
Research Into Practice

A Randomized Evaluation of the Safe and Civil Schools Model for Positive Behavioral Interventions and Supports at Elementary Schools in a Large Urban School District

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Abstract. In this article, we report the results from a randomized evaluation of the Safe and Civil Schools (SCS) model for school-wide positive behavioral interventions and supports. Thirty-two elementary schools in a large urban school district were randomly assigned to an initial training cohort or a wait-list control group. Results suggested that SCS training positively affected school policies and student behavior. Surveys administered after the commencement of SCS training found large improvements in staff perceptions of school behavior policies and student behavior at schools receiving SCS training that were not observed at wait-list schools. Similarly, we observed reductions in student suspensions at schools implementing SCS that were not observed at control schools. The observed improvements persisted through the second year of trainings, and once the wait-list control schools commenced SCS training, they experienced similar improvements in school policies and student behavior.

Student misbehavior has long been a problem for educators (Danforth & Smith, 2005). In today's schools, disciplining students who misbehave is one of the major tasks educators must face (Nelson & Colvin, 1996). Although major violent or criminal actions in schools continue to decrease, disruptive behaviors (e.g., noncompliance, disrespect, tar-

diness, truancy) seem to be increasing (National Center for Educational Statistics, 2007, 2010). In the public perception, discipline ranks second in the list of biggest challenges faced by public schools (Bushaw & Lopez, 2010).

Students' disruptive behavior can make other students feel unsafe in school (Mijano-

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vich & Weitzman, 2003), can reduce instructional time (McEvoy & Welker, 2000), and is often cited as the primary reason new teachers leave the profession within 5 years (Schlichte, Yssel, & Merbler, 2005; Sprick, Garrison, & Howard, 1998; Sprick, 2009).

Traditionally, educators resort to punitive methods (e.g., verbal reprimands, time outs, restitution, referrals, suspensions) in their efforts to make students behave appropriately, which are ineffective in improving student behavior (Gottfredson, 1997; Maag, 2001; Skiba, 2000). In fact, punitive methods often serve more to exert authority over the student than to change irresponsible behavior (Noguera, 1995; Sprick, Sprick, & Garrison, 1992). A consensus in the literature argues that punitive methods have no lasting effect on student behavior and, if successful at all, serve to mitigate misbehavior only in the short term (Carr et al., 1999; Skiba & Peterson, 1999).

Research in the areas of applied behavioral analysis, effective schools, and systems change have coalesced over the past 30 years into a set of strategies and policies designed to improve student behavior within a framework of multitiered positive, proactive, and instructional supports. Horner and colleagues (1990) coined the term *positive behavior supports* in 1990 to encompass this set of strategies.

The term *positive behavior supports* referred generically to behavioral strategies that incorporated fundamental characteristics such as stating expectations for behavior in a positive manner, teaching those expectations overtly, using quantitative data to make decisions, and monitoring and measuring the effectiveness of implementation (Warger, 1999). Although originally conceptualized as an approach used at the individual student level, a systems-level perspective has led to the incorporation of these strategies into a prevention-oriented, school-wide framework for encouraging appropriate behavior among all students. With the reauthorization of the Individuals with Disabilities Act in 2004, Congress referred to positive behavior support strategies as positive behavioral interventions and supports (PBIS). The U.S. Department of Education has since used that term, or the

acronym PBIS, generically in reference to any model or curriculum that employs a proactive “positive, multitiered continuum of evidence-based behavioral interventions that support the behavioral competence of all students” (A. Posny, personal communication, September 7, 2010). In contrast to traditional methods of behavior management, PBIS strategies are proactive and instructional, and previous analyses have demonstrated their effectiveness at reducing problem behaviors at the whole-school level (Lassen, Steel, & Sailor, 2006; Lewis, Sugai, & Colvin, 1998; OSEP Center on Positive Behavioral Interventions and Supports, 2009).

The Safe and Civil Schools (SCS) model is an approach to PBIS that was derived from Sprick et al. (1992), which also served as the conceptual basis for other PBIS approaches. The SCS model was designed to improve students’ social and academic outcomes, and to support staff in their endeavors to teach appropriate behavior and correct misbehavior through “a comprehensive, multimedia program that guides staff through the process of designing a positive and proactive school-wide discipline plan.” Program implementation includes a variety of resource materials to help schools address specific objectives, coupled with ongoing multiyear professional development services (Safe and Civil Schools, 2011). Training is provided to administrators, teachers, specialists, paraprofessionals, bus drivers, and others who contribute to the climate of schools. More than 5,000 schools in 25 states have implemented the SCS model since 1985 (Safe and Civil Schools, 2011).

Previous quasi-experimental investigations into the effectiveness of SCS describe improved outcomes following implementation. Madigan and Cross (2010) compared schools using the SCS model, schools adhering to the School-Wide Positive Behavior Support (SWPBS) framework (Sugai & Horner, 2002), and control schools not implementing a PBIS model. They found that students in the SCS and SWPBS schools during the 3-year treatment (intervention) phase experienced faster academic progress than stu-

dents at the control schools. However, during the maintenance phase following treatment, the rate of academic progress between students in SWPBS schools and control schools was the same, while the rate continued to increase in schools implementing SCS. Tyre and Feuerborn (2010) compared behavior outcomes after 1 year of implementation to outcomes before implementation, and found that the numbers of unacceptable behavior slips (similar to office referrals), detentions, and suspensions all decreased.

Although previous studies on the effectiveness of the SCS model suggest positive outcomes for students and schools, the available literature has employed only quasi-experimental methodology in its research designs. An experimental randomized design would allow for an evaluation of whether implementation of the SCS model itself, rather than other potential variables (e.g., school policies, other programs), cause observed outcomes. Therefore, the current study was implemented to utilize a randomized design within a large urban school district with more than 80,000 students. The following research questions guided the study: (a) To what extent does SCS training lead to improvements in the development and enforcement of school discipline policy, and (b) to what extent does SCS training lead to improvements in student behavior and measures of academic achievement?

Method

Selection of Participating Schools

We selected the schools examined in this study using a two-step process. First, the district sent a letter describing the program to each principal in the district. This letter asked each principal if the school and its staff were interested and ready to participate in SCS training. Forty-three schools responded to this letter and indicated that the school was ready to participate in the program, 33 of which were elementary, 8 middle, and 2 high schools. Ultimately, the research team decided to focus the effectiveness study on the elementary schools because of the limited number of middle and high schools and the fact that a

separate program was simultaneously implemented in all of the district's middle schools.

The research team randomly assigned the 33 interested elementary schools to treatment and control groups by assigning schools a random number. We selected the half of schools with the lowest numbers for inclusion in the treatment group. Seventeen schools were assigned to Cohort 1 and 15 schools were assigned to Cohort 2 (the wait-list control group for Year 1). One school was not randomly selected for inclusion in Cohort 1 but was added to the initial training cohort because the district identified it as having a strong immediate need. We exclude this school from the analysis.

