors of special education, Algozzine, et al., (1983) found that as many as 4 to 5% of the school district population were referred and evaluated during the target years. They concluded that with school districts referring, evaluating, and placing large numbers of children in special education programs, the current system has been driven by federal incentives that require very little in terms of accountability or justification of need.

Reasons for Referrals

Students are referred to special education for a variety of reasons, including academic, behavior, sensory, and physical problems. The category of mild disabilities draws the largest number of students into special education and consists of children who qualify as learning disabled, mildly mentally retarded, or having speech and language needs. Slightly more than half (51%) of children in special education are being served

because of a learning disability. Another 22% of children are qualified for special education services due to speech and language impairments; 11% due to mental retardation; 9% due to serious emotional disorders; and 7% due to hearing or visual impairments (Terman, Larner, Stevensen, & Behrman, 1996). Another study (Lloyd, et al., 1991) found that students were referred most frequently for general academic problems (35%), followed by reading problems (31%), and attention problems (23%). The remaining 4% of referrals were for other problems (visual/perceptual difficulties or depression). These results are consistent with previous research that found the majority of unclassified referrals were for "learning related" problems. This research supports the notion of teachers' viewing attention problems as influencing a students' success in the classroom.

A factor analysis has been utilized to determine whether referrals resulted from patterns of behavior exhibited by the students. Five factors were identified as contributing to student referrals. The first factor, written language, accounted for 10% of the variance. Externalizing behavior accounted for 9.7% of the variance, internalizing behavior 8.6%, overactivity 8%, and finally, sensory problems accounted for 8% of the variance (Lloyd, et al., 1991).

Further exploration of referrals suggested that, of teachers' referrals for assistance, 54% asked for help with off-task or inattentive behaviors. Approximately 29% of referral concerns dealt with low quality work (chronic task completion) and the remaining 17% of concerns focused on addressing the difficult to teach students poor relations with other adults or peers or a lack of academic skills (Fuchs & Fuchs, 1988).

Although students' needs play a major role in why they are referred for special education, teacher variables may also influence the referral process. For example, incongruence has been found to exist between teacher expectations and the reason for the referral. Teachers believed that children were found eligible for special education services only if they demonstrated academic deficits. Behavior problems, on the other hand, were seen as neither necessary nor sufficient for eligibility for special education, apparently indicating that teachers might focus on academic information in order to assure eligibility. Teachers may also anticipate quicker and more reliable assistance for the academic difficulties than for the behavioral problems. Lloyd, et al., 1991, attest to a need for additional research investigating pre-referral interventions to address the specific problems of the individual students, as well as longitudinal data variance. These researchers found that regular classroom teachers alone initiated 74% of the special education referrals.

When they are the source of referral, parents are more likely to refer their children for special education for academic reasons than for any other reason. For the referrals made by parents, 71.2% were made for purely academic reasons, 9% for purely behavioral reasons, and 19.8% for a combination of academic and behavioral reasons. On the other hand, teachers referred students for special education 55.5% of the time for purely academic reasons, 10.7% of the time for purely behavioral reasons, and 34.1% of the time for a combination of behavioral and academic reasons. These results indicate teachers make referrals for the combination academic/behavioral concerns more often than do parents. Parents view the academic difficulties as being the source of greatest concern regarding special education referrals. This finding is consistent with that of teachers, yet

to a lesser degree. Teachers view students with academic only or both academic and behavioral problems as more concerning (that is, impacting school success), thus leading to more special education referrals, in contrary to the belief that a large number of referrals result from behavioral problems (Gottlieb, Gottlieb, & Trongone, 1991).

Because many of the students who are referred for additional educational assistance are brought to a student assistance team based on an academic, behavioral, or a combination of academic and behavioral concerns, these areas will be discussed in more detail in the following section.

Academic skills referrals. Academic skills are a primary deficit area for children with mild disabilities, such as learning disabilities and mental retardation.

Academic referrals often come from the classroom teacher and may include difficulties with reading comprehension, decoding, written expression, and mathematics; and less frequently, for difficulties with science or social studies. The largest number of referrals result from reading and language arts problems. An academic referral indicates that the teacher is aware of a child's lack of progress and concerned about that student's performance in the classroom, which, if severe enough, results in placement in special education.

Teachers often identify a student's problem based on a set of experiential norms by which to compare the child to other classmates, as well as previous grade level expectations. Teachers may identify unacceptable student performance in addition to a realization that they are unable to provide the instruction necessary for success in the classroom (Gottlieb, et al., 1991).

Behavioral referrals. Children with varying difficulties in school have been identified based on social skill deficits or other behavioral problems. Children are often labeled emotionally or behaviorally disordered because their conduct is bothersome to teachers. Teachers have utilized the term "behavior disordered" with as many as 22% of children in regular classroom. Problems that appear to be especially disturbing to teachers include noncompliance, defiance, or oppositional behaviors. Less disturbing behaviors, also deemed to be more passive, include withdrawal or anxiousness (McConaughy & Ritter, 1996). Placement that is influenced heavily by these referral questions depends primarily on the subjective opinion of the teacher who is no longer able to tolerate the behavior of a particular child in the classroom (Ward, et al., 1991).

McIntyre (1990) discussed how behavioral referrals may be a function of the teacher's classroom standards. When considering a behavior referral, a teacher may compare the student's aggression not only with other students but also against his/her own standards. When the discrepancy between the student's behavior and the standard reaches a certain level, the probability of a referral is increased. The strictness of the standards imposed by the individual teacher correlates with an increased or decreased number of referrals. With more strict individual standards, the lower levels of aggressive behavior can lead to a greater discrepancy and greater likelihood of a referral.

Coleman and Gilliam (1983) administered a survey to 139 first- through sixth-grade teachers to determine which student behaviors result in the most negative response from teachers. The results indicated that teachers held the least favorable attitude towards students whose presenting behavior was aggressive interaction with teachers and peers.

The other behavioral factors (inappropriate behaviors, physical reactions, anxiety-reactions) did not result in significant differences among teachers. The results support that aggressive behaviors lead to the most negative teacher reaction, a disruption of the teacher's preference for a conformist classroom. In addition, the least negative attitude demonstrated by teachers resulted from students who were characterized as not interacting with peers. The results support that teachers' beliefs about students whose behaviors do not interfere with the classroom structure and do not require large amounts of time or energy. Moreover, aggressive students are seen as a source of frustration among teachers, and the disruption is viewed as negative because it interferes or disrupts the teacher's ability to manage and instruct the classroom.

Academic and behavioral referrals. Students are not only referred for either academic concerns or behavior concerns (i.e., one or the other), but many students are referred for special education services based on a combination of the two problems areas. As many as 31% of students referred for special education services in an urban school district were based on a combination of academic and behavioral concerns.

In addition to studies of behavioral difficulties of all children with disabilities, research has been conducted to explore their social skills. Conducting an extensive sociometric study of 84 learning disabled children in 62 third, forth, and fifth grade classrooms, Bryan (1974) looked at the peer popularity of learning disabled children and found that these children were viewed as "more socially rejected" and "less socially attractive" as compared to children without a learning disability.

Further confirmation of the problematic peer status of children with disabilities has been demonstrated by numerous studies between 1974 and the present (Bryan, 1974; Bruininks, 1978; Sheare, 1978; Sipperstein, 1978; Scranton & Ryckman, 1979; Garrett & Crump, 1980; Horowitz, 1981; Wiener, 1980; Olivia & LaGreca, 1988). For example, in a study by Stone and LaGreca (1990), children with learning disabilities received lower liking scores and higher disliking scores than the nonlearning disabled children. Over 75% of the children with learning disabilities fell into the rejected or neglected groups. This study also demonstrated sex differences within this realm, namely that poorer social functioning was found for girls then for boys.

Traditional Assessment Process

The traditional "refer-test-place" sequence of providing services for students with academic or behavioral problems came about as an unintended outcome of Public Law 94-142 in the 1970's. This eligibility sequence for special education resulted in over-referrals and concerns regarding costly and time-consuming testing (Schrag & Hendersen, 1996). This growing concern regarding resource utilization has led to the focus on a quantitative means for assessing success among students.

