Reducing Teacher Stress by Implementing Collaborative Problem Solving in a School Setting

Averi Schaubman, Erica Stetson, and Amy Plog

Student behavior affects teacher stress levels and the student-teacher relationship. In this pilot study, teachers were trained in Collaborative Problem Solving (CPS), a cognitive-behavioral model that explains challenging behavior as the result of underlying deficits in the areas of flexibility/adaptability, frustration tolerance, and problem solving. It was hypothesized that teacher stress would be reduced when teachers' understanding of the underlying causes of student behavior shifted to a framework of skills development, and they began using a proactive, positive approach to misbehavior (CPS), with the support of mental health consultation. Results showed a significant decrease in teacher stress, as measured by self-report. Further, discipline referrals were significantly reduced. Limitations of the study and implications for school mental health consultation are also discussed.

Keywords: *challenging behaviors, Collaborative Problem Solving, discipline referrals, mental health consultation, school social work, teacher stress*

Educational professionals nationwide are challenging themselves to figure out how to better educate students with a variety of behavioral and academic needs. In addition to teaching academics, teachers are also

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being asked to teach social-emotional skills, organize extracurricular activities, attend staff meetings, increase their professional development, counsel students, provide supervision during unstructured time, and perform other tasks assigned by their administration (Esteve, 2000). These added responsibilities and lack of pre-service training in how to teach a diverse group of students with a variety of needs has created a great deal of stress for teachers.

With the passage of No Child Left Behind in 2002, school districts are also faced with even more pressure to have students meet state standards for achievement. This legislation requires that students achieve designated benchmarks in the core academic areas and take standardized tests annually to demonstrate their mastery of the material. In addition, there is a requirement that schools implement evidence-based interventions, or ones that have demonstrated effectiveness in teaching new skills or responding to the specific behavioral challenges of the student (http://www.ed.gov/nclb/landing.jhtml). Schools establish annual progress goals with potentially serious consequences if students do not meet these criteria, including the provision of "supplemental services" to students, changes in staff, and the possibility of being taken over by the state or a charter school. These demands put tremendous pressure on teachers to ensure that they can deliver content in their classes. Not only does stress affect teachers' general attitude about teaching, it has also been shown to affect the quality of the relationships they have with their students (Yoon, 2002). Another source of stress for teachers is management of students' behavioral issues. Students' misbehavior has been consistently linked to teachers' reports of stress (Blasé, 1986; Geving, 2007; Yoon, 2002). Most general education teachers do not receive adequate pre-service training to learn how to work with students with behavioral challenges and become highly stressed if the students' behavioral needs exceed the resources available to effectively work with them (Esteve, 2000). If a particular child stresses teachers, they may become unrealistically biased in their judgments and this may result in negative outcomes for the child (Christenson, Ysseldyke, Wang, & Algozzine, 1983). Although students who exhibit disruptive behaviors in school are often referred to the school social worker or psychologist for assessment and intervention, they are also often referred to a school administrator for disciplinary actions. In many circumstances, this results in punitive responses for the student, such as detentions, suspensions, or even expulsion. It has been the authors' experience that it is common for schools to handle disruptive behaviors by focusing on the outward manifestations of the behavior without looking at the underlying issues and assigning consequences to students.

Collaborative Problem Solving, or CPS (Greene & Ablon, 2006; Greene, 2008; Greene, 2010), provides an alternative to focusing on punishment for disruptive behaviors. CPS is a cognitive-behavioral model that defines disruptive behavior (or "meltdowns") as the result of situational demands outstripping the cognitive skills of the child. In other words, children displaying chronically maladaptive behaviors have lagging cognitive skills in the areas of flexibility/adaptability, frustration tolerance, and problem solving. These students have a type of learning disability, although different than one in the areas of reading, math, or writing; rather they have an inability to handle life's emotional, behavioral, and social challenges. Educators, parents, and school mental health professionals work together to figure out what specific skills each challenging student is lacking and what triggers in the environment consistently set the stage for that student's challenging behaviors. The CPS intervention focuses on teaching these lagging skills and creating a more compatible environment between the student and adults.

Supporting teachers in order for them to believe they can effectively work with students with emotional and behavioral problems is a major challenge for mental health professionals in the schools. The needs of some of these students are so significant that they make it difficult for even the most experienced school social workers and psychologists to understand and, therefore, develop effective interventions.

This article reviews the literature on the relationship between teacher stress and student behavior and describes the Collaborative Problem-Solving (CPS) approach (Greene & Ablon, 2006; Greene, 2008; Greene, 2010). It was hypothesized that when CPS was implemented in the school setting, it would provide a model for mental health consultation, and it would give teachers an alternative means of understanding student behavior. Further, because of this consultation and the new understanding of student behavior, there would be reduced teacher stress and decreased disciplinary actions for students with severe emotional and behavioral problems.

Student-Teacher Relationships

When students have warm and trusting relationships with their teachers, they have a better chance for positive school outcomes (Baker, Grant, & Morlock, 2008). Vulnerable children have the greatest need of a teacher's support and guidance (Birch & Ladd, 1997). Teachers can help such students to compensate for other challenges in their lives, and they can provide them with a safe haven during uncertain times.

Students report that it is important to them that their teachers care about them (Muller, Katz, & Dance, 1999). Children define caring as sharing, emotional support, and talking with them about personal problems (Baker, Clark, Maier, & Viger, 2008). In order to develop caring relationships, students need opportunities to interact with their teachers. Waxman and colleagues (Waxman, Huang, Anderson, & Weinstein, 1997) found that one of the differences between effective and ineffective urban schools was that teachers in effective schools simply spent more time interacting with their students. The relationships that develop from these simple interactions have been shown to positively impact students' reported satisfaction with school (Baker, 1999), and grades (Murray & Malmgren, 2005).