Participating schools have high concentrations of students receiving free or reduced-price lunch (approximately 90%), minority students (approximately 87%), and students who scored low on statewide standardized tests. Table 1 describes mean differences between Cohort 1 and Cohort 2 schools included in this study for several descriptive variables, as well as for the variables that are the focus of this article (which we describe in more detail below). The differences between Cohort 1 and Cohort 2 schools listed in Table 1 were not large and were not statistically significant at the .01 level.

Safe and Civil Schools Training and Procedures

Sprick, Garrison, and Howard (2002) served as the core of the SCS approach. Specifically, the program outlines strategies to establish settings, structures, and systems to facilitate positive behavior change. SCS materials are intended to guide the efforts of administrators, teachers, specialists, paraprofessionals, bus drivers, and others who contribute to the climate of schools. During the first year of training, each of the schools identified a leadership team involving a school administrator, at least three general education teachers, one special education teacher, and one or two other personnel. Each of these leadership teams participated in 7 days of training facilitated by an SCS consultant. Each

Table 1
Differences Between Cohort 1 and 2 Schools Prior to Treatment
for Selected Variables

Label	Cohort 1	Cohort 2	Difference (Sections A, D, E) or Odds Ratio (Sections B, C)	Effect Size
	<i>M (SD)</i>	<i>M (SD)</i>		
A. Demographics				
Share free and reduced-price lunch	0.91 (0.04)	0.90 (0.05)	0.01 (0.06)	$g = 0.07$
Share nonminority	0.14 (0.03)	0.12 (0.03)	0.02 (0.05)	0.19
B. School discipline policy developed and enforced				
Staff—a schoolwide behavior system is in place (+)	0.75 (−0.04)	0.81 (−0.04)	0.61 (0.21)	Cox = −0.30
Staff—rules and expectations are clearly defined (+)	0.85 (−0.03)	0.89 (−0.03)	0.60 (0.30)	−0.31
Staff—a safe and secure environment is provided (+)	0.88 (−0.02)	0.89 (−0.03)	0.81 (0.31)	−0.13
Staff—a formal school safety and student discipline policy exists (+)	0.81 (−0.04)	0.88 (−0.02)	0.58 (0.19)	−0.33
Staff—training about school safety/student discipline policy is provided for staff (+)	0.55 (−0.03)	0.63 (−0.03)	0.68 (0.14)	−0.24
Staff—the discipline policy is enforced consistently (+)	0.62 (−0.05)	0.72 (−0.03)	0.61 (0.19)	−0.30
C. Reduced Bullying				
Staff—bullying (−)	0.29 (−0.04)	0.28 (−0.05)	1.01 (0.36)	Cox = 0.01
Staff—widespread disorder in the classroom (−)	0.13 (−0.03)	0.09 (−0.04)	1.77 (0.87)	0.35
Staff—disrespectfulness and defiance	0.05 (−0.01)	0.05 (−0.01)	0.84 (0.26)	0.10
Student—share never hit or pushed by other students (+)	0.51 (−0.02)	0.47 (−0.02)	1.17 (0.11)	0.09
Student—share never had other students spread mean rumors about them (+)	0.49 (−0.01)	0.45 (−0.01)	1.15 (0.09)	0.09
D. Suspensions				
Suspensions per 100 students enrolled (−)	18.6 (−3.0)	19.7 (−2.6)	−1.1 (−4.0)	$g = 0.10$
Days suspended per 100 students enrolled (−)	27.2 (−4.0)	30.8 (−4.0)	−3.6 (−5.6)	0.23
E. State Achievement Test Performance				
Share proficient English	0.21 (0.02)	0.20 (0.03)	0.01 (0.04)	$g = 0.10$
Share proficient math	0.27 (0.02)	0.26 (0.03)	0.01 (0.04)	0.05

Note. Standard deviations clustered on school in parentheses. Demographic differences reflect differences during 2001–02 through 2006–07. The remaining differences reflect differences during 2007–08. Labels that begin with *Staff* reflect analysis of staff surveys. These results reflect analysis of approximately 2,100–2,200 staff responses. Variables from staff surveys indicate the share of staff who responded that the statement listed was true frequently or very frequently at their site. Labels that begin with the word *Student* reflect analysis of student surveys. These results reflect analysis of approximately 7,500 student surveys. The suspensions analysis was conducted at the school level and reflects the 32 analyzed schools (times the number of years of data examined). The test score analyses reflect more than 25,000 student test scores.

* $p < .01$.

consultant is a long-time educator involved with SCS implementations in their own schools or districts.

During the training sessions, teams received training on how to implement improve-

ments related to safety, behavior, and discipline as defined in the SCS program. Teams learned to collect and analyze data from observations of common areas (e.g., playground, cafeteria, arrival), office discipline referrals,

and results from safety/climate surveys. Using these data, the team, with input from staff, selected an order of priorities to focus on for the year. In subsequent training sessions, teams were taught skills for training their staff in PBIS (e.g., direct teaching of expectations, active supervision strategies such as circulating, scanning, providing positive feedback and correcting misbehavior calmly and consistently). Training sessions occurred in May, June, October, and February. Cohort 1 schools began training in May of 2008 and received a second year of training beginning in May of 2009. Control schools received exactly the same sequence, beginning one year later in May of 2009.

Measures

In this study, we examined measures of the fidelity of implementation and measures that describe the effect of the SCS model on student and school outcomes. The outcome measures used assess the effects of the model's implementation on staff and student perceptions of school safety and student behaviors, students' suspension records, and students' scores on statewide math and reading tests.

Implementation measures. In order to assess SCS implementation, we examined data from two sources: the School-wide Benchmarks of Quality (BoQ; Kincaid, Childs, & George, 2005), administered to schools implementing the SCS model in February of 2009 and 2010, and the district's Positive Behavior Support [PBS] Assessment, administered to all school staff in the district in December of each school year.

The BoQ metric was developed to measure implementation of school-wide PBIS (Kincaid et al., 2005). Previous research found a Cronbach's alpha of .96, test-retest reliability of .94, and an interrater reliability correlation of .87 (Cohen, Kincaid, & Childs, 2007). Data from the BoQ correlated at $r = .51$ (Cohen et al., 2007) with the School-wide Evaluation Tool (Horner et al., 2004), which is another standard measure of SWPBS implementation. The BoQ asks each staff member

to indicate whether various "benchmarks of quality" are in place, need improvement, or are not in place. Benchmarks include such items as "faculty involved in establishing and reviewing goals," "problem behaviors are defined," and "expected behavior routines in classroom are taught" (Kincaid et al., 2005).

The district's PBS Assessment—Staff Survey, administered to all staff in December of each year, includes one module with several questions that are either similar to questions on the BoQ or otherwise reflect changes in school policies and practices that are consistent with the SCS training. This survey asks each staff member to indicate how much they agree with various statements that could apply to their school such as "a school-wide behavior system is in place," "training about school safety/discipline policy is provided for staff," and "the discipline policy is consistently enforced."