After a referral has been made, the formal assessment process begins. Traditionally, special education eligibility has been based on information gathered by school psychologists and other educational diagnosticians. These professionals have been criticized for their over-reliance on norm-referenced tests that provide only a snapshot of general student achievement. Specifically, norm-referenced achievement tests are criticized for the lack of correspondence with curriculum and instruction. Also, these tests

are not suitable for guiding day-to-day instruction and are not sensitive to small but important changes in student learning. In addition, individually administered intelligence tests are most frequently used as a primary indicator of exceptionality, eligibility, and educational placement (Salvia & Ysseldyke, 1995).

Ysseldyke (1983) suggests that there is little relationship between the supportive eligibility data and the actual decision made by the team. In addition, Ysseldyke posits that the acknowledgment of a referral does not necessarily warrant psychoeducational testing or special education label. In addition, when asking teachers what they expected to get from a referral, Ysseldyke states that they overwhelmingly told him that they expected the student to be tested and placed in special education; this led Ysseldyke to assert: "We must stop perpetuating the automatic referral-to-placement process that is occurring for so many students" (p.231).

Throughout the past 10 years, the traditional referral-placement process has been examined to determine whether or not school personnel are adequately qualifying and placing special education students. The search for a reduction in the number of children referred for special education services began when Algozzine, Christenson, and Ysseldyke, (1982) explored the referral-placement process. From a survey of school psychologists, they found that the amount of special education services received by students increased by nearly 17% between October, 1976, and December, 1980. Subsequently, the skepticism has grown as to the appropriateness of identifying handicapping conditions for specialized classrooms. Furthermore, it has been argued that the mild handicapping conditions (e.g.,

learning disabilities, mild mental retardation, and mild behavior disorders) are deemed "treatable" in the regular classroom by the regular education teacher.

In response to varying opinions of the current debate, Fugate, et al., (1993) conducted a study to assess, extend, and update the referral-to-placement research. Using 236 students referred for special education assessment, 128 were diagnosed by the multidisciplinary teams as eligible for services, a 54% eligibility ratio. Fugate et al. explained that the discrepancy between their results and the Algozzine, et al., (1982) study lies in a reliance on survey data rather than empirical data to assess the ratios. The results of Fugate et al. are interpreted as reflecting an overestimation due to special education teachers (who work with learning disabilities) making the actual referrals rather than regular education teachers. In summary, the traditional referral system has several problems including too many referrals, over-reliance on norm-referenced tests, and an increase in placements of students with mild handicaps.

Alternatives to the Traditional Assessment Process

The transition away from the traditional means of testing for possible placement in special education means that schools must adopt an alternative process for determining eligibility for assistance and/or special education. Alternatives currently being implemented include utilization of intervention teams, an applying a approach to address student needs, and the adoption of a new approach to meeting the unique needs of students in the general education environment to eliminate the over-identification of special education referrals.

Intervention Teams. With the failure of the general education system to accommodate all students, intervention teams of varying structures were developed. Intervention teams as delivery systems can be classified into consultation models, collaborative teaching, pre-referral assistance, and mainstream assistance. While a collaborative approach and team teaching are used, most schools rely on pre-referral and mainstream teams for problem-solving. In support of the growing evidence that too many children are being identified as handicapped and the failure of general education to accommodate all students, these techniques have been successful in this endeavor. These more widely used approaches will be discussed in more detail later.

Research has been conducted that validates the necessity of pre-referral interventions as an alternative to the traditional test and place process. Fugate, et al., (1993) conducted such a study that consisted of 236 students referred for special education assessments within their school district. Information was obtained by examining the psychological evaluation results. Eligibility was determined through an multidisciplinary team (MDT) meeting based on a discrepancy between ability and achievement. The results of this study indicate that according to MDT results, 54% of children who were referred for services were found eligible for special education. Fugate et al. warn that an increased emphasis on pre-referral intervention could lead to fewer overall placements but a higher referral-placement ratio. Participation in the pre-referral intervention process may result in extinguishing difficult problems or providing intervention to assist students before the difficulties lead to more serious educational issues. The higher referral-placement ratio will potentially be a positive result as the

number of referrals to the intervention teams is ultimately viewed as a successful alternative to traditional testing procedures.

The use of pre-referral intervention teams, the most widely used and researched area of intervention in the general classroom, is an alternative to special education referral and placement. These teams usually consist of elected special education, regular education, and school professionals, as well as administrative representation. The purpose of the teams is to assist teachers with their work with students who present varying academic and behavioral problems (Morsink & Lenk, 1992).

Pre-referral intervention is defined as an "educational practice that addresses the needs of at-risk learners in general education, enhances the skills of school professionals through collaborative problem-solving, and embodies the spirit of least restrictive environment" (Bahr, 1994, p. 309). Another definition states that student or teacher assistance teams are "school-based unit[s] used to assist teachers in generation intervention strategies so that they may cope with a wide range of issues" (Sindelar, Griffin, Smith, & Watanabe, 1992, p. 251).

Teacher assistance teams (TAT), also known as SAT teams, initiated in the early 1970's as group for teachers who indicated a need for information about difficult-to-teach and difficult-to-manage students. The traditional TAT emphasized teacher initiative, accountability, communication, and effective decision-making. The ultimate goal it to "enable teachers to meet the needs of difficult-to-teach students" (Sindelar, et al., 1992, p. 247). A consultative model evolved in the early 1980's which expanded upon the original TAT to include assisting teachers collaboratively to develop the interventions for these

difficult-to-teach students. This collaborative effort continues to be utilized among schools today encompassing both regular and special education students referrals (Sindelar, et al., 1992).

Studies done on the effectiveness of these intervention teams revealed a drop in the number of referrals, "no exceptionality" classifications, and placement rates. The result was a 79% decrease in the number of inappropriate special education referrals across eight schools (Schrag & Henderson, 1996). The focus of the pre-referral intervention process may diminish inappropriate referral and placement of students in special programs, as well as future student problems, through a strengthening of interventions with a diverse population of children (Fuchs & Fuchs, 1988).

When examining the effectiveness of this pre-referral process, considerations should be given to how the educators and professionals involved in the decision making believe it meets the needs of the students (Flugum & Reschley, 1994). As for effectiveness, special educators indicated that they were "uncertain" whether the pre-referral intervention should be maintained, is a bureaucratic hurdle, or is beneficial to the teachers. Regular classroom teachers were believed to follow through with the process, maintain students in general education, and refer fewer students for formal evaluations (Nelson, Smith, Taylor, Dodd, & Reavis, 1992).

Additional research as indicated by members of the team process can verify that professionals are not certain as to the effectiveness of pre-referral interventions. Bahr (1994) stated that 75% of directors of special education believed that pre-referral intervention is only "sometimes" successful, 10% "usually" successful, and 2% "rarely"

successful. In an additional examination of the school personnel analysis of effectiveness, 5% of general education teachers believed that the teams provided them with new intervention ideas. The majority of the teachers thought that the teams failed to explore a variety of intervention options and those provided were not successful. Yet 74% of teachers that responded thought that this process should be maintained (Nelson, et al., 1992).

Noell and Gresham (1993) attempted to explain the ineffectiveness of the pre-referral process and educators' inability to resolve referral problems. The authors claim that the consultation process breaks down because interventions are not maintained or implemented as designed, teachers reject the interventions as unacceptable or impractical, or because teachers continue to be dissatisfied despite resolution of referral concerns and possibly due to the intervention itself.

School administrators were surveyed about their districts' pre-referral practices, implementation, evaluation, and student accommodations (Bahr, 1994). Results indicated that school districts utilized this team process primarily for students with mild handicaps (emotional impairments, 98%, and learning disabilities, 96%). Eighty-six percent of school districts refer students with mental impairments to a pre-referral team. The majority of school districts (61%) used the team process for any or all suspected handicaps.