Teacher Stress

Lazarus (1993) defined stress as a state of anxiety produced when events and responsibilities exceed one's coping abilities. The feeling of being threatened and a sense that one does not have adequate resources to handle the stressors may accompany stress. The constant pressure of school demands interferes with the development and expression of teachers' creative abilities (Blasé, 1986). Students' misbehavior is often identified as a primary cause of teacher stress (Geving, 2007). Given that many students are experiencing social-emotional stressors that impact behavior—it has been estimated that 20 percent of American children and adolescents experience a mental disorder that at least mildly impairs their everyday functioning (U.S. DHHS, 1999)—it is not surprising that teachers sometimes feel overwhelmed from trying to handle classroom behaviors and students' social-emotional needs. In a qualitative study investigating the sources of teacher stress and their impact on teacher work performance conducted by Blasé, he identified student misbehavior, the overdemands of work, and teacher control and time as significant variables. Stress for teachers increased when owing to these concerns they felt as though they were unable to achieve their professional goals of educating students. "Moreover, as teachers acclimate themselves to school-related demands, they often become overly concerned with the control and routine of their own behaviors and the behavior of their students. In anticipation of student discipline problems, for example, teachers develop lesson plans (i.e., materials, questioning techniques, objectives) with more concern for controlling students than for developing stimulating and meaningfully engaging learning experiences" (Blasé, 1986, p. 32). When teachers are unable to

handle all of their professional responsibilities, and challenging behaviors have an impact on teacher stress levels, student achievement is directly affected.

Secondary-level teachers are thought to experience the most stress on the job (Anderson & Iwanicki, 1984; Innes & Kitto, 1989; Schwab & Iwanicki, 1982). Teachers who identify more behavior problems in their classroom tend to experience the most work-related stress (Geving, 2007). Thus, student behavior problems can have repercussions for both the students' school outcomes and the teachers' feelings of work-related stress. However, there is little research on improving student behavior to reduce teacher stress. More study in this area is needed.

Teacher Interpretations of Student Behaviors

Teachers' beliefs about human interactions affect their interpretations of student behavior (Athanasiou, Geil, Hazel, & Copeland, 2002). Many teachers often believe that the cause of a student's problems are beyond the teacher's control—that they are best explained by factors intrinsic to the child, such as the child's cognitive potential or motivation, or that they are caused by family or other environmental factors outside of school. One study (Ysseldyke, Christenson, Algozzine, & Thurlow, 1983) showed that teachers explained 85 percent of student problems as a result of variables within the child. Teachers typically do not emphasize their own potential contributions to student misbehavior (Athanasiou et al., 2002).

In addition, the way in which a teacher interprets student behavior can have an impact on the teacher-student relationship (Greene, Abidin, & Kmetz, 1997). Greene, Abidin, and Kmetz examined student-teacher compatibility, defined as the degree to which the capacities, motivations, and style of behaving of a student are compatible with the expectations, demands, and other characteristics of his or her teacher. It was hypothesized that behaviorally challenging students might evoke different levels of subjectively experienced stress in different teachers, and that this variability might differentially affect the student-teacher relationship and more global aspects of student adjustment (Greene, et al., 1997). Although teachers tend to downplay their contributions to student misbehavior, it appears that their response to such behaviors has an impact on students' school satisfaction. One study (Baker, 1999) showed that reprimands for behavior were twice as common among students who report low school satisfaction than among students with higher school satisfaction.

It should be noted that this is not to say that teachers' referrals for student misbehavior are based solely on their impression of the student. A

study of teacher referrals conducted by Abidin and Robinson (2002) found that teachers' perceptions of students were based on observed behaviors of students and were not merely reflections of teachers' subjective judgments of students. Further, teachers' stress levels were not the primary reason for referring a student for services.

Teacher stress, however, can affect teacher-student interactions. Greene et al. (1997) examined teachers' experience of stress with students, their perceptions of their relationships with those students, and whether their perceptions had an impact on the way in which they interacted with students in the classroom. They found that teacher behavior toward those students with behavioral challenges was more negative and neutral than behaviors toward the students without these challenges. As teacher stress level related to self-perception as a competent professional increased, the number of positive and neutral behaviors demonstrated toward the behaviorally challenged student decreased.

Thus, it is easy to imagine a vicious cycle, wherein teachers interpret misbehavior as something beyond their control, their response is only reactive—to reprimand the student—perhaps leading to the student's greater dissatisfaction with school and an increased likelihood of further misbehavior (Baker, Grant, et al., 2008), which would only increase the teacher's level of stress and likelihood of a negative response, such as reprimanding or punishing the student.

Proactive Versus Reactive Classroom Management

Proactive classroom management is a teacher's use of strategies to decrease the likelihood that a child will demonstrate inappropriate behaviors. The idea is to alter a situation before a problem escalates. In contrast, reactive management occurs following a child's inappropriate behavior. Teachers who use predominantly reactive strategies report elevated stress due to workload, student misbehavior, time and resources, and relationships with colleagues (Clunies-Ross, Little, & Kienhuis, 2008). In addition, there is evidence that reactive management is not only harmful to teachers, but harmful to students as well. One study (Beaman, Wheldall, & Kemp, 2006) found that when teachers engaged in more reactive management, students reported being less engaged, and their on-task behaviors declined.