This survey was developed by district staff and was not formally evaluated for reliability and validity at that time; however, conducting our own analysis using the data available, we found a Cronbach's alpha of .87 for the items related to school discipline policy and training. Various items on the district PBS survey correlate well with similar elements from the BoQ. For example, the average correlation between various items on the PBS Assessment—Staff Survey that assess the existence and enforcement of discipline policy and the elements of the BoQ that assess "effective procedures for dealing with discipline" was $r = .56$. Similarly, the average correlation between items on the staff survey that assess training in discipline policy and the BoQ elements related to the existence of "lesson plans for teaching expectations and rules" and an "implementation plan" was $r = .58$.

Outcome measures. We obtained data on student-level and school-level outcomes from district administrative records as well as from annually administered surveys of students and teachers. Specifically, we used three sources of data to examine policy and behavioral outcomes at participating schools: (a) student administrative records (suspensions

and achievement test scores on state assessment), (b) responses on the California Healthy Kids Survey (CHKS; WestEd, 2013), and (c) responses on items from the staff survey that relate to student behaviors.

Student administrative records record student suspensions and achievement test scores on a state assessment. We have no insight into or reason to doubt their reliability.

The CHKS is the largest statewide survey of resiliency, protective factors, and risk behaviors in the nation. Psychometric studies have shown that CHKS scales have a high degree of reliability. Other research likewise shows that confidential surveys like the CHKS have a high degree of validity in student answers—even with sensitive questions. In addition, the CHKS uses several checks and measures to ensure validity (WestEd, 2013).

We discuss the staff survey in the previous section. It asks each staff member to indicate how much they agree with various statements that could apply to their school such as “a school-wide behavior system is in place,” “training about school safety/discipline policy is provided for staff,” and “the discipline policy is consistently enforced.” Previous research found a Cronbach’s alpha of .84, cross-year correlations for schools before entering SCS—a quasi-measure of test–retest reliability—of .83, and an average correlation between measures of behavior problems and actual student suspension rates of .58. These describe the staff survey and its reliability in the preceding section.

We selected data from these sources that describe student behaviors (from both teacher and student perspective) as well their assessments of school safety. For instance, the staff survey asks about the extent to which a number of behaviors like bullying, widespread disorder in the classroom, and disrespectfulness and defiance occur at their school. The California Healthy Kids student survey includes questions such as “Do other kids hit or push you at school when they are not just playing around?” and “Do other kids spread mean rumors or lies about you?”

Most of the survey questions ask respondents to assess how strongly they agree

with certain statements or how frequently certain things occur. We simplified the responses to these questions by generating dummy variables for each question that equal 1 if the respondent selected the highest two categories and 0 otherwise. We excluded the 1% to 2% of responses coded blank or N/A responses; of the N/A responses, the vast majority come from support staff who may not have sufficient knowledge of the school environment to respond to certain items. In addition to the surveys, administrative records contain information about the number of suspensions that more directly reflect student behavior. School administrative records also contain data on student test scores that could be indirectly affected by student behavior (and SCS implementation).

The analysis focused primarily on data drawn from three school years: 2007–08, 2008–09, and 2009–10, although we obtained and used data on student suspensions and test scores from some previous years. Prior to 2008–09, no school received SCS training. During 2008–09, Cohort 1 commenced SCS implementation, but Cohort 2 received no training. Finally, during 2009–10, Cohort 1 received its second year of SCS training while Cohort 2 completed its first year of training. Because schools were randomly assigned to Cohorts 1 and 2, the number of years of SCS training a school has received in any given year is exogenous. We exploit this exogenous variation to estimate the effect of SCS implementation.

Data Analysis

The data analyses in this study addressed two questions. First, we addressed whether SCS training led to improvements in the development and enforcement of school discipline policy. Essentially, this research question examined the extent to which SCS was implemented. The second question assessed whether SCS training led to improvements in student behavior (e.g., reduced bullying or reduced suspensions) or measures of student academic achievement.

We addressed these questions using two empirical strategies. Each strategy relies on

slightly different assumptions about what would have occurred in participating schools in the absence of SCS. We employed multiple identification strategies for two reasons. First, presenting the results from two analyses illustrates the robustness of our results to alternative assumptions. Second, only one of our identification strategies allows us to present the effects of SCS implementation beyond the first year. Examining second year results allows us to address additional questions of interest such as what happens to schools in their second year of training or what happens to control schools in their first year of training.

In our first analysis, we conducted a differences-in-differences analysis using data from the 2007–08 and 2008–09 school years (before the wait-list control group received any SCS training). In this analysis, we compared the change in school outcomes for Cohort 1 during the year after the implementation of SCS training to the change in outcomes for Cohort 2 (control) schools over the same period. This analysis rests on the assumption that the trends observed at schools randomly assigned to the control group describe the trends that would have occurred at Cohort 1 schools.

Analysis of the available data that allows examination of trends in the Cohort 1 and wait-list control schools prior to SCS implementation provides some support for this assumption. We obtained data on the number of suspensions per 100 students, the number of suspended days per 100 students, the percent of students proficient in math, and the share of students proficient in English going back to 2001–02. Analysis of these data suggests that the schools in Cohorts 1 (experimental) and Cohort 2 (control) followed similar trends prior to SCS implementation. For instance, the number of suspensions per 100 students per year grew from approximately 14 in 2001–02 to approximately 19 or 20 in 2007–08 in both cohorts (a growth rate of approximately 1 suspension per 100 students per year on average). Similarly, the share of students rated proficient on the statewide math test followed similar patterns for both cohorts (growing an average of 4 percentage points per year in the 6 years prior to the initiation of SCS). Regression es-

timates of the trends for each cohort do not reveal large or statistically significant differences in the trends between the two cohorts.

Specifically, we estimated regressions for the years prior to the commencement of SCS that included a linear trend interacted with a dummy variable for Cohort 1 (the regression also included both the trend alone and the Cohort 1 dummy variable alone). In the regression examining the number of suspensions per 100 students per year, the trend was significant (coefficient = 1.07, $SE = 0.44$), but neither the Cohort 1 dummy (coefficient = 0.78, $SE = 3.79$) or the interaction term (coefficient = -0.16 , $SE = 0.77$) were significant.