The referrals to an intervention team result in various accommodations for each individual student. These accommodations can be seen as interventions that may assist the students in the school environment without placement into special education. Recommendations given by team members vary in nature and number, but are generally

seen as positive efforts by the school to meet each student's individual educational needs. Of accommodations advocated, 96% of directors indicated use of instructional modifications, and 71% identified reliance on counseling; less used alternatives were placement review/change (63%), parent training (37%), and "other" (referral to outside agencies, use of existing academic support programs, and unknown) (8%).

Unless contraindicated by the data or considerations, the accommodations or interventions recommended by the team should be implemented and evaluated. Bahr (1994) found that general education teachers (92%), principals (69%), and counselors (47%) were identified as following through with the recommendations of the team. This follow-up can be seen as an essential ingredient in the success of the accommodations in meeting the needs of the students. Evaluations were completed on the progress of the approved interventions by psychologists (59%), general education teachers (55%), principals (53%), teacher consultants (53%), and others (less than 20%). With successful interventions and accommodations, as recommended by the student assistance teams, students may be able to more successfully meet their educational goals and succeed in school. This success results in both fewer referrals to special education and meeting the needs of the students in the general education environment.

Focus on Accommodations

In order to focus realistically on the educational assistance school districts can provide, it is essential that the information taken from team meetings, referrals, and eligibility data become tools for designing accommodations to meet student needs. With continuing pressure from the public about accountability and the need for an improvement

of current educational programs, it is imperative that there be professional scrutiny of the quality of these accommodations and how they lead to positive academic and behavioral outcomes for students (Bruininks, Thurlow, & Ysseldyke, 1992). Special education must move towards a concentration on the quality of educational experiences for children with disabilities (Ysseldyke, Thurlow, & Bruininks, 1992).

When exploring the success of the pre-referral process, accommodations for students involved in the pre-referral intervention process must also be addressed in specific terms. While successful pre-referral interventions teams should decrease the number of students referred and placed in special education, additional variables exist that can also be measured by this success. Favorable interventions should result in improved academic performance and classroom conduct or lowered teacher expectations. By attempting to solve the problems of all students, schools should see fewer instructional and management problems; yet the success of the pre-referral teams is dependent upon the nature and appropriateness of the accommodations and the quality of the implementation (Flugum & Reschly, 1994; Sindelar, et al., 1992).

As special education has seen a shift towards positive outcomes for students, administrators are being asked about the extent to which students can read and write, rather than specific placement information (Reschly & Ysseldyke, 1995). Appropriate accommodations must be developed for students to meet these educational standards.

Summary and Conclusions

With a large number of referrals for academic and/or behavioral problems, and accountability as an issue in schools today, the educational environment and need for

accommodations was examined closely. There is little research related to service delivery in general and accommodations specifically. Problems related to outcome-focused research include a lack of sufficient subject characteristics, instructional or behavioral change, limited behavioral targets, and insufficient procedures to demonstrate experimental control (Kauffman, Lloyd, & Hallahan, 1995). Special education should move beyond the concern with equal access to education and concentrate on the quality of educational experiences for children and youth with disabilities (Ysseldyke, et al., 1992).

As schools continue to shift from the traditional test-place model to a approach aimed at the education of all students, schools must provide a context for teams to work through this process. The multidisciplinary approach utilized by many schools today, specifically SAT teams, involves referrals from various sources for academic and/or behavioral concerns. These referrals potentially lead to accommodations made by teachers to best assist the students' learning. Accommodations were examined to determine if the educational standards of all students were met.

Proposed Study

Problems associated with the traditional test-place system and failure to meet the educational needs of all students led to a need for the examination of student educational or behavioral accommodations. These accommodations provided information about what schools did to assist students, as well as what students need individually.

Hypothesis 1: It is hypothesized that there would be an overall decrease in special education referrals. If so, the drop in referrals will result from increased effectiveness at

the remediation of problems through a process prior to a need for additional testing and, ultimately, placement.

Hypothesis 2: It is hypothesized that accommodations resulting from the SAT process will increase in quality as the process is utilized more efficiently over time. Specifically, accommodations found in records beginning in 1997 should have higher relevance and quality or specificity than those examined from earlier years. In addition, as referrals became more appropriate, accommodations for the identified problems should become more specific and useful. With practice, the teams become more effective in making judgments about interventions that work with students. Students will be provided with more effective interventions that match the problem.

Hypothesis 3: With an increase in the effectiveness of pre-referral intervention teams, it is hypothesized that many behavior problems, as opposed to academic problems, will be remediated through the process. With a better match between problems and interventions, as well as specificity in defining the problem behaviors, many of the referral problems will be corrected prior to special education placement. In addition, due to a large number of behavioral referrals accounted for by externalizing behaviors, these behaviors will be more readily modified through appropriate interventions (Lloyd, et al., 1991).

Hypothesis 4: Although the team presumably became more productive at matching problems with solutions, academic difficulties will require more extensive remediation to overcome. There will be, therefore, more structured and monitored interventions for students with academic difficulties. With the use of Curriculum Based

Monitoring and normative measures to monitor progress for students, it is proposed that many of the students referred to a SAT team based on academic difficulties were remedied through this process but not with as much success as those referred for behavioral problems (Lloyd, et al., 1991; Fuchs & Fuchs, 1989).

Hypothesis 5: For those students referred for a combination of academic and behavioral problems, it is hypothesized that referral rates will remain constant due to the difficulties in defining the multitude of problems, as well as the complications of multiple interventions and prioritizing concerns.

Hypothesis 6: It is hypothesized that accommodations that result from the MDT process will be similar to those recommended at the time of the SAT team. The accommodations and strategies utilized for all students, regardless of special education eligibility, will be similar to the accommodations that result from the special education process, specifically the MDT process. Although effective and well-designed interventions result from the SAT team process, underlying developmental or psychological problems may interfere with effectiveness. While teams are able to define problems with more specificity, design accommodations more effectively, and implement the intervention more readily, these accommodations may not always able to remediate the students' difficulties in school.

Method

Participants

Referral records of students in grades 1 through 6 from the 1990/91 to the 1997/98 school years were examined to determine the reasons for referral and

accommodation plans. The referral records were taken from two school districts in the Midwest. One hundred thirty-one referral records from four schools within the two districts were examined. Files were chosen if the student had a SAT referrals within the targeted 1990 through 1998 school years. At the SAT level, student files consisted of 81 males (61%) and 50 females (39%). For those 51 students who went on to the MDT level, 35 male (69%) and 16 female (31%) files were included. The students referred to SAT teams in this study represented a higher proportion of males. This data is consistent with national averages, as supported by national special education findings (Terman, et al., 1996). Students who had been referred to a SAT or the equivalent for the first time were included in the study.

Setting

The two school districts used in the present study were served by one Area Education Agency (AEA). In order to report the socioeconomic information regarding the population of students included in the study, a breakdown of free and reduced lunches was investigated. The breakdown of free-reduced lunch as well as ethnicity is reported by county, rather than individual school district because the data were only available by county. In County 1, 98.17% of the students were Caucasian, .1% are African American, .2% Asian, .5% of the students were Hispanic, .5% were White/Hispanic, and .3% of the student population was Native American based on the 1994 United States Bureau of the Census estimate. For County 2 which contains the other two school, 91.32% of the students were Caucasian, .71 % are African American, .53% Asian, .3.1% of the students

were Hispanic, 3.96% were White/Hispanic, and .37% of the student population was Native American.

For the students in County 1, 33.3% received free and reduced lunches while 34.3% of students in County 2 received this support. These percentages indicate that the two counties were comparable with regard to ethnicity and socioeconomic status. The students referred to SAT teams in this study represent a higher proportion of males and come from lower socioeconomic backgrounds. These data are consistent with national averages, as supported by national special education findings (Terman et al., 1996).