Interestingly, teachers tend to respond positively when students exhibit appropriate academic behaviors, and yet they tend to ignore positive social behaviors and respond negatively to inappropriate social behavior. In a study of Australian primary teachers, Clunies-Ross and colleagues (2008) found that while teachers were, overall, responding

more positively than negatively to children, there was a difference when responses to academic behaviors versus social behaviors were compared. The mean percent of positive responses to academic behavior was 43.93 percent and the mean for negative responses to academic behavior was only 8.82 percent. In contrast, when one looks at the responses to social behavior, the mean for positive responses was only 12.29 percent and that for negative responses was 34.96 percent. So while teachers are, overall, positive and proactive, this must be attributed primarily to their responses to academic behaviors. Responses to social behaviors are more likely to be negative.

The use of proactive, positive approaches brings greater benefits to both teachers and students. Given this evidence of decreased stress for teachers, greater student engagement and more on-task behaviors, it seems important for support staff and administrators to facilitate teachers' proactive and positive behavior management. Since general education teachers do not receive a great deal of education and training on teaching social-emotional skills, this becomes a valuable role for school mental health professionals.

Collaborative Problem Solving

Collaborative Problem Solving (CPS) (Greene & Ablon, 2006; Greene, 2008; Greene, 2010) is a cognitive-behavioral, transactional model based on the premise that a child's outcome is a function of the compatibility between child and adult characteristics. Behavior problems are one possible manifestation of poor child-adult compatibility. The central philosophy is "Children do well if they can," and it emphasizes the adult's role in helping children to learn new skills and develop better solutions to their problems. The model sets forth two major tenets: first, that challenging behaviors are best understood as the by-product of lagging cognitive skills (rather than, for example, as attention-seeking, manipulative, limit-testing, or a sign of poor motivation); and second, that these challenges are best addressed by teaching children the skills they lack, rather than through reward and punishment programs (http://lostatschool.org/different/index.htm; http://www.thinkkids.org). Greene and Ablon (2006) propose that children with behavior problems have lagging skills in the areas of flexibility/adaptability, frustration tolerance, and problem solving. Thus, oppositional behavior, for example, is viewed as the result of a developmental delay, a learning disability of sorts that prevents children and adolescents from being able to respond adaptively to adult expectations.

CPS has been shown to reduce problematic behavior and the necessity of restraints in clinical and school settings (Greene, Ablon, & Goring, 2003; Greene, Ablon, & Martin, 2006; Martin, Krieg, Esposito, Stubbe, & Cardona, 2008; Mohr, Olson, Martin, & Pumariega, 2009; Regan, Curtin, & Vorderer, 2006). Restraints were decreased dramatically at an in-patient child psychiatric unit in Massachusetts following implementation of CPS. Nine months prior to training in the model, the unit recorded 281 episodes of restraint. Fifteen months following implementation, there was only one documented case of physical restraint (Greene, Ablon, & Martin, 2006). According to unpublished data from a study conducted in Maryland at a regional program for twenty to twenty-five elementary students with significant emotional disturbance, it was found that prior to training in CPS, there were twenty-five physical restraints and 6,223 minutes out of class for time-outs in one month. Following implementation of CPS, there was one physical restraint and 789 minutes out of class in a one-month period (J. Stuart Ablon, personal communication, February 24, 2010).

In families that learn the CPS model, a declining trend in oppositional behaviors continues even after professional intervention has stopped (Greene et al., 2004). This study compared the intervention effects of both Parent Management Training (PMT) (Barkley, 1997) and Collaborative Problem Solving (CPS) and demonstrated that while those families trained in PMT showed behavioral improvement while the family was in treatment, it was difficult to sustain that improvement without the support of a clinician over time. When CPS was implemented, the children continued to exhibit improvement at a four-month follow-up. These results are thought to be due to the focus on building skills to help children become more flexible, tolerant, and able to solve problems rather than solely focusing on managing behaviors.

CPS was chosen for the current study because of its demonstrated impact and its positive way of conceptualizing maladaptive behaviors, proactive approach, and focus on the adult-child relationships. Since this project was undertaken as an effort to reduce teacher stress and improve teachers' abilities to work with students with challenging behaviors, several characteristics of CPS were thought to be potentially beneficial. Specifically, teaching adults to look for underlying cognitive deficits that may be causing problem behaviors, as opposed to just focusing on the behavior itself, and providing a procedure for adults and children to collaborate together to solve problems facilitates a warm teacher-student relationship and also alleviates teacher stress around the challenging behavior.

Rationale for Study

A positive teacher-student relationship is important to school success. When students exhibit problem behavior, it increases teacher stress, especially when teachers believe the behavior is caused by factors beyond the teacher's control. This was the case at the alternative middle school program in the authors' school district. The site was selected because the teachers requested support in working with their most difficult and vulnerable students.

Students were referred to this alternative program because they were struggling academically, behaviorally, or socially, in their traditional middle school. It was anticipated that had they stayed in their "home" school, they would not have had positive school outcomes. When this study began, the school was experiencing high rates of problem behaviors, as well as many suspensions. It was hypothesized that by changing the way the teachers thought about problematic student behaviors, teacher-student relationships would improve, thereby reducing both problem behaviors at the school and work-related stress experienced by the teachers.