Analysis strategy. Stated in equation form, our differences-in-differences analysis amounts to estimating the following equation, where Y is the outcome of interest, Cohort 1 is a dummy variable equal to one for schools randomly assigned to the first SCS cohort, 2009 is a dummy variable for the 2008–09 school year (the first year of SCS implementation), (Cohort1 * 2009) is the interaction between these two variables, and μ_s is a school-level random effect (or random intercept that accounts for the nested nature of these data):

$$Y_{ist} = \alpha + \beta_1 * \text{Cohort1}_{is} + \beta_2 * 2009_{it} + \beta_3 * (\text{Cohort1}_{is} * 2009_{it}) + \mu_s + \varepsilon_{jt} \quad (1)$$

This simple differences-in-differences approach provides a straightforward way to estimate the effects of the SCS training. The main coefficient of interest in Equation 1 is β_3 . It captures the following relationship: $(\bar{Y}_{2008-09}^{\text{Cohort1}} - \bar{Y}_{2007-08}^{\text{Cohort1}}) - (\bar{Y}_{2008-09}^{\text{Controls}} - \bar{Y}_{2007-08}^{\text{Controls}})$.

Secondary analysis. We conducted an alternative analysis that employs slightly different (and, given the circumstances, a potentially more conservative) assumptions. Specifically, we conduct analyses that rest on the assumption that outcomes would have remained at the level of pre-SCS implementation or non-SCS schools but for SCS training.

Utilizing this second identification assumption allows us to conduct analyses using all the available data. The use of additional data may yield more precise estimates for the effect of the first year of SCS (because we can use the data from both cohorts' first year of training). Using this second identification assumption also allows us to describe the effect of SCS training over the first 2 years of implementation (as opposed to just the first year).

Specifically, we perform a two-level regression analysis with school random effects (students or staff nested within schools). That is, we estimate the following:

$$Y_{ist} = \alpha + \beta_1 * \text{First Year of Foundations} + \beta_2 * \text{Second Year of Foundations}_{it} + \mu_s + \varepsilon_{ist} \quad (2)$$

First Year of SCS is a dummy variable equal to one if school i is in its first year of SCS training in year t . Second Year of SCS is defined similarly for schools in their second year of SCS training. The remaining terms are similar to equation 1. The two coefficients of interest (β_1 , β_2) describe the change in the average outcomes for schools in their first and second year of SCS relative to the years prior to commencing SCS.

We estimate this equation twice. First, we limit the sample to the years prior to 2009–10. The results from this estimation provide a direct comparison to the differences-in-differences estimates because both reflect the effect of SCS on Cohort 1 schools during the first year of training. As such, any differences between these two estimates illustrate the importance of different identification assumptions. Second, we estimate equation 2 including the data from 2009–10.

For variables with dichotomous outcomes (i.e., those from the staff and student surveys and student test performance), we estimate each equation using two-level logistic regression (staff or students nested within schools) and robust standard errors. Because some of these data were originally ordinal responses, we also estimated equations 1 and 2 using ordered logits and obtained very similar

results. We report the results from the logistic regression because we find them easier to interpret. For the suspension data, we estimate each equation using two-level Poisson regression (students nested within schools) and robust standard errors. For all regressions, we report odds ratios or incidence rate ratios (i.e., exponentiated coefficients) and effect sizes calculated using a Cox index (derived by dividing the log odds ratio by 1.65). All estimates were generated using the `gllamm` command in STATA 11.1.

Results

Question 1: Implementation

Although implementation varied across schools, schools participating in SCS training reported fairly high levels of implementation after a relatively short period of training. First, we found that, on average, both Cohort 1 and Cohort 2 elementary schools received 63 out of 100 points on the BoQ midway through their first year of training, and 68 out of 100 points midway through the second year. The standard deviation for the mean BoQ score during the first year was 16, and 20 during the second year.

These scores resemble those reported by Cohen et al. (2007) in their article documenting the development and validation of the BoQ. Among the 105 schools in their sample participating in a statewide PBIS programs they examined in Florida and Maryland, the average score was 69 points. Although this value is slightly higher than what we observed in our sample of elementary schools, some of this discrepancy may reflect differences in the timing of observation. The BoQ in the Cohen et al. (2007) study was administered as part of year-end evaluation procedures, so differences in administration timing may affect the comparison between the Cohen et al. study and ours.

In addition to the BoQ, we assessed SCS implementation by examining changes in the development and enforcement of school discipline policy as reflected in district's PBS Assessment—Staff Survey. Table 2 presents the results of our analysis of these data. Following

Table 2
Impact of Safe and Civil Schools Training on the Development and Enforcement of School Discipline Policy Through the First Year of Implementation

Label	Differences-in-Differences Estimates for First Year		Before and After Estimate of First Year (Cohort 1 only)	
	Odds Ratio (1)	Effect Size (Cox Index) (2)	Odds Ratio (3)	Effect Size (Cox Index) (4)
Schoolwide behavior system is in place (+)	2.05 (0.69)	0.44	1.76* (0.35)	0.34
Rules and expectations are clearly defined (+)	2.10 (0.79)	0.45	1.54 (0.34)	0.26
Safe and secure environment is provided (+)	2.00 (0.63)	0.42	1.91* (0.42)	0.39
Formal school safety and student discipline policy exists (+)	2.67* (0.90)	0.60	1.82* (0.36)	0.36
Training about school safety/student discipline policy is provided for staff (+)	2.28* (0.57)	0.50	1.74* (0.26)	0.34
Discipline policy is enforced consistently (+)	2.38* (0.68)	0.53	1.62* (0.27)	0.29

Note. Robust standard errors in parentheses. The table includes only the primary exponentiated coefficients of interest from estimation of equations 1 and 2 using logistic regression. All estimates include school random effects. The remaining coefficients are available upon request. Column 1 reflects coefficients from the differences-in-differences analysis (equation 1). Columns 3, 5, and 7 reflect the coefficients from estimation of equation 2. Column 3 includes estimates based on data before 2009–10. Columns 5 and 7 use all years of data. The expected sign for the coefficient is presented in parentheses in the label column. These results reflect analysis of approximately 2,100–2,200 staff responses.

* $p < .01$.

SCS training, we observed statistically significant increases in the odds that staff members responded that statements relating to school policies and training were true about their school frequently or very frequently.

Columns 1 and 2 present the main result (β_3) from our differences-in-differences analysis of the first two years of data. This analysis indicates that, during 2008–09, after receiving SCS training, the odds that staff at Cohort 1 schools reported that a school-wide behavior system was in place doubled relative to the change at control schools (effect size = 0.44). Similarly, the odds that staff reported that rules and expectations are clearly defined or reported that they receiving training about student discipline policy also doubled or more than doubled (effect sizes = 0.45 and 0.50, respectively).