For the school districts included in this study, the referral-placement process began with a teacher who had a student with an academic, behavioral, or combination of academic/behavior problem presenting the problem to the assistance team. The referring teacher then completed a form that provided relevant information about the student. The team coordinator reviewed the form, assisted in the paperwork, notified the team members and arranged a meeting. The teacher making the referral attended the SAT meeting. At the SAT meeting, team members brainstormed interventions that might assist in helping the child, and agreed on how to proceed. After six to nine weeks of intervention, the SAT team reconvened to discuss the student's progress. At that time, the team determined the effectiveness of the interventions. Three possible outcomes occurred as a result of the SAT process: 1) the interventions remediated the problem; 2) additional interventions were warranted; and 3) further information would be needed in order to determine if the child might require long-term assistance and qualify for special education. If the latter outcome was deemed appropriate, the team met with the student's parents to discuss what

interventions had been implemented and secure parental consent for the special education evaluation. After the additional information was obtained through an assessment process, the team met again with the student's parents to share the information at a MDT meeting and determine programming.

Data Collection. For each referral, student files or records were reviewed to collect the following information: (a) identification number; (b) gender (male/female); (c) age (6 to 13); (d) grade (1 to 6); (e) specific reason for referral: academic (i.e. math difficulties, reading problems, overall low achievement), behavioral (acting out in class, aggressive behavior, lack of social skills), or academic/behavioral (talking out in class so he/she does not get work done); and (f) accommodation: social skills training, counseling, academic interventions, additional time to test, parent interview, seating at both the SAT and, if applicable, MDT levels. The information was collected verbatim and later coded (see Appendix A for data collection sheet).

Coding. The information about SAT/MDT referrals was coded in the following way: 1) the reason for referral to the SAT team; 2) the specificity of the SAT referral; 3) SAT referral/accommodation match; 4) MDT reason for referral; 5) specificity of MDT referral; 6) MDT referral/accommodation match; 7) SAT\MDT referral match; and 8) SAT/MDT accommodation match (see Appendix B for coding sheet). Coding of data for the MDT and all related information was completed only for those cases in which the referral led to a full evaluation and subsequent special education accommodations during the targeted years.

Referral information was categorized as academic, behavior/social, or combination to assist in the coding of the information. Academic referrals consisted of information about difficulty with academic skills, abilities, or aptitudes. For example, statements such as "the student is failing all of math assignments" or "the student is in the bottom 2% of the class in reading" were classified as academic problems.

Behavioral/Social referrals included concerns about a child's social behaviors, attention and motivation, and/or classroom behaviors. Examples of behavioral/social referrals include "acting out in class," "hitting and kicking peers," or "can't keep hands to himself."

The combination academic/behavioral referrals were indicated based on at least one concern in each area. Regardless of one concern presenting itself to a greater extent than another, if both problems were mentioned by the person making the referral, the referral was classified as both an academic and behavioral concern. Examples of combination referrals include "poor motivation and low reading," or "not doing well in all subjects and off-task a lot of the time."

Procedure

Referral records were examined in order to classify: 1) reason for referral (academic, behavioral/social, or academic/behavioral); and 2) accommodations (counseling, placement review/change, parent training) at the SAT and, if applicable, MDT level.

Accommodations recommended by the team were categorized to determine whether or not they corresponded with the reason for referral. SAT and MDT

information was compared over time to indicate how the process was working, specifically whether or not accommodations changed as a result of additional experiences using this procedure. In addition, the accommodations resulting from the pre-referral process were compared to those that were recommended during a MDT process following a special education referral. This information assisted school professionals determine accommodations that work for all students and those that were successful with only a specific population of students. School personnel and special education records were explored in order to obtain this information.

To assist in identifying why students were referred to the SAT team, referrals were coded by assigning a "1" for academic concerns, "2" for behavioral concerns, and "3" for academic/behavioral concerns in combination.

In addition to coding the type of referral, information was needed to help determine if the referrals led to specific, high quality accommodations. For SAT or MDT accommodations, a "1" indicated at least 50% of the interventions distinct and well-defined. Examples of accommodations that were coded as specific include "friendship group for increasing self-esteem" "behavior modification of off-task behaviors" or "teaching comprehension strategies such as predicting and using picture cues." A "2" was coded for unspecific or general/indistinguishable interventions. The specific accommodations give the reader a clear picture of the intervention that will be in place to remediate the referral problem. Examples of accommodations coded as unspecific include "one on one assistance," "behavior plan," and "learning center support." All of the

unspecific accommodations give little information regarding exactly what interventions will be implemented.

Information on whether SAT/MDT accommodations matched was examined to determine whether or not the referral problem was consistent with the interventions prescribed. For this exploration, a "1" indicated a match between reason for referral and the accommodation. For example, if the referral related to academics, the accommodation must reflect an academic intervention, such as one on one instruction or drill and practice. A "2" indicated no match between the accommodation/referral. An accommodation could be coded as a mix only if the initial referral was for both academic and behavioral concerns. A "3" was coded for a mix and indicates that one but not both reasons for referral were addressed by the accommodations. This coding was also used for the MDT and SAT accommodation match to determine whether or not the interventions used for a referral at the SAT level matched those interventions at the MDT level.

In order to determine whether students were referred for similar reasons at the SAT and MDT levels, referral information was coded. Coding included assigning a "1" if the reason for referral at the SAT level matched the reason for referral at the MDT level. For example, a match was coded if the student was referred to the SAT team for reading and the MDT team for reading comprehension. A "2" would reflect that the reason for referral to the SAT did not match the reason for referral to the MDT. For example, a student would be referred to the SAT team for behavioral concerns and the MDT referral would indicate academics only. A "3" was coded for those referral which included both academic and behavioral concerns in combination such that a mix of reasons was reflected

in one but not the other referral. A student, in this case, may be referred to the SAT team for written language/off-task behaviors but referred at the MDT level for behavior (off-task) only. A "3" or mixture was reflected in those referral which include academic and behavioral concerns in combination.

Finally, for identification of whether accommodations at the SAT level were similar to the MDT accommodations, data were coded to verify a match between the interventions at each level. A "1" was used for a match between the accommodations listed at the SAT and MDT levels. For example, the accommodations at the SAT level would include one-on-one instruction and counseling, while those at the MDT level included individual instruction/counselor small group. The information would be coded as a match if the interventions match at the MDT level and may include additional but no fewer interventions. It was determined that additional MDT interventions could be present and still indicate a match due to the overwhelming number of accommodations listed at the MDT level. A "2" was used for no match between the accommodations, such that they focused on distinctly different areas of remediation. A "3" was used for a mix, similar to that stated earlier, which was only indicated in a referral which contained both academic and behavioral accommodations. The accommodations in this example would address one area at the SAT level and both at the MDT level.

Interventions were then analyzed using the codes designated by Bahr (1994), with the addition of five categories to help specify interventions. Bahr's coding included: 1) individual instruction; 2) counseling; 3) placement review/change; 4) parent training; and 5) other. Individual instruction included providing one-on-one academic assistance by

either a resource teacher or paraprofessional. Counseling may included that by a counselor or psychologist and may be done individually or within a group. Placement review may include educational program changes or a multidisciplinary team meeting to determine how the current program is working. Examples of parent training include "increased communication with parents" or "parents involvement." Examples of items that would fall into the "other" category includes "use of timer," "shortened directions," "peer mentor," and "teacher prompts."

Additional categories were added to Bahr's original five classifications for the purposes of the current study to allow for more specificity. The new categories include: 6) academic assistance/training; 7) behavioral training/techniques; 8) student observation; 9) testing; and 10) parent interview. Thus, ten categories were used. Academic assistance/training examples include "oral tests," "breaking down assignments," and "one-on-one reading strategies." Examples of accommodations that would fit into the behavioral training/techniques category include "assignment notebooks" and "assignment completion." Testing may include "academic testing," "speech/language testing," or "CBM." The data for these accommodations were used to identify percentages and were calculated using Bahr's interventions, as well as those that were added to Bahr. The information gathered would help identify which accommodation were utilized most often throughout the data collection.