In this pilot study, a positive, proactive approach to student behavior, Collaborative Problem Solving, was presented to teachers in an attempt to shift the way they interpreted student misbehavior, so that they no longer viewed misbehavior as purposeful and malicious, but rather understood it as a maladaptive attempt by the student to solve his or her problems. Teachers were trained to identify lagging skills in students and to work collaboratively with their students to solve problems and improve skills. It was hypothesized that as teachers became more adept at using the CPS model, they would view their students in a more positive light and experience less work-related stress, and that the school would experience a decrease in disciplinary actions as the teachers took a more positive and proactive approach to student behavior.

Methods

Participants and Setting

This pilot study was undertaken at an alternative school for 7th- and 8th-graders who have not been successful in the traditional, large middle school environment in a suburban Colorado school district. The program serves a total of a hundred students, who benefit from a smaller environment in which they have the opportunity to develop close relationships with their teachers and receive more individualized instruction. Students receive all of their academic core classes (Language Arts, Social Studies,

Science, and Math) as well as some elective classes. The teachers work as a close-knit team and know all of the students well, as they have all of the students in their classes at some point during the day.

This pilot study began out of necessity because of teacher-stated concerns about the intensive needs of the students referred to the program over the two years preceding the study. As resources in the community have decreased, students with significant behavioral challenges are being served in the public schools with minimal supports. When students are unsuccessful, their traditional schools refer them to an alternative placement in the hopes that they will be more successful in this environment. The teachers at this school are not trained in special education; they are general education teachers with a passion for working with students who learn in an alternative way or need a different environment. The program has successfully served a total of 500 students over the six years that it has been in existence. However, the current group of students posed such diverse needs that the teachers voiced concerns about how to best work with them and became stressed when their "tool box" was exhausted and their usual strategies did not work. The site was identified as having strong research potential because the staff had no previous exposure to CPS, were motivated to try something new, and the social worker in the building had received intensive training in the CPS process.

Eight teachers participated in the pilot study, and each teacher identified two of their most challenging students to focus on during the course of the study, for a total of sixteen students. Owing to constraints of the program (time of year when issue was discussed, time needed for administrative approval, availability of district in-service days to provide training, first year that social worker with knowledge of CPS was working in building), the study was begun in late February of the school year and intervention was only able to occur for a nine-week period before the school year ended. As a pilot study, it provided useful data to guide further intervention.

Measures

The instrument that was chosen for use in this project was the Index of Teaching Stress (ITS) (Abidin, Greene, & Konold, 2004). This instrument assesses the causes of stress that emanate from the process of teaching a specific student. It does not rate specific traits of the teachers. The instrument is divided into two domain areas: child characteristics and teacher characteristics. Within each domain, there are several subscales focused on eliciting information on aspects of both the child and

the teaching relationship that may influence the level of stress reported. The child characteristics domain measures child-related factors that can have an impact on student stress, such as emotional lability, anxiety/withdrawal, low ability, and aggressiveness/conduct problems. In addition, there is a specific scale for ADHD in order to determine the teacher's perception of ADHD types of behaviors (the student does not necessarily need to be diagnosed as having ADHD). This scale was included because the authors found in their experience that many of the behaviors associated with ADHD create a great deal of stress in the classroom. The teacher characteristics domain included items to measure sense of competence, loss of satisfaction in teaching, disruptions to the teaching process, and frustration in working with parents. The total scale represents a summative measure of the distress induced in the teacher as a result of the presence of a particular student in the teacher's classroom (Greene et al., 1997). The ITS was completed by the teachers for each of the two students identified prior to any intervention as a baseline and again at the end of the year as a post-test.

In addition, discipline referral data was collected for each student. Discipline referrals occur when a student demonstrates behaviors in violation of school policy or the student does not respond to the classroom-management techniques of the teacher. In this case, the teacher writes a behavior report and the student is sent to the office, where a Dean of Students meets with the student to discuss the situation and assign consequences if necessary. This school participates in Positive Behavior Support (PBS) and has the advantage of all behavioral referrals being entered into a database, SWIS (School Wide Information System), which can later be accessed to analyze the information. The information collected included the problem behavior, location, time of day, whether another person was involved in the incident, and the referring teacher.

Finally, each teacher was rated on the degree to which he or she implemented CPS with fidelity. A Likert scale from 1 to 5 was used to rate the teachers at the end of the project in terms of how well they understood and implemented the components of CPS, with 1 being low and 5 being high. These scores were ascribed to each teacher by the authors based upon observation of the teachers' interventions with students and participation in ongoing consultation throughout the project.

Intervention and Procedure

Teachers participated in a total of twelve hours of training on CPS conducted by the authors over a two-day period. The training consisted

of learning about the philosophy of CPS, skills training in implementing the model, and specific assessment and planning on the sixteen students selected by the teachers. During the project, weekly consultation for seventy-five minutes over eight weeks was provided by one of the authors and another district psychologist trained in CPS, to discuss specific students and troubleshoot in order to increase the staff's skills in using CPS effectively. In addition, the on-site social worker provided individual support to staff and coaching during Plan B conversations to increase their skills. A comprehensive description of the CPS model is beyond the scope of this article, but a brief outline of the main principles follows.

The first step of CPS is identifying a child's "pathways" or specific lagging skills that are resulting in behavior problems. The Assessment of Lagging Skills and Unsolved Problems, or ALSUP (Greene & Ablon, 2006), currently known as the Thinking Skills Inventory (www.thinkkids.org), identifies the lagging cognitive skills that often result in behavior problems. By identifying these unlearned skills, adults learn to view behavior in a new light—not as a child's purposeful efforts to create problems for others, but as the result of lagging thinking skills. Through empathy and reassurance, adults learn about the child's perception of the problem and triggers that precipitate the behavior, allowing the child to feel heard and understood in the process. In this way, the challenging behaviors are viewed as "problems to be solved" rather than behaviors to be managed or stopped. Just as children with dyslexia resist reading because it is difficult for them because of a learning disability not because they want to create difficulties for others, children with behavior problems also have a disability in the areas of frustration tolerance, flexibility, and problem solving and need help to develop these skills in order to function more adaptively.