Estimates based on the alternative assumption that these schools would have re-

mained at pre-SCS levels but for SCS (presented in Column 3), reveal similar but smaller changes. Although the average effect size from the differences-in-differences estimates is 0.49 standard deviations, the average effect size described in Column 4 is 0.33. The smaller effect sizes stem from the differences between what the two methods assume would have occurred in the absence of treatment. The differences-in-differences estimate assumes that, in the absence of SCS training, the Cohort 1 schools would have witnessed deteriorating outcomes during 2008–09 similar to the worsening outcomes observed at the wait-list control schools. The secondary analysis does not assume that the Cohort 1 schools would not experience the same deterioration; rather, it simply assumes that Cohort 1 schools would remain at pre-SCS levels. If the Cohort 1 schools would have followed the same

Table 3
Impact of Safe and Civil Schools Training on the Development and Enforcement of School Discipline Policy Through the Second Year of Implementation

Label	Before and After Estimate for First Year (Cohort 2 Only)		Before and After Estimate of Cumulative Impact of First and Second Years (Cohort 1 Only)	
	Odds Ratio (1)	Effect Size (Cox Index) (2)	Odds Ratio (3)	Effect Size (Cox Index) (4)
Staff—a schoolwide behavior system is in place (+)	1.52 (0.37)	0.25	1.66 (0.34)	0.31
Staff—rules and expectations are clearly defined (+)	1.45 (0.31)	0.22	2.17* (0.51)	0.47
Staff—a safe and secure environment is provided (+)	1.46 (0.43)	0.23	2.60* (0.75)	0.58
Staff—a formal school safety and student discipline policy exists (+)	1.02 (0.25)	0.01	2.06* (0.67)	0.44
Staff—training about school safety/ student discipline policy is provided for staff (+)	1.15 (0.19)	0.09	1.77* (0.34)	0.35
Staff—the discipline policy is enforced consistently (+)	1.10 (0.22)	0.06	1.74* (0.31)	0.34

Note. Robust standard errors in parentheses. The table includes only the primary exponentiated coefficients of interest from estimation of equations 1 and 2 using logistic regression. All estimates include school random effects. The remaining coefficients are available upon request. Column 1 reflects coefficients from the differences-in-differences analysis (equation 1). Columns 3, 5, and 7 reflect the coefficients from estimation of equation 2. Column 3 includes estimates based on data before 2009–10. Columns 5 and 7 use all years of data. The expected sign for the coefficient is presented in parentheses in the label column. Labels that begin with *Staff* reflect analysis of staff surveys. These results reflect analysis of approximately 2,100–2,200 staff responses.
 * $p < .01$.

trend as the wait-list control schools, this analysis may understate the effect of SCS.

The longer-term analysis of suspensions we described as supporting the differences-in-differences assumptions also provides support for the assumptions we rely on in estimating Equation 2. Although the number of suspensions per 100 students per year grew between 2001–02 and 2006–07, the trend flattened and remained roughly constant between 2006–07 and 2007–08. The average change over this period was a statistically insignificant –0.6 (*SE* 1.4) suspensions per 100 students. Furthermore, as demonstrated in Column 3 of

Table 2, the average change remained essentially flat for the untreated Cohort 2 schools in 2008–09 (coefficient = 0.82, *SE* = 1.95).

Table 3 describes the effect of SCS at all schools through both years of implementation (under the assumption that schools would remain at their pre-SCS levels until implementation began). The first column reports the change in outcomes for both Cohort 1 and Cohort 2 schools during the first year of training. After 1 year of training, schools witness statistically significant improvements in the development and enforcement of school discipline policy. For instance, on average, during

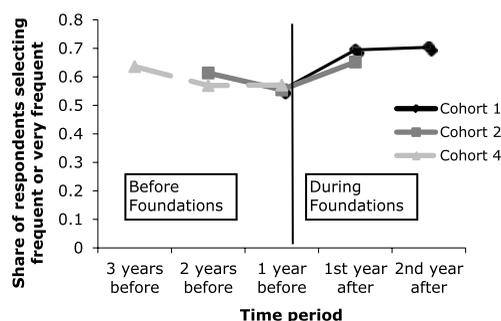


Figure 1. Share of elementary school staff reporting that training about school safety and discipline is provided to school staff.

the first year of training, the probability that staff at Cohort 1 and Cohort 2 schools report that a school-wide behavior system is in place increased by 68% (effect size = 0.31), the probability that staff report that a safe and secure environment is provided increased by 71% (effect size = 0.32), and the probability that staff report that training about school safety/discipline is provided to staff increased by 46% (effect size = 0.23).

The third and fourth columns report the cumulative change in outcomes through the second year of training. Because only Cohort 1 had completed 2 years of training at the time of this evaluation, these results reflect the effects for Cohort 1 schools only. The coefficients in Column 3 suggest that schools maintained or improved their outcomes during the second year of training. The coefficients are at least as large as observed during the first year and remain statistically significant.

Figure 1 presents a visual (and perhaps more intuitive) depiction of these results by reporting the share of staff indicating that staff frequently or very frequently received training about school discipline policy for each cohort and year. We further divide the data so that the left half of the figure shows the results for cohorts before they enter SCS and the right half of the figure shows the results for cohorts after they enter SCS. We also include the trend for schools that declined participation in the

study (and thus were not formally included in our analysis) as a further description of trends in the district. The results in this figure (and most of the other figures) describe what we would expect to observe if SCS implementation caused changes. Outcomes after commencing SCS are different than outcomes before commencing SCS, and the changes do not occur until after schools begin implementing the SCS model.

Question 2: Behavioral Outcomes

Our analysis also suggests that SCS training reduces aspects of student problem behavior (e.g., it reduces bullying and/or it reduces widespread disorder in the classroom). Section A of Table 4 and Table 5 (and Figure 2) describe changes in staff and student reports of selected student behaviors.

Staff at participating elementary schools reported substantial improvements in student behaviors following the commencement of SCS training. The differences-in-differences analyses indicate a 32% decline in the odds that Cohort 1 staff report that bullying is frequently a problem (effect size = -0.24), a 67% decline in the odds that staff report that widespread disorder in the classroom is frequently a problem (effect size = -0.67), and a 21% decline in the odds that staff report that disrespectfulness and defiance are frequently problems (effect size = -0.15). However, only the effect on widespread disorder in the classroom is statistically significant at the .05 level.

Columns 3 and 4 in Table 4 again report results that use the same data as the differences-in-differences estimates, but employ the alternative identification assumptions imbedded in equation 2. Relative to the differences-in-differences estimates, Column 3 shows similar, although slightly smaller, results for the effects of the first year of SCS on Cohort 1 schools. Columns 1 and 3 in Table 5 also show large and statistically significant results. The additional data used in these analyses add sufficient power to turn decline in the share of staff reporting problems with bullying during the first year statistically significant. Among

Table 4
Impact of Safe and Civil Schools Training on Bullying, Suspensions, and Student Test Scores Through the First Year of Implementation