Interrater Reliability. Interrater reliability checks was determined to verify consistency with the coding procedures. Five trained individuals coded the data for the current study. Two individuals were used for each two-year dyad to determine interrater

reliability. Once reliability was figured, the differences were reconciled. Differences were reconciled with the entire group for consensus if uncertainty between the two interraters occurred (see Appendix C, D, and E for instructions and examples given to the individuals coding the data). Interrater reliability for the current study was 91.18%.

Data Analysis

Descriptive data were computed. Because the categorical nature of the data, a chi square analysis was utilized to evaluate the results. Chi square analyses were used to address all six research questions (see Table 10). Question 1 analysis addressed the SAT referrals that go on to MDT across time. Research question 2 examined whether accommodations were specific across time. Accommodations that were specific were also examined by reason for referral. Research questions 3, 4 and 5 compared the reason for referral (academic, behavior, combination academic/behavior) across years. Research question 6 looked at whether the MDT/SAT accommodations matched and how these matches were changed across time. Accommodation matches were examined by reason for referral, as well. In addition, the percentages of students referred in all years were calculated to allow a comparison to the national statistics. The referral records were aggregated across two-year dyads for the purposed of data analysis; thus, there were four groupings that remained (1990/1992; 1992/1994; 1994/1996; 1996/1998).

Results

A series of analyses were conducted to explore whether referral/accommodation varied according to the year of the referral, as reported by two-year groupings. The data analyses indicated that student assistance team referrals remain greatest for academic

concerns than for combination academic/behavioral or behavior concerns. These results remain consistent across years (see Table 1). Comparable gender data analyses indicate that 61% of SAT referrals were males, while 39% of the referrals were female. As for MDT referrals, 69% of those referred were males, as compared to 31% of referrals being female.

Hypothesis 1 It was hypothesized that there would be an overall decrease in special education referrals when looking at the referral rates during the 1990/1992 school years as compared to the 1996/1998 school years.

The results indicate that there was an increase during the 1992/94 school years, followed by a decrease slightly during the 1994/96 school years and an even sharper decrease in the percentages during the 1996/98 school years (see Table 1). Chi square results compared the percentage of MDT referrals across time. Results indicate no significant differences in referral rate across time ($X^2 = .30$, NS). These results were also divided into reason for referral, as indicated previously by Table 6. The hypothesis that a decrease in referral rates will occur during the 1996/1998 school years as compared to the 1990/1992 school years is not supported. The decrease in referrals seen in the current study was not as large as the 79% decrease reported by Schrag and Henderson (1996).

Hypothesis 2 It was hypothesized that accommodations resulting from the SAT process will increase in quality and specificity as the process is utilized more efficiently over time. Accommodations found in records during the 1996/1998 school years should be significantly more specific than those examined from earlier years.

Analyses of whether accommodations were specific at the SAT level were utilized in order to address the quality of accommodations. A chi square analysis was used to examine if specificity of the accommodations was effected by the year of the referral (X^2 = .21, $p < .01$). The analysis indicated a significant difference among referral years. Although the current hypothesis predicted an increase in specificity across time, this hypothesis was not supported. Instead, an informal analysis of that data suggest that specificity started high in 1990/92, then decreased during the 1992/94 school years, followed by an increase again during the 1996/98 school years (see Table 2).

Finally, the data on whether or not accommodations are specific according to reason for referral was broken down by year (see Table 5) The results indicate that for all two-year dyads, academic referrals contained the largest number of well-defined interventions, except for the 1992/94 school years. During 1992/94, combination academic/behavioral referrals contained the largest number of specific accommodations (50%), but academic referrals containing specific accommodation during that year remained close behind (40%). Behavior referrals were the least specific except for during 1996/98 (23%). This was followed by combination referrals (15%)

In order to get a better indication of which accommodations were used most often, Bar's modified coding scheme was used. The accommodations were divided into percentages. Comparing MDT to SAT, percentages for the different categories of accommodations were similar (see Table 4 and Table 5). At both levels, the largest accommodation utilized was individual instruction (MDT 36%; SAT 30%), followed by

academic assistance (MDT 31%; SAT 26%) , other (MDT 14; SAT 16%), and behavioral interventions (MDT 14%; SAT 12%).

Hypothesis 3 It was hypothesized that many behavior problems, as opposed to academic problems, would be remediated through the process.

By collapsing the behavioral referral data across years, 18% of this type of referral went on the MDT. When looking at the data across time, 29% of the behavioral referrals during the 1990/92 dyad resulted in an MDT referral (see Table 6). These referrals did not continuously decrease as predicted; instead, the referrals slightly increased again in 1996/98. There was a slight decrease in behavioral referrals that went on to MDT during 1992/94 (23%) and 1994/96 (6%), but this decline was not continued. The behavioral referrals that went on to MDT increased slightly during 1996/98 (13%). The chi square results did not support a statistically significant difference among social/behavior referrals across time ($X^2 = .41$, NS). An overall decline was noted, however, in referrals that continued to MDT, when the early referrals (29%) were compared to the later ones (13%).

Hypothesis 4 It was hypothesized that academic difficulties required more extensive remediation to overcome and would, therefore, lead to MDT referrals at a greater rate than behavioral or academic/behavioral concerns.

Overall, 47% of the referrals that went on to MDT were for academic concerns. The number of referrals to MDT that resulted from academic problems resulted in a decline of referrals during the 1992/94 dyad but this increased over the next two dyads. This resulted in 63% of the SAT referrals that continued on to the MDT level having

academic concerns in 1994/96 and 1996/98 (see Table 6). Chi square results were not significant for reason for referral and year referred (X^2 =.41, NS). Despite the decline during the 1992/94 dyad, this referral rate remained above 50% for all referral years.

Hypothesis 5 It is hypothesized that referral rates will remain constant across time for those referrals for academic/behavioral concerns with referral rates slightly below those academic referrals.

For referrals that were made during the four grouped years studied, combination behavioral/academic concerns consisted of 35% of the referrals. The referral rates began during the 1990/92 dyad at 21% and increased to 62% during the 1992/94 (see Table 6). These referrals than declined, again, during the following two dyads and remained constant (31%; 25%). Results of the chi square analysis were not significant for differences across time (X^2 = .41, NS), thus supporting the hypothesis that this type of referral would remain constant over time, despite the increase noted during the 1992/94 dyad.

Hypothesis 6 It was hypothesized that accommodations for a student that resulted from the MDT process would be similar to those recommended by the SAT team.

Fifteen percent of the MDT/SAT accommodations were found to match and 29% of the SAT accommodations did not match the accommodations at the MDT level. Fifty-five percent of the interventions were mixed, indicating that some but not all of the interventions were utilized at the MDT level. When the data were divided according to the year of the referral, the results indicated a rapid decline whether the interventions at the SAT and MDT levels match. While 5 out of 14 of the accommodations matched

during the 1990/92 dyad declined to a 2 out of 15 match for the 1992/94 dyad occurred. In addition this decline continued for the remaining two dyads. During 1994/96, accommodation matches were 1 out of 16 and 0 out of 8 for 1996/98 (see Table 7). Chi square results were not significant when looking at MDT/SAT accommodation matches based on the year of the referral ($X^2 = .61$, NS).

After analyzing the initial data to determine if accommodations matched the reason for referral, additional questions needed to be answered. The initial data were coded into three areas (match; no match; mix), therefore leaving a third category, mix, without consideration. The two categories (match; mix) were combined to allow for additional analysis which included any accommodation/referral that had either a partial or full match. When combining the match/mix data into one category, the results indicated an overall 70% match of accommodations. When breaking the information into two-year dyads, 57% of accommodation matched at the SAT/MDT levels. This matching increased to 77% during 1992/94 and declined slightly to 69% the following two-year dyad. Finally, 88% of the accommodation matched during the 1996/98 dyad. Chi square analysis of match based on the year of referral dyad when combining the match/partial match categories indicates a significant difference over time ($X^2 = .42$, $p < .05$).