The second step of CPS is prioritizing what unsolved problems will be addressed first. Unmet expectations are categorized in Plans A, B, and C. These "plans" refer to ways in which the adult can respond when a child does not meet the adult's demands or expectations. In Plan C are things the adult will let go of, for now, in order to stabilize the situation or because other behaviors were rated as higher priorities. They will be addressed at a later time. In Plan A are goals that the adult will pursue regardless of the child's concerns and usually reflect imposing the adult's will on the child. Plan B is where the collaborative work is done, and where the child has the opportunity to learn new skills.

Plan B involves three steps: empathy, problem definition, and an invitation to solve the problem. During empathy, the adult makes it clear that he/she understands the child's concern by "drilling down," to truly understand the child's perspective and concern about the problem. This

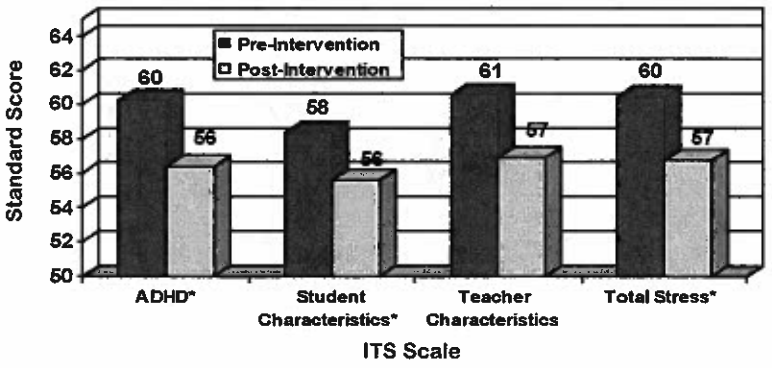
is accomplished through reflective listening, clarifying questions, and educated guessing in order to obtain a clear picture of the child's point of view. In order to define the problem, not only is the child's concern clarified, but the adult must also describe his or her own concern. Adult concerns usually involve issues of health, safety, learning, or how the child's behavior affects others. Once two concerns are "on the table," problem solving can begin. Finally, the adult asks the child to work with him or her to come up with a mutually satisfying solution to the problem.

Results

Pre and post assessments of the ADHD, Student Characteristics, Teacher Characteristics, and Total Stress scales on the ITS were compared using one-tailed *t*-tests. As shown in figure 1, all four scale scores on the ITS were lower at the post-intervention administration. For three of the four scales, ADHD, Student Characteristics, and Total Stress, these differences were statistically significant ($p < .05$). This reflects a lower degree to which the teachers find coping with the student's ADHD-type behaviors frustrating and distressful, a lower level of stress coping with the student's temperament and classroom behaviors, and a lower level of overall stress.

Teachers trained for the study were rated on their implementation of the CPS model using the Likert scale previously described. In order to assess the impact of the quality of implementation of CPS on changes in

Figure 1. Pre-Post Changes on Four ITS Scale Scores

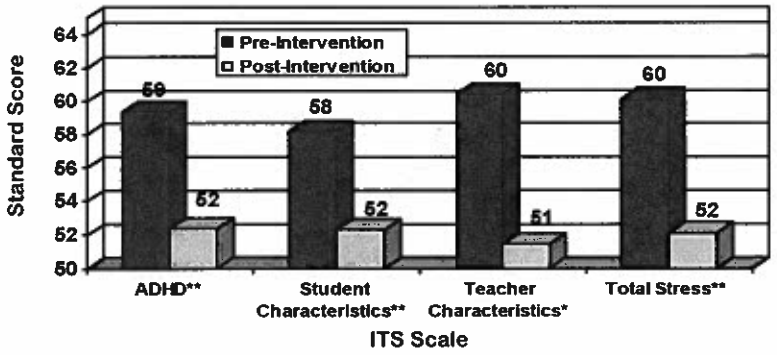


For all comparisons, $n = 16$ students.
*Difference was found to be statistically significant (one-tailed *t*-test; $p < .05$).

teachers' self-reported stress, the *t*-test analysis was repeated using only students of those teachers who were rated as having adequately implemented CPS. Five of the teachers received a score of 4 or 5 on the Likert scale rating competency in implementing CPS. The *t*-test with the students of only these five teachers showed again that all four scale scores were lower (see figure 2), with each difference achieving statistical significance. The ADHD, Student Characteristics, and Total Stress scales were significant at the $p < .01$ level, and the Teacher Characteristics scale was significant at the $p < .05$ level. Not surprisingly, indicators of the positive influence of the CPS training were stronger when data were collected only from teachers who were highly rated regarding their understanding and implementation of the model. Given the relatively small sample size, however, the degree of difference necessary to achieve significance speaks to the overall strength of the effect size.