Label	Differences-in-Differences Estimates for First Year		Before and After Estimate of Impact of First Year (Cohort 1 Only)	
	Odds Ratio (1)	Effect Size (Cox Index) (2)	Odds Ratio (3)	Effect Size (Cox Index) (4)
Staff—bullying (–)	0.68 (0.22)	–0.24	0.75 (0.15)	–0.18
Staff—widespread disorder in classroom (–)	0.33* (0.12)	–0.67	0.45* (0.10)	–0.49
Staff—disrespectfulness and defiance (–)	0.79 (0.17)	–0.15	0.81 (0.10)	–0.13
Student—share never hit or pushed by other students (+)	0.92 (0.10)	–0.05	1.15* (0.05)	0.08
Student—share never had other students spread mean rumors about them (+)	1.01 (0.09)	0.01	1.16* (0.05)	0.09
Suspensions (–)	0.78 (0.11)		0.83 (0.07)	
Days suspended (–)	0.80 (0.09)		0.79* (0.07)	
Proficient in math (+)	1.001 (0.07)	0.00	1.51* (0.07)	0.25
Proficient in English language arts (+)	0.95 (0.06)	–0.03	1.33* (0.05)	0.17

Note. Robust standard errors in parentheses. The table includes only the exponentiated coefficients of interest from estimating equations 1 and 2 using logistic or poisson regression. All estimates include school-level random effects. The remaining coefficients are available upon request. Column 1 reflects coefficients from the differences-in-differences analysis equation 1. Columns 2, 4, and 7 reflect the coefficients from estimation of equation 2. All estimates include school random effects. Column 3 includes estimates based on data before 2009–10. Columns 5 and 7 use all years of data. The expected sign for the coefficient is presented in parentheses in the label column. Labels that begin with “staff” reflect analysis of staff surveys. These results reflect analysis of approximately 2,100–2,200 staff responses. Labels that begin with *Student* reflect analysis of student surveys. These results reflect analysis of approximately 7,500 student surveys. The suspensions analysis included approximately 25,000 student records (times the number of years of data examined). The test score analyses reflect more than 25,000 student test scores.

* $p < .01$.

the Cohort 1 schools, the effect of SCS on bullying continued to improve during the second year. Relative to pre-SCS schools, during the second year of training we observe a 46% (effect size = –0.38) decline in the odds that Cohort 1 staff report problems with frequent bullying.

Questions from student surveys also suggest potential reductions in bullying following SCS implementation. For instance, relative to pre-SCS levels, students attending Cohort 1 schools in 2009–10 were 22% more likely to report that they were never hit or pushed at school (effect size = 0.12). How-

ever, over this same period, the control (Cohort 2) schools that had not yet commenced SCS training also experienced substantial improvements in the share of students who reported that they were never pushed or hit or never had mean rumors spread about them. As such, the differences-in-differences analyses do not reveal significant effects for these measures. Although the secondary analyses reveal statistically significant improvements, we cannot rule out the possibility that whatever non-SCS factor caused improvements in Cohort 2 during 2008–09 would also have generated improvements at the Cohort 1 schools.

Table 5
Impact of Safe and Civil Schools Training on Bullying, Suspensions, and Student Test Scores Through the Second Year of Implementation

Label	Before and After Estimate for First Year (Cohort 2 Only)		Before and After Estimate of Cumulative Impact of First and Second Years (Cohort 1 Only)	
	Odds Ratio (1)	Effect Size (Cox Index) (2)	Odds Ratio (3)	Effect Size (Cox Index) (4)
A. Reduced Bullying				
Staff—bullying (–)	0.55* (0.13)	–0.35	0.54* (0.10)	–0.38
Staff—widespread disorder in classroom (–)	0.45* (0.15)	–0.49	0.46* (0.08)	–0.47
Staff—disrespectfulness and defiance (–)	0.54* (0.11)	–0.37	0.61 (0.13)	–0.30
Student—share never hit or pushed by other students (+)	1.22* (0.07)	0.12	1.22 (0.11)	0.12
Student—share never had other students spread mean rumors about them (+)	1.26* (0.06)	0.14	1.29* (0.06)	0.16
B. Suspensions (Incidence Rate Ratio)				
Suspensions (–)	0.83* (0.05)		0.77* (0.04)	
Days suspended (–)	0.78* (0.05)		0.74* (0.05)	
C. Test Scores				
Proficient in math (+)	1.46* (0.05)	0.23	1.75* (0.08)	0.34
Proficient in English language arts (+)	1.32* (0.03)	0.17	1.51* (0.07)	0.25

Note. Robust standard errors in parentheses. The table includes only the exponentiated coefficients of interest from estimating equations 1 and 2 using logistic or poisson regression. All estimates include school level random effects. The remaining coefficients are available upon request. Column 1 reflects coefficients from the differences-in-differences analysis (equation 1). Columns 3, 5, and 7 reflect the coefficients from estimation of equation 2. All estimates include school random effects. Column 3 includes estimates based on data before 2009–10. Columns 5 and 7 use all years of data. The expected sign for the coefficient is presented in parentheses in the label column. Labels that begin with *Staff* reflect analysis of staff surveys. These results reflect analysis of approximately 2,100–2,200 staff responses. Labels that begin with *Student* reflect analysis of student surveys. These results reflect analysis of approximately 7,500 student surveys. The suspensions analysis included approximately 25,000 student records (times the number of years of data examined). The test score analyses reflect more than 25,000 student test scores.

* $p < .01$.

Student Suspensions

Section B of Tables 4 and 5 (and Figure 3) describe the effects of SCS training on student suspensions. Following SCS implementation, students attending the participating elementary schools were less likely to be suspended and were suspended for fewer total days. Although the differences-in-differences analysis in Column 1 suggest that incidence rate for suspensions and the total number days suspended declined by 20% during the first

year of implementation, these results fall slightly short of statistical significance at the .05 level (the p values for these estimates are .08 and .1, respectively). Estimates from the secondary analysis indicate declines in the incidence rate of similar magnitude that are statistically significant at the .05 level. On average, the first year of training reduced the incidence rate for suspensions by 17% and the incidence rate for the suspended days by 22%; the second year of SCS training reduced the

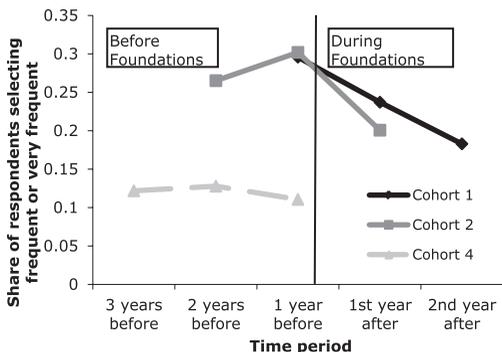


Figure 2. Share of elementary school staff reporting that bullying occurs frequently or very frequently at their school.

incidence rate for suspensions by 23% and the incidence rate for the number of days suspended fell by 26%.