Looking at whether the reason for referral matched the accommodation resulted no significant differences across years ($X^2 = .27$, NS). Seventy-seven percent of referrals matched the accommodations across years (see Table 8). The individual breakdowns remained consistent, ranging from 65% (1992/94) to 88% (1996/98) of referrals matching

the accommodations. When looking at summative data, 6% of the referrals did not match. Matched data ranges from 0 in 1996/98 to 14% (low) in 1994/96 (high).

At the SAT level, when looking at the match between the reason for referral and the accommodation, the data were divided into the three referral categories (academic, behavior/social, and combination academic/behavior). The results indicated that overall 67% of the referrals that had matching accommodations, were academic referrals (see Table 9). The academic referrals were consistently the largest reason for referral that resulted in a referral/accommodation match. The academic referral data ranged from 62% (1992/94) to 73% (1994/96). Eighteen percent of SAT accommodation/referral matched data were behavioral referrals and 14% of matches were for combination academic/behavioral referrals. Chi square analysis revealed no significant difference across year when looking at the accommodation/referral matches ($X^2 = .20$, NS).

Breaking down the information about reason for referral for referral/accommodation matches was also completed to determine which referrals led to more appropriate accommodations. First, for academic referrals that went on to MDT, 75% of this type of referral resulted in similar accommodations at both levels. The percentages decreased during 1992/94 (33%), increased again in 1994/96 (80%), and declined to 71% in 1996/98. Second, behavioral data, however, remained constant across time (0%) matches. Third, combination academic/behavioral referral rates that resulted in matched accommodations at the MDT level began low in 1990/92 (25%), increased to 66% in 1992/94, and declined dramatically during the final two dyads (20%; 29% respectively).

Discussion

The results of the current study are consistent with national data regarding the reasons for SAT/MDT referrals and gender data. Despite the relatively homogenous subject pool from the Midwest, the data are representative of national referral concerns and accommodations identified.

Hypothesis 1 A decrease in referral rates was noted, yet without statistical significance; thus, it is difficult to determine whether the decrease is truly supportive of more specific and well-generated accommodations as a result of the process. While a SAT process had been adopted as a requirement prior to a MDT referral, research has not been done to determine the effectiveness of this specific process within the state. A review by Schrag and Henderson (1996) of research done nationally (comparing the referrals prior to SAT implementation to those made in the first year of the process), resulted in as much as a 79% decrease in referrals rates due to the process; however, it is difficult to determine what specifically impacted the decrease.

With the difficulty in determining whether or not these teams should continue, further exploration of their prior success is needed. The literature on the effectiveness of pre-referral intervention teams has been inconsistent regarding whether these interventions should be maintained. Despite over 75% of special education directors' indicating that pre-referral intervention is "sometimes" successful, a large percentage of teachers believe that the process should be maintained (Nelson et al., 1992).

Although the current study does not support or hinder the continuation of teams, Schrag and Henderson (1996) argue that a drop in the number of referrals is proof that

effectiveness is shown. Therefore, if the focus of the intervention teams is to diminish inappropriate referrals and special education placements, the teams, regardless of size, can be seen as effective if a decrease is noted. Any impact on referrals can be deemed a success, especially when it is difficult to determine to what degree student problems have continued on to MDT prior to the implementation of teams.

Hypothesis 2 The hypothesis that more specific accommodations would be seen over time was not supported. While the improved quality of pre-referral interventions can impact the number of referrals that continue on to the MDT level, additional factors may be interfering with the success of the accommodations. The lack of education to staff members about the quality or variety of interventions may influence the accommodations chosen. It may be argued that the interventions provided have not increased in quality over the years, as one may predict, because the teams have little experience with designing and implementing appropriate interventions. With additional opportunities for education on the specific process. A staff may experience increased success in generating appropriate accommodations for students. Sindelar, et al., (1992) support the success of pre-referral teams, depending on the nature and appropriateness of the accommodations. This support advocates for additional opportunities for practices to occur.

Increased experience with pre-referral interventions, as well as designing appropriate accommodations, lead to student success in meeting the educational goals (Bahr, 1994). The key to remediation, however, involves not only well-defined, specific accommodations, but also teams that follow the process. For example, intervention teams must generate well-defined, observable problems, an established baseline from

which to begin working, and a plan for on-going monitoring. Therefore, effective accommodations, established through this model, must remain congruous with the defined problem. With any inconsistency in the process incompatible or inappropriate interventions result, leading to dissatisfied teams.

Further exploration and education are needed in order to determine what factors may impact the quality of interventions utilized by SAT teams. Research by Nelson, et al., (1992) suggests that teachers believe that unsuccessful teams fail to explore a variety of intervention options. Teams should explore effective interventions that have been successful in the past at remediating academic and behavioral concerns. Without experience in providing interventions, less specific accommodations may result. Educating the team on alternative interventions to implement may be seen as a key to providing specific accommodations. Overall education on the process ensures that the interventions are well-defined and specific leading to a favorable implementation. Aksamit and Rankin (1993) argue that as many as 57% of SAT teams rated "determining appropriate interventions" as problematic, therefore, support the need for assistance to teams in this area of .

SAT teams are generating specific accommodations that vary according to the type of intervention chosen. The results of the current study are consistent with previous exploration of interventions but expand Bahr's coding scheme. The use of instructional modifications was often seen an accommodation for the remediation of academic difficulties. However, the results of the current study also supported the use of academic assistance/training, behavioral training/techniques, and alternative or other interventions

among practitioners in the schools. Bahr's coding did not address behavioral accommodations beyond what counseling remediated. According to the current study, professionals working in the schools are not utilizing alternative placements, parent training, or outside agencies; this finding is what Bahr predicted. While interventions seen include some, but not all of, Bahr's scheme, the current findings support the consistency of interventions within the school setting. It can be argued that SAT teams are becoming more successful in using interventions consistently that are implemented and monitored by teachers. If certain interventions are used consistently by teachers, it is these accommodations that must be explored further to determine if they are successful in remediating school problems.

Hypothesis 3 While it was hypothesized that a decrease in behavioral/social referrals would be found, statistically this hypothesis was not supported. Behavioral referrals were predicted to be effected the greatest by the SAT process; however, the data show that behavioral referrals rates did not change over time. The inconsistency of referral rates and the effectiveness of the interventions could be related to difficulties in defining the problem, choosing an appropriate intervention, or providing documentation of progress. Behavioral referrals can be seen as unique because of the subjectivity involved when following the process. In addition, the current study indicated that high quality, specific interventions were not utilized for behavioral referrals. Additional support for education to practitioners using the problem-solving process is needed to assist these teams in intervening for school problems. Sindelar, et al., (1992), support the need for well-defined problem, which is a key step in the process.

Yet, when given appropriate interventions, the behavioral referrals can be seen as readily modified (Lloyd et al., 1991). An important piece of includes implementation of the accommodations early enough to make an impact. Not only must teams determine which concerns warrant SAT attention, it is imperative that teams identify and try to remediate the problems quickly. Sindelar, et al. (1992) support the quality of the implementation as significantly impacting the success of teams, and, as seen through previously cited literature, that quality interventions lead to the most success.

Hypothesis 4 The largest referral rates, those for academic concerns, remained consistent with national percentages and was constant across time. Academic referrals were not only the largest reason for referral, but were deemed the most difficult to remediate (Lloyd et al., 1991). In the current study, these referrals were also seen as having the most specific, well-matched interventions. These results support that many academic referrals lead to accommodations that match the presenting problem. Despite the ability to identify specific interventions for the remediation of this problem, it is relatively ineffective for helping to solve these problems prior to the MDT process.

Hypothesis 5 For those academic/behavioral referrals, significant differences were not seen across time. Both nationally and in the current study, approximately 31% of referrals result from combination academic/behavioral concerns. The difficulty faced by many teams include defining the specific problem and prioritizing the concerns. With prioritization of concerns comes the challenge of determining if the behavioral concerns are leading to academic difficulties or if the academic difficulties are resulting in behaviors. The combination academic/behavioral referral, while not the largest reason for student

referrals, may be the most challenging. The challenge, in collaboration with the difficulty and inconsistency in using the problem-solving process, may lead to lowered success.