In addition to the positive impact on teacher stress, comparison of pre- and post-intervention office referral data revealed a significant drop in the number of behavioral referrals for the sixteen students. Examples of referable behaviors included, but were not limited to, fighting, cussing at a teacher or peer, refusal to follow adult directions, frequent talking out in class, constant off-task behaviors, and excessive tardies. Prior to the CPS intervention, students had an average of 8.8 behavior referrals over a three-month time period. Following the intervention, this number

Figure 2. Pre-Post Changes on Four ITS Scores for Teachers Who Had Adequately Implemented CPS

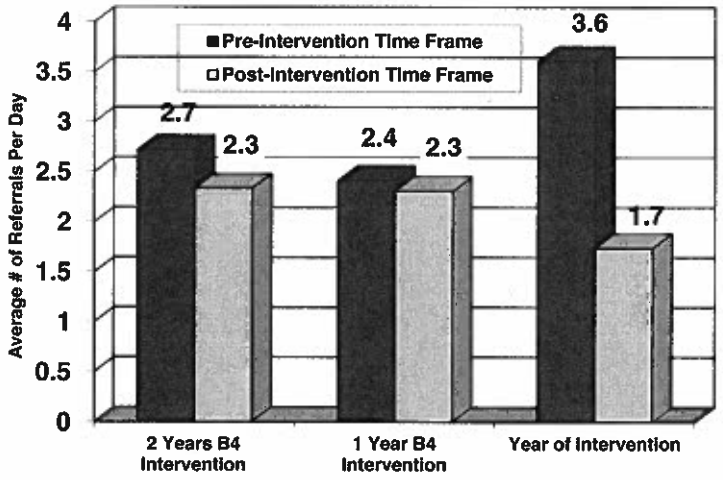


For all comparisons, $n = 10$ students. Only students whose teachers were rated as having adequately implemented the intervention were included in these comparisons.
*Difference was found to be statistically significant (one-tailed *t*-test: $p < .05$, **= $p < .01$).

was 2.4. A *t*-test comparison of pre- and post-behavior referrals achieved statistical significance ($t = 5.54$, $p < .01$). In order to determine whether this apparent change was reflective of the entire student population, comparison of the schoolwide average number of behavior referrals per day prior to and following the intervention was made. In addition, as a cursory way of assessing whether any changes that were found simply reflected fall-to-spring changes in behavior referrals, comparisons of behavior referrals in the time frame prior to and following CPS implementation were made for each of the two years prior to implementation of CPS as well. This information is reported in figure 3. For each of the three years, *t*-tests were conducted comparing "pre" and "post" average behavior referrals; only for the years of CPS implementation was this difference statistically significant ($p < .05$).

Data on student referrals to the office, including suspensions and expulsions, were examined to determine if the school had reduced disruptive behaviors. The school had 177 referrals to the office from March to June (during and after CPS training). That is an average of 2.7 referrals per day, as shown in figure 3. Prior to CPS training, the school had 419

Figure 3. Pre-Post Changes on Schoolwide Average Number of Referrals Per Day Two Years Prior to the Intervention, One Year Prior to the Intervention, and the Year of the Intervention



*$t = 2.25$, $p < .05$

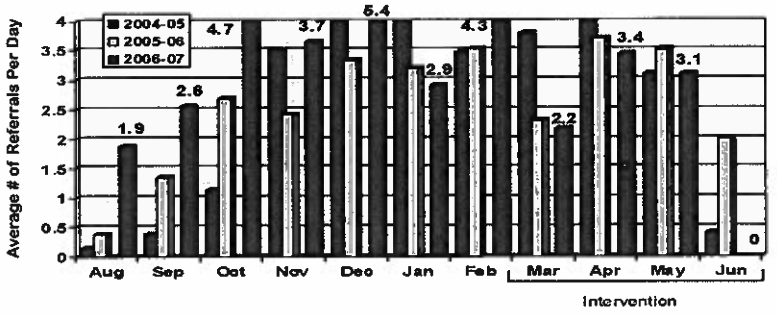
referrals in 116 days of that school year, or an average of 3.6 referrals per day. During the same three-month period (March to June) a year earlier, the school had 185 referrals, an average of 3.0 referrals per day. Thus, in comparison to earlier in the same school year, and also in comparison to the same time of the school year a year earlier, the number of office referrals was reduced.

A closer look at behavioral trends within the school indicates that office referrals were increasing in comparison to the two previous school years until the CPS intervention began. As figure 4 shows, before CPS training, office referrals were higher each month (with the exception of the month of January) than in the corresponding month of the previous two years. However, after teachers had been trained in CPS, there were fewer office referrals each month than there had been in either of the previous two years. Thus, the trend of increased office referrals was reversed during the CPS training.

Discussion

This pilot study shows promising results for lowering teacher stress and reducing problem behaviors by training teachers in a proactive, positive approach to behavior. Teachers participating in this study were trained in Collaborative Problem Solving, in which adults analyze misbehavior by going through a process of identifying which cognitive skill deficits are preventing the child from meeting adult expectations. The

Figure 4. Schoolwide Average Number of Referrals Per Day Two Years Prior to the Intervention, One Year Prior to the Intervention, and the Year of the Intervention Reported Separately by Month



goals are to identify lagging skills and teach them through mutual problem solving. Thus, misbehavior is not viewed as a volitional attempt to manipulate others so that the child can get his or her way, but as a maladaptive way of trying to solve a problem. The hypothesis of this study was that if teachers shifted their explanation of student misbehavior—from seeing it as an intentional act to understanding it as a skill deficit or learning disability—they would experience less work-related stress and have a different perception of the challenging behaviors. In addition, problem behaviors would decline.