Exploratory Analysis: Effect on Student Test Scores

Student performance on statewide tests also improved following SCS implementation. These changes are described in Section C of Tables 4 and 5 (and Figure 4). Since 2007–08, Cohort 1 schools saw an increase of 14 percentage points (Cox index = .25) in the share of students rated proficient in math and an

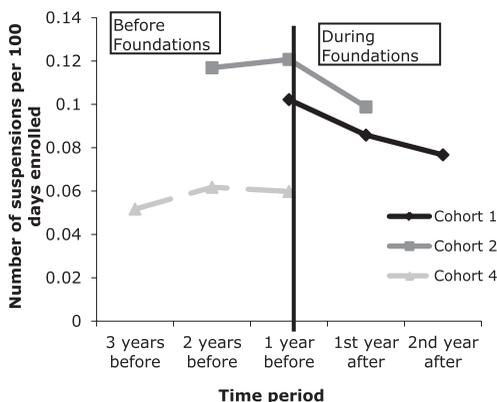


Figure 3. Number of suspensions per 100 enrolled days at district elementary schools.

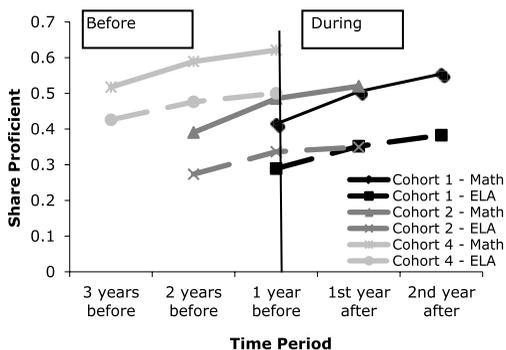


Figure 4. Share of elementary students rated proficient on statewide math and English language arts tests.

increase of 9 percentage points (Cox index = .17) in the share of students rated proficient in English language arts. However, Cohort 2 witnessed similar increases over the same time period. Unlike the outcomes examined earlier, the improvement in Cohort 2 started before they commenced SCS training. As such, improvements in student test performance appear to have occurred district-wide throughout this period. Thus, we cannot precisely identify any effects of SCS on student test performance.

Discussion

The results of this evaluation suggest that SCS training positively affects school policies and student behavior during the first year of training. Staff at schools that received SCS training reported substantial changes in the development and enforcement of school discipline policy, which suggested that participating schools implemented what they were trained.

Differences-in-differences estimates indicated that participating in SCS training also generated significant improvements in staff perceptions of student behavior. The same level of improvement in staff perception was not observed at the schools randomly assigned to the wait list. Similarly, we observed differences in student perception of school safety and in the incidence of suspensions across Cohort 1 and Cohort 2 schools that are consistent with staff perceptions.

Additional analyses that rest on the alternative assumption that schools would have remained at pre-SCS levels but for SCS also indicate that SCS positively affects school outcomes. The results of these analyses confirm that schools randomly assigned to the wait list experienced improvements similar to those described for the experimental schools only after they commenced SCS and the improvements in outcomes observed during the first year of SCS implementation for Cohort 1 persisted or expanded during the second year of SCS training.

Overall, this study found evidence consistent with previous, less rigorous studies on Safe and Civil Schools (Madigan & Cross, 2010; Tyre & Feuerborn, 2010)—namely, increased staff perception of student behavior, decreases in problem behavior, and tentative evidence of positive academic gains. The results support SCS as an effective approach to implement PBIS and decrease school-level problem behaviors. Further, the results of this study are congruent with and expand on findings from other randomized experiments of SWPBIS (e.g., Benner, Nelson, Sanders, & Ralston, 2012; Bradshaw, Leaf, Thornton, & Leaf, 2009; Bradshaw, Mitchell, & Leaf, 2010; Horner et al., 2009), which have found evidence of decreased problem behavior, including suspensions, and increased school climate as reported by school staff.

Horner and colleagues (2009) randomly assigned 63 schools in three states to treatment and wait-list control conditions, with treatment consisting of one year of SWPBIS training and support finding implementation treatment effects of $g = .33$ and treatment effects in reading of $g = .13$, both very similar to the results reported here. However, Horner and colleagues found no statistically significant difference between schools on staff perceptions of school safety, including bullying and problem behaviors. Bradshaw et al. (2010) reported on a 5-year randomized control trial of 37 elementary schools in Maryland and found that schools implementing SWPBIS had consistent declines in behavior problems, including suspensions, but so did control schools, and no significant differences were

found between treatment and control schools across time. Therefore, unlike previous research, SCS not only increased school safety and decreased problem behaviors within schools, but those effects were greater than those experienced in control schools.

It is important to understand the limitations with this study. First, the SCS training lasts for several years, and the evidence reported here was collected only during the first 2 years of training for Cohort 1 and the first year for Cohort 2. It is possible that the effects of SCS training will be even more pronounced once schools have had sufficient time to absorb and implement the training. However, a wait-list control design cannot answer this question.

Second, the effects of the SCS training may be muted by contamination of the control group. In August 2007, before any schools received formal training, the developer of the intervention presented to leadership teams from several schools (including all of the control group schools). As a result, the control schools had the opportunity to implement some of the SCS strategies. When surveyed during the spring of 2009 about the changes they may have implemented related to this 1-day training, 11 of the 15 control elementary schools indicated they had made at least one change, and a majority indicated that they made multiple changes. However, the results of this simple survey were not confirmed in the other evidence examined. For instance, there were no differences between schools indicating that they made changes and those that did not indicate changes in the share of staff reporting that the school had a school-wide behavior system in place. The responses to similar questions from the staff survey also show no differences. This led us to conclude that many of the changes control school principals made may have been minor or tentative steps in terms of full SCS implementation.

Third, the data available do not allow for an examination of every outcome likely affected by the SCS training. We observe only the prevalence of major behavioral disturbances (those warranting suspensions) and teacher perceptions of school safety and stu-

dent behaviors. These are supplemented by student self-reports related to issues such as bullying. Although we expect these outcomes to reflect SCS training, we do not observe changes in other important student behaviors (e.g., classroom disruptions) or school-wide safety outcomes. As such, this evaluation provides a somewhat mixed pattern of findings.

Finally, this study examined a subset of elementary schools in a large urban school district that were identified by the district as having a pressing need for PBIS training. Given that the effects of the SCS training may vary across schools and school districts, our results may not reflect the average effectiveness of the SCS training.

Despite the limitations, the current data have implications for practice and future research. Together, the results of this study and those preceding it support the value of implementing school-wide models of behavior support that change systems, settings and structures to increase the likelihood students will meet classroom and school expectations, decrease problem behaviors, and increase academic performance.