Hypothesis 6 The hypothesis that SAT/MDT accommodations would match was not supported. A possible explanation as to why the accommodations provided at the SAT and MDT level did not match may include a limitation of resources. With additional resources, such as staff or allocated time and a commitment to remediation, consistency in implementation of the process might follow. The student interventions at the SAT level are also seen as short term interventions that are implemented for quick remediation of the problem. Long-term accommodations or modifications provided on the students' IEPS are carried out on a consistent and on-going basis by regular and special education teachers. For many referrals the presenting problem warrants long-term interventions to successfully provide remediation, but SAT teams are often limited in the time and resources that are given to implementation. For many problems presented to SAT teams, short-term interventions should be sufficient, but only if well-designed and well-monitored.

When the data were combined to allow for further analysis of referral/accommodation matches, results supported the hypothesis that interventions will match reasons for referral over time. By collapsing the partial and full accommodations matches, the information supported the teams' ability to provide accommodation that are consistent with the reason students are referred. Not only are teams better over time at providing interventions that match referrals, for the combination academic/behavioral

referral, teams have designed accommodations that remediate at least one of the areas of concern, as supported by Fuchs and Fuchs (1989).

When looking at SAT referral/accommodation matches, academic referrals were shown to have the greatest consistency. The results were relatively compatible for behavioral and combination academic/behavioral referrals as well. Therefore, despite the large number of academic referrals that resulted in consistent accommodations, a significant decline in these referrals continuing to the MDT level was not supported. With the additional experience in providing interventions for academic concerns due to the large number of referrals, the team may be better able to determine the appropriate option. For behavior concerns, however, fewer of this type of referral resulted in a matching accommodation. These results supported the difficulties noted previously with the ability of the team to provide interventions that were consistent with the presenting problem. Without a match between the reason for referral and the intervention, it is difficult to impact the concern.

General Conclusions While implementation of a process for short-term remediation of academic or behavioral/social concerns is common, this process has not been allocated resources and support to ensure ongoing success. Short-term interventions are often not given appropriate attention early in the process and, therefore, fail to result in any improvement in the problem area. It may be argued that if given additional resources to assist with problem-solving, teachers would: understand the importance of, be willing to design, implement, and monitor interventions; and experience success.

Allocation of resources, in addition to understanding the how the process is used, will most likely lead to continued success, as supported by Aksamit and Rankin (1993). While many teams were trained when implementation of the process began, relatively little, if any, education is given to teams on an ongoing basis. This continued education about how the problem-solving process should look is beneficial not only to ensure that teams understand how to use it, but that it is consistent across team members. With the variation of background and philosophy for individual team members as well as the introduction of new team members, the process may become lost along the way. Key team members that would have participated in the team when early implementation and subsequent education began may have moved off of the team or out of the district, thus leaving new members to continue with the process. With the addition of ongoing education, regardless of background or membership, teams will become familiarized on how to provide interventions that are successful for remediating school problems.

The team make-up must be explored in order to determine the effectiveness of the problem-solving model. While the original SAT teams consisted of regular education teachers as participants in the process, it is imperative that we look beyond what our teams are determining effective to include how teams are functioning. The current SAT practices involve not only a regular education teachers but also special educators as team members. The difficulty with this collaboration involves not only the expert-driven model but also encourages regular education teachers to take a hands-off approach to the problem-solving and implementation of the interventions. If an expert, often the special education representative, is determining the interventions the classroom teacher may lose

not only ownership of the problem but lack interest in the implementation of the intervention. Additional research must address the make-up of the teams in order to determine whether or not the addition of a special education representative, as opposed to the regular education model, impacts the ownership and treatment integrity so vital to the success of this process.

Finally, it can be argued that the teams explored in the current study may have decreased the special education referrals to a greater extent than the data revealed. The results presented did not include any baseline data; therefore, it is difficult to get a reliable picture of what extent SAT teams were able to provide remediation. With no prior information to compare to the results, referral rates could presumably be quite high before this process was adopted. SAT teams would have a greater impact on student concerns if numerous student concerns declined after beginning the problem-solving process, but show this decline was not revealed by the present data.

Implications for Practitioners Previous examination of the effectiveness of SAT teams is inconclusive. Flugum and Reschly (1994) argue that there are decreased levels of creative problem-solving among pre-referral intervention teams. While the current study supports this view, further exploration of the process should assist in determining why it is true. Professionals using the process should be encouraged to continue matching the accommodations to the reason for the referral, defining clearly the problems, and determining successful interventions that remediate everyday problems. Ongoing education and teacher-friendly teams will allow for more successful interventions. The opportunity for consultation among practitioners must continue to counter the increasing

concerns among students. Information regarding what schools are currently doing successfully must be shared so that practitioners can continue with these pieces of problem-solving.

The current study supports the need for further education for SAT teams in order to provide consistency when given a referral. The results do not support progress of SAT teams over time, but if provided with ongoing education, the SAT teams can improve existing practices. Expansion of accommodations utilized by SAT teams may include further exploration of Bahr's coding scheme or may expand it to better reflect what is currently being done in the schools. Appropriate and specific interventions and strengthening the accommodations currently utilized, is imperative to the success of SAT teams. While students will continue to present with difficulties in our schools, professionals must be geared for handling these concerns appropriately and successfully.

Limitations The results of the current study may have been influenced by several uncontrolled factors. The number of students that participated must be taken into consideration. The number of students in each two-year dyad may have been too low to provide a true representation of the SAT team accommodations. In addition, the 1992/94 dyad had the smallest subject pool. Difficulty in locating data that fell into this dyad led to an examination of the results despite the low numbers. With an increase in the number of subjects per dyad, not only would there be a better representation of referrals, but also a more revealing portrayal of SAT practices.

Increasing the number of subjects and enhancing the representation of subjects would strengthen the current study. Subjects from only two school districts participated

in the study. Additional participants would provide a more appropriate representation of the SAT teams across the AEA and the country. The inconsistent structure of the SAT teams across the AEA also likely impacted on the results of the current study. Not only did a limited representation of schools participate, the teams may have been quite varied in membership and how the process was implemented. The sample utilized for the current study is relatively homogenous and may not be adequate for generalizations about SAT team practices across the country.

Finally, by clustering the academic years into two-year groupings may have limited the analysis of differences across years. It is difficult to represent changes that may be occurring across time or yearly through the consolidation of data. Progress that may be made within the two-year dyad may be less detectable than analyzing yearly changes.

Suggestions for Future Research Although mentioned throughout the discussion of each hypothesis, future research should focus on further examination of the practice of pre-referral interventions teams-- as shown not only by a reduction in special education referrals, but also through successful implementation of the process.

While further education on the process is needed to help assist teams in following this method of remediation, examination of the process in general will allow practitioners to determine where the process breaks down. Noell and Greham (1993) assert that the process breaks down because despite resolution of referral concerns, and that teachers are dissatisfied with the consultation process as a result of the dissolution. Future research can examine SAT teams consultation practices. Future research should examine SAT team outcomes before and after further training on problem-solving. A study of this

nature would include consistency among team members and monitoring of the length of the intervention. Further research should also include specificity data and the referral/accommodation match information.

Summary Overall, the effectiveness of SAT teams has yet to be determined. While some teams demonstrated specific accommodation and match the reason for referral to the intervention, consistency and positive outcomes were not demonstrated. Previous research supports the practices of SAT teams in remediating academic, behavior and combination academic/behavior concerns. The current study provided a beginning exploration of how teams are handling referrals and how referrals are effected by SAT teams. Further exploration of what practitioners are providing as interventions, as well as in schools is encouraged. Since referral rates remain highest for academic concerns (followed by combination academic/behavioral concerns and behavior) teams should adopt a process for assisting students prior to special education. The current study may not support the continuation of the SAT process. There should be, however, ongoing exploration of the success of and consistencies in utilizing the principles of the process, including consultation practices.