In this study, we did find a decrease in both teacher stress and student misbehavior. Teachers reported significantly less stress, as measured by the ITS, after training and implementation of CPS. Of interest, not only did they report experiencing less stress themselves, but also they reported fewer symptoms of emotional distress in their students. The ITS shows a significant decrease in ADHD symptoms, as reported by teachers. Given that the pre and post ITS were completed within four months, the question arises: Did the students actually exhibit fewer ADHD symptoms, or did the teachers perceive fewer symptoms because they were more tolerant and now viewed problem behaviors in a different light?

A limitation of this study is that we did not assess teacher interpretations of misbehavior before and after intervention. The CPS model trains adults to think of behavior problems in terms of cognitive deficits, like a learning disability. The philosophy of "Children do well if they can," is a shift away from interpreting misbehavior as malevolent and purposeful. We believe that the teachers in this study did view misbehavior in a new light, and that this changed perception led to decreased stress and a decrease in reported student maladaptive behaviors, but we did not specifically assess their interpretations of misbehavior. It is possible that the teachers simply felt more supported in their efforts to deal with misbehavior because of the consultation, so they made fewer referrals and reported lower stress levels. In the future, it will be important to assess teacher perceptions of the underlying causes of misbehavior both before and after intervention.

This was a pilot study and the sample size was very small. The promising results indicate that a replication study with a larger sample size is warranted. Further, the intervention time was nine weeks. Most likely, there would have been further gains with a longer implementation period, which would have allowed the teachers to increase their skill in using the CPS model, and the students to make even greater gains. Only five of the eight teachers were rated as adequately implementing CPS in this short time. Assessments of fidelity were not subject to reliability

checks. Should training in CPS be conducted over a longer period of time, it is predicted that the results would be even more dramatic. While problem behaviors were reduced, there remained an average of 1.7 referrals per day. Clearly, a goal in the future would be to reduce referrals even further.

Given the promising results shown here, future research could assess the use of CPS in reducing teacher stress in a larger, more typical school. This study took place in an alternative setting, where teachers feel committed to supporting nontraditional students. Further research in a traditional school would provide a bigger sample size. Another factor to consider is the short intervention period implemented in this study. The results are promising and it would be interesting to measure teacher stress and student referrals over a year or more. This would provide the teachers more opportunities for training and practice in CPS. Ideally, future studies would include a control group, which we were unable to include. In this study, the staff of the whole school was trained in CPS, which was ideal, because students interact with various staff members throughout their day. Further research might match two schools with roughly equivalent populations and measure teacher stress, teacher perceptions of student misbehaviors, and referral data over the course of a year, while one school implements the CPS model, and the other school does not. A control group would strengthen the design of the study.

In addition, this study demonstrated the key role school mental health professionals can play in supporting teachers to work with students with challenging behaviors. Through training, consultation, and on-site coaching, the authors were able to have a direct impact on the reduction of teachers' stress levels by providing them with an alternative means of understanding students' challenging behaviors and teaching them new skills to effectively problem-solve with their students. In turn, this created an opportunity for positive interactions and an improved school climate as evidenced by a reduction in behavior referrals. It is common in many schools for administrators and teachers to request that school social workers and psychologists remove students with behavioral problems from the classroom and work with them individually in their offices. This approach is often used in order to allow the teachers to get back to the "business of teaching academics" and in order to not disrupt the learning environment of other students. However, this approach does not provide a long-term solution as to how to work with these students in the classroom, nor does it take into account the dynamic nature of the classroom. It has been our experience that we can calm a student down and teach them social-emotional skills in our offices; however, these skills

usually do not generalize, and the problems often repeat themselves. Also, when students are removed, they miss valuable instruction and do not have a way to catch up. As a result, they are often disruptive when they return to the classroom. Through this consultation model, teachers learned how to work more effectively with the students so they could remain in the classroom and be more available for learning. They also became more aware of the need to teach social-emotional skills in the areas of problem solving, frustration tolerance, and flexibility in addition to academic material in order for students to be successful. Many of the students we work with are complicated, and a transactional approach is needed to consider both the child's characteristics and the environment. Through a collaborative process between mental health staff, teachers, and students, teachers can feel supported in their work and students will learn valuable academic and life skills.

Students who exhibit maladaptive behaviors are often misunderstood. Instead of striving to ignore or punish, we need to seek understanding. Vulnerable children are the most in need of a positive teacher-student relationship and often the least likely to have it. By supporting teachers in a collaborative manner, we can reduce teacher stress and student misbehavior, paving the way for the positive teacher-student relationship these children desperately need.

References

Abidin, R. R., Greene, R. W., & Konold, T. R. (2004). Index of teaching stress (ITS): Professional manual. Lutz, FL: Psychological Assessment Resources, Inc.

Abidin, R., & Robinson, L. (2002). Stress, biases or professionalism: What drives teachers' referral judgments of students with challenging behaviors? *Journal of Emotional and Behavioral Disorders, 10*, 204–212.

Anderson, M. B. G., & Iwanicki, E. F. (1984). Teacher motivation and its relationship to burnout. *Educational Administration Quarterly, 20*, 109–132.

Athanasiou, M. S., Geil, M., Hazel, C. E., & Copeland, E. P. (2002). A look inside school-based consultation: A qualitative study of the beliefs and practices of school psychologists and teachers. *School Psychology Quarterly, 17*, 258–298.

Baker, J. A. (1999). Teacher-student interaction in urban at-risk classrooms: Differential behavior, relationship quality and student satisfaction with school. *Elementary School Journal, 100*(1), 57–70.

Baker, J. A., Clark, T. P., Maier, K. S., & Viger, S. (2008). The differential influence of instructional context on the academic engagement of students with behavior problems. *Teaching and Teacher Education: An International Journal of Research and Studies, 24*, 1876–1883.