References

- Benner, G. J., Nelson, J. R., Sanders, E. A., & Ralston, N. C. (2012). Behavior intervention for students with externalizing behavior problems: Primary-level standard protocol. *Exceptional Children, 78*, 181–198.
- Bradshaw, C. P., Leaf, C. W., Thornton, L. A., & Leaf, P. J. (2009). Altering school climate through school-wide positive behavioral interventions and supports: Findings from a group-randomized effectiveness trial. *Prevention Science, 10*, 100–115. doi:10.1007/s11212-008-0114-9
- Bradshaw, C. P., Mitchell, M. M., & Leaf, P. J. (2010). Examining the effects of schoolwide positive behavioral interventions and supports on student outcomes: Results from a randomized controlled effectiveness trial in elementary schools. *Journal of Positive Behavior Interventions, 12*, 133–148. doi:10.1177/1098300709334798
- Bushaw, W. J., & Lopez, S. J. (2010). A time for change: The 42nd annual Phi Delta Kappa/Gallup Poll of the public's attitudes toward the public schools. *Kappan Magazine, 92*(1), 8–26.
- Carr, E. G., Horner, R. H., Turnbull, A. P., McLaughlin, D. M., McAtee, M. L., Smith, C. E., ..., Doolabh, A. (1999). Positive behavior support for people with developmental disabilities: A research synthesis. Washington, DC: American Association on Mental Retardation.
- Cohen, R., Kincaid, D., & Childs, K. (2007). Measuring school-wide positive behavior support implementation: Development and validation of the Benchmarks of Quality. *Journal of Positive Behavior Interventions, 9*, 203–213.
- Danforth, S., & Smith, T. J. (2005). *Engaging troubling students: A constructivist approach*. Thousand Oaks, CA: Corwin Press.
- Gottfredson, D. C. (1997). School-based crime prevention. In L. W. Sherman, D. Gottfredson, D. MacKenzie, J. Eck, P. Reuter, & S. Bushway (Eds.), *Preventing crime: What works, what doesn't, what's promising: A report to the United States Congress* (pp. 1–84). Washington, DC: U.S. Department of Justice, Office of Justice Programs.
- Horner, R. H., Dunlap, G., Koegel, R. L., Carr, E. G., Sailor, W., Anderson, J., & O'Neill, R. E. (2005). Toward a Technology of 'Nonaversive' Behavioral Support. Research And Practice For Persons With Severe Disabilities, 30(1), 3–10. doi:10.2511/rpsd.30.1.3
- Horner, R. H., Dunlap, G., Koegel, R. L., Carr, E. G., Sailor, W., et al. (1990). Toward a technology of "nonaversive" behavioral support. *Journal of the Association for Persons with Severe Handicaps, 15*, 125–132.
- Horner, R. H., Todd, A. W., Lewis-Palmer, T., Irvin, L. K., Sugai, G., & Boland, J. B. (2004). The school-wide evaluation tool (SET): A research instrument for assessing school-wide positive behavior support. *Journal of Positive Behavior Interventions, 6*, 3–12.
- Horner, R. H., Sugai, G., Smolkowski, K., Eber, L., Nakasato, J., Todd, A. W., & Esperanza, J. (2009). A randomized, wait-list controlled effectiveness trial assessing school-wide positive behavior support in elementary schools. *Journal of Positive Behavior Interventions, 11*, 133–144.
- Kincaid, D., Childs, K. E., & George, H. (2005). *School-wide benchmarks of quality*. Unpublished instrument. Tampa, FL: University of South Florida.
- Lassen, S. R., Steele, M. M., & Sailor, W. (2006). The relationship of school-wide positive behavior support to academic achievement in an urban middle school. *Psychology in the Schools, 43*, 701–712.
- Lewis, T. J., Sugai, G., & Colvin, G. (1998). Reducing problem behavior through a school-wide system of effective behavioral support: Investigation of a school-wide social skills training program and contextual interventions. *School Psychology Review, 27*, 446–459.
- Maag, J. W. (2001). Rewarded by punishment: Reflections on the disuse of positive reinforcement in schools. *Exceptional Children, 67*, 173–186.
- Madigan, K., & Cross, R.W. (2010). *Determining the impact of Safe & Civil Schools' school-wide positive behavior interventions and supports program on academic achievement: A nine-year study*. Unpublished manuscript.
- McEvoy, A., & Welker, R. (2000). Antisocial behavior, academic failure, and school climate: A critical review. *Journal of Emotional and Behavioral Disorders, 8*, 130–140.
- Mijanovich, T., & Weitzman, B. C. (2003). Which "broken windows" matter? School, neighborhood, and family characteristics associated with youths' feelings of unsafety. *Journal of Urban Health: Bulletin of the New York Academy of Medicine, 80*, 400–415.

- National Center for Educational Statistics. (2007). *Indicators of school crime and safety*. Retrieved from <http://nces.ed.gov/programs/crimeindicators/crimeindicators2007/>
- National Center for Educational Statistics. (2010). *Indicators of school crime and safety*. Retrieved from <http://nces.ed.gov/programs/crimeindicators/crimeindicators2010/>
- Nelson, J. R., & Colvin, G. (1996). Designing supportive school environments. *Special Services in the Schools, 10*(2), 7–36.
- Noguera, P. A. (1995). Preventing and producing violence: A critical analysis of responses to school violence. *Harvard Educational Review, 65*, 189–212.
- OSEP Center on Positive Behavioral Interventions and Supports. (2009, March). *Is school-wide positive behavior support an evidence-based practice?* Retrieved May 14, 2011, from <http://www.pbis.org/research/default.aspx>
- Safe and Civil Schools. (2011). *Safe & Civil Schools series overview*. Retrieved March 7, 2011, from http://www.safeandcivilschools.com/products/scs_overview.php
- Schlichte, J., Yssel, N., & Merbler, J. (2005). Pathways to burnout: Case studies in teacher isolation and alienation. *Preventing School Failure, 50*(1), 35–40.
- Skiba, R. J. (2000). *Zero tolerance, zero evidence* (Report No. SRS2). Retrieved from <http://www.indiana.edu/~safeschl/publication.html>
- Skiba, R. J., & Peterson, R. (1999). The dark side of zero tolerance: Can punishment lead to safe schools? *Phi Delta Kappan, 80*, 372–382.
- Sprick, R. (2009). *CHAMPS: A proactive and positive approach to classroom management* (2nd ed.). Eugene, OR: Pacific Northwest Publishing.
- Sprick, R., Garrison, M., & Howard, L. (1998). *CHAMPS: A proactive and positive approach to classroom management*. Longmont, CO: Sopris West.
- Sprick, R. S., Garrison, M., & Howard, L. (2002). *Foundations: Establishing positive discipline policies* (2nd ed.). Eugene, OR: Pacific Northwest Publishing.
- Sprick, R. S., Sprick, M., & Garrison, M. (1992). *Foundations: Establishing positive discipline policies*. Longmont, CO: Sopris West.
- Sugai, G., & Horner, R. H. (2002). The evolution of discipline practices: School-wide positive behavior supports. *Child & Family Behavior Therapy, 24*(1), 23–50.
- Tyre, A., & Feuerborn, L. (2010). *Establishing positive discipline policies: An urban elementary school case study*. Manuscript submitted for publication.
- Warger, C. (1999). *Positive behavior support and functional assessment* (ERIC/OSEP Digest E580; ERIC Document Reproduction Service No. ED434437). Reston, VA: ERIC Clearinghouse on Disabilities and Gifted Education.
- WestEd (2013). *California healthy kids survey*. San Francisco, CA: author. Available online at <http://chks.wested.org/>.

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