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Table 1

SAT referrals that went on to MDT by year

	SAT Referrals that lead to MDT	
	Raw Scores	Percentages
Year		
1990/1992	14	42%
1992/1994	13	65%
1994/1996	16	44%
1996/1998	8	19%

Note. Raw scores represent the number of referrals for a given year from a total of 51.

Percentages refer to the number of SAT referrals out of 100 that went on to MDT.

Table 2

Specificity of SAT accommodations by year

Year	Percentages of Specific Accommodation	Raw Scores
1990/1992	73%	24
1992/1994	50%	10
1994/1996	47%	17
1996/1998	67%	28

Note. The raw scores indicate the number of SAT referrals that had specific accommodation from a total of 79. The percentages presented refer to the percentage of SAT referrals that were specific for each given year from a total of 100.

Table 3

Bahr's accommodation coding by year of referral to SAT

Accommodation	1990/92	1992/94	1994/96	1996/98
Individual instruction	19(33%)	13(28%)	22(31%)	24(24%)
Counseling	1(2%)	1(2%)	4(5%)	6(6%)
Placement review/change	1(2%)	0	0	0
Parent training/ involvement	2(2%)	2(4%)	5(3%)	10(10%)
Academic assistance/ training	15(26%)	15(32%)	17(24%)	15(15%)
Behavior intervention	10(17%)	6(13%)	5(7%)	14(14%)
Observation	0	2(4%)	2(3%)	2(2%)
Testing	2(3%)	3(6%)	4(5%)	8(8%)
Parent interview	1(2%)	0	3(4%)	0
Other	8(14%)	5(11%)	12(17%)	20(20%)
TOTAL	58	47	71	99

Note: Both raw scores and percentages are presented in this table. Raw scores indicate the number of responses for each accommodation. Percentages represent the number of times the accommodation is used out of 100.

Table 4

Bahr's accommodation coding by year of referral to MDT

Year	1990/92	1992/94	1994/96	1996/98
Individual instruction	14(39%)	14(39%)	14(34%)	8(35%)
Counseling	0	0	4(10%)	0
Placement review/change	0	0	0	0
Parent training/ involvement	0	0	1(2%)	0
Academic assistance/ training	12(33%)	10(28%)	13(32%)	6(26%)
Behavior intervention	2(6%)	5(14%)	7(17%)	3(13%)
Observation	0	0	0	0
Testing	1(3%)	0	0	1(4%)
Parent interview	1(3%)	1(3%)	0	0
Other	6(17%)	6(17%)	2(5%)	5(22%)
TOTAL	36	36	41	23

Note: Both raw scores and percentages are presented in this table. Raw scores indicate the number of responses for each accommodation. Percentages represent the number of times the accommodation is used out of 100.

Table 5

Specific accommodations by reason for referral

	Specific, well-defined accommodations			
	Academic	Behavioral	Combination	Total
Year				
1990/1992	14(52%)	4(15%)	9(33%)	27
1992/1994	4(40%)	1(10%)	5(50%)	10
1994/1996	11(65%)	2(12%)	4(24%)	17
1996/1998	16(62%)	6(23%)	4(15%)	26
Totals	45(56%)	13(16%)	22(28%)	80

Note. Raw scores are presented for each reason for referral with the totals listed at the end of each column. Percentages represent the number of occurrences out of 100 for each year of the referral.

Table 6

SAT referrals that go on the MDT by reason for referral and year

	Referrals that go on to MDT			
	Academic	Behavioral	Combination	Total
Year				
1990/1992	7(50%)	4(29%)	3(21%)	14
1992/1994	2(15%)	3(23%)	8(62%)	13
1994/1996	10(63%)	1(6%)	5(31%)	16
1996/1998	5(63%)	1(13%)	2(25%)	8
Totals	24(47%)	9(18%)	18(35%)	51

Note. Raw scores are presented for each reason for referral with the totals listed at the end of each column. Percentages represent the number of occurrences out of 100 for each year of the referral.

Table 7

SAT / MDT accommodation match by year

	SAT/ MDT accommodation match			
	Match	No Match	Mix	Total
Year				
1990/1992	5(36%)	6(43%)	3(21%)	14
1992/1994	2(15%)	3(23%)	8(62%)	13
1994/1996	1(6%)	5(31%)	10(63%)	16
1996/1998	0(0%)	1(13%)	7(88%)	8
Totals	8(15%)	15(29%)	28(55%)	51

Note. Raw scores are presented for each reason for accommodation match with the totals listed at the end of each column. Percentages represent the number of occurrences out of 100 for each year of the referral.

Table 8

SAT reason for referral matching the accommodation

	SAT referral/accommodation match			
	Match	No Match	Mix	Total
Year				
1990/1992	25(76%)	2(6%)	6(18%)	33
1992/1994	13(65%)	1(5%)	6(30%)	20
1994/1996	26(72%)	5(14%)	5(14%)	36
1996/1998	37(88%)	0(0%)	5(12%)	42
Totals	101(77%)	8(6%)	22(17%)	131

Note. Raw scores are presented for each reason for SAT/referral accommodation with the totals listed at the end of each column. Percentages represent the number of occurrences out of 100 for each reason for referral according to the year of the referral.

Table 9

SAT referral/accommodation match by reason for referral

	SAT referral/accommodation match			
	Academic	Behavioral	Combination	
Year				
1990/1992	16(62%)	6(23%)	4(15%)	26
1992/1994	8(62%)	3(3%)	2(15%)	13
1994/1996	19(73%)	2(8%)	5(19%)	26
1996/1998	25(69%)	8(23%)	3(8%)	36
Totals	68(67%)	19(18%)	14(14%)	101

Note. Raw scores are presented for each reason for referral with the totals listed at the end of each column. Percentages represent the number of occurrences out of 100 for each year of the referral.

Table 10

Chi square analysis results

Variable	X^2	DF	Significance
SAT referral x Year	.19	6	NS
SAT match x Year	.27	6	NS
SAT specificity x Year	.21	3	.01
MDT referral x Year	.30	6	NS
MDT match x Year	.26	6	NS
MDT specificity x Year	.21	3	.01
MDT/SAT referral match x Year	.28	6	NS
SAT accommodation match x Year	.61	6	NS
SAT combining mix/ match accommodation x Year	.42	3	.05
SAT referral leading to MDT x Year	.41	6	NS
MDT referral percentages x Year	.30	3	.025

Table 10 continued

Note. The table represents the statistical information including the results of the chi square analysis, the degrees of freedom used for analysis, and the level of significance for each statistic that was run.

Appendix A

SAT team data collection information

Identification Number:

Gender:

Age:

Grade:

Reason for SAT referral:

Accommodations:

Reason for MDT referral:

Accommodations

Appendix B

SAT coding sheet

ID # (1, 2 ...)	SAT referral (A, B, C)	SAT accomm (M,NM,Mix)	Spec/ Unsp (S,U)	MDT referral (A,B,C)	MDT accomm (M,NM, Mix)	Spec/ Unsp (S,U)	MDT = SAT referrals (M,NM, Mix)

Appendix C

Information for data coding on reason for referral

Referrals

A = Academic referral (reading [decoding, fluency], math [addition, subtraction, numbers], written language [handwriting, sentence structure], spelling)

B = Behavioral referral (attention, motivation, on-task, hitting/bothering other children, up and out of seat)

C = Combination academic and behavioral concerns (math/attention; reading/disorganized; all subjects/talking and hands on other students; reading/noncompliance with adult requests)

Appendix D

Information for coding accommodation specificity

Specificity for accommodations

S = Specific (social skills group focusing on aggression; sight word drill/practice; reading comprehension small group activities; modify aggressive behavior through plan with counselor)

U = Unspecific (resource room; special education assistance/aid; math facts; behavior plan; reading support)

Appendix E

Information for coding referral/accommodation match

Accommodations

M = Match (reading, drill sight words; math, peer reviews of math concepts; behavior, social skills)

NM = No match (behavior; send homework in reading; writing concerns, social skills group)

Mix = Some match/ some don't match (combination referrals such that accommodations address academics only or behavior only, rather than both reasons for referral)