Baker, J. A., Grant, S., & Morlock, L. (2008). The teacher-student relationship as a developmental context for children with internalizing or externalizing behavior problems. *School Psychology Quarterly, 23*(1), 3–15.

Barkley, R. A. (1997). *Defiant child: A clinician's manual for assessment and parent training, 2nd edition.* New York: Guilford Press.

Beaman, R., Wheldall, K., & Kemp, C. (2006). Differential teacher attention to boys and girls in the classroom. *Educational Review, 58*, 339–366.

Birch, S. H., & Ladd, G. W. (1997). The teacher-child relationship and children's early school adjustment. *Journal of School Psychology, 35*, 67–79.

Blasé, J. (1986). A qualitative analysis of sources of teacher stress: Consequences for performance. *American Educational Research Journal, 23*(1), 13–40. DOI:10.3102/00028312023001013

Christenson, S., Ysseldyke, J., Wang, J. J., & Algozzine, B. (1983). Teachers' attributions for problems that result in referral for psychoeducational evaluation. *Journal of Educational Research, 76*, 174–180.

Clunies-Ross, P., Little, E., & Kienhuis, M. (2008). Self-reported and actual use of proactive and reactive classroom management strategies and their relationship to teacher stress and student behavior. *Educational Psychology, 28*, 693–710.

Esteve, J. (2000). The transformation of the teacher's role at the end of the twentieth century: New challenges for the future. *Educational Review, 52*, 197–207.

Geving, A. M. (2007). Identifying the types of student and teacher behaviors associated with teacher stress. *Teaching and Teacher Education, 23*, 624–640.

Greene, R. W. (2008). *Lost at school: Why our kids with behavioral challenges are falling through the cracks and how we can help them.* New York: Scribner.

Greene, R. W. (2010). *The explosive child: A new approach to understanding and parenting easily frustrated, chronically inflexible children* (3rd ed.). New York: HarperCollins.

Greene, R. W., Abidin, R., & Kmetz, C. (1997). The Index of Teaching Stress: A measure of student-teacher compatibility. *Journal of School Psychology, 35*, 239–259.

Greene, R. W., & Ablon, J. S. (2006). *Treating explosive kids: The collaborative problem-solving approach.* New York: The Guilford Press.

Greene, R. W., Ablon, J. S., & Goring, J. (2003). A transactional model of oppositional behavior: Underpinnings of the Collaborative Problem Solving approach. *Journal of Psychosomatic Research, 55*, 67–75.

Greene, R. W., Ablon, J. S., Goring, J., Raezer-Blakely, L., Markey, J., Monuteaux, et al. (2004). Effectiveness of collaborative problem-solving in affectively dysregulated children with oppositional defiant disorder: Initial findings. *Journal of Consulting and Clinical Psychology, 72*, 1157–1164.

Greene, R. W., Ablon, J. S., & Martin, A. (2006). Innovations: Child psychiatry: Use of collaborative problem solving to reduce seclusion and restraint in child and adolescent inpatient units. *Psychiatric Services, 57*, 610–612.

Innes, J. M., & Kitto, S. (1989). Neuroticism, self-consciousness and coping strategies, and occupational stress in high school teachers. *Personality and Individual Difference, 10*, 303–312.

Lazarus, B. D. (1993). Self-management and achievement of students with behavior disorders. *Psychology in the Schools, 30*(1), 67–74.

Martin, A., Krieg, H., Esposito, F., Stubbe, D., & Cardona, L. (2008). Reduction of restraint and seclusion: A five-year prospective inpatient study. *Psychiatric Services, 59*, 1406–1412.

Mohr, W., Olson, J., Martin, A., & Pumariega, A. (2009). Beyond point and level systems: Moving toward child-centered programming. *American Journal of Orthopsychiatry, 79*(1), 8–18. DOI: 10.1037/a0015375.

Muller, C., Katz, S. R., & Dance, L. J. (1999). Investing in teaching and learning: Dynamics of the teacher-student relationship from each actor's perspective. *Urban Education, 34*, 292–337.

Murray, C., & Malmgren, K. (2005). Implementing a teacher-student relationship program in a high-poverty urban school: Effects on social, emotional, and academic adjustment and lessons learned. *Journal of School Psychology, 43*, 137–152.

Regan, K., Curtin, C., & Vorderer, L. (2006). Paradigm shifts in inpatient psychiatric care of children: Approaching child and family-centered care. *Journal of Child and Adolescent Psychiatric Nursing, 19*, 29–40.

Schwab, R. L., & Iwanicki, E. F. (1982). Who are our burned out teachers? *Educational Research Quarterly, 7*(2), 5–16.

U.S. Department of Health and Human Services. (1999). *Mental Health: A Report of the Surgeon General.* Rockville, MD: U.S. Department of Health and Human Services.

Waxman, H. C., Huang, S.-Y. L., Anderson, L., & Weinstein, T. (1997). Classroom process differences in inner-city elementary schools. *Journal of Educational Research, 91*(1), 49–59.

Yoon, J. (2002) Teacher characteristics as predictors of teacher-student relationships: Stress, negative affect and self-efficacy. *Social Behavior and Personality, 30*, 485–494.

Ysseldyke, J. E., Christenson, S., Algozzine, B., & Thurlow, M. L. (1983). *Classroom teachers' attributions for students exhibiting different behaviors* (Report No. BBB17903). Minneapolis, MN: Minneapolis Institute for Research on Learning Disabilities. (ERIC Document Reproduction Service No. ED236848)