

COMPARISON OF CORRELATES OF CLASSROOM BEHAVIOR PROBLEMS IN SCHOOLS WITH AND WITHOUT A SCHOOL-WIDE CHARACTER EDUCATION PROGRAM

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System-wide practices in schools should diminish the occurrence of children's problem behavior that is deleterious to academic achievement. The current study examined the relationship between variables that affect classroom behavior and observed behavior in schools with and without a theoretically based character education program. Observational data from 12 elementary schools compared control and treatment conditions on classroom disruption, and examined the influences of class size and percentage of students receiving a free or reduced price lunch (FRL). Results showed a weaker relationship between class size, FRL, and behavior problems within the character education schools than in control schools and that the character education program may have had a stronger influence in schools with a high percentage of students eligible for FRL. © 2010 Wiley Periodicals, Inc.

Effective instruction depends on a classroom environment that is conducive to learning, which is often a challenge. Some of the most frequent disciplinary referrals in elementary schools are for disruption, disrespect, and aggression within the classroom (Algozzine, Christian, Marr, McClanahan, & White, 2008). Practices within schools, however, can either increase or decrease the likelihood of problem behaviors. An environment characterized by aggression and disruption can elicit cyclical recurrences of inappropriate behavior (Barth, Dunlap, Dane, Lochman, & Wells, 2004; Thomas, Bierman, & Conduct Problems Prevention Research Group, 2006), whereas other system-wide practices can elicit appropriate behaviors and diminish problem behaviors (e.g., school-wide positive behavior support [SWPBS]; Lewis & Sugai, 1999).

Decreasing problem behaviors and increasing academically engaged behaviors could be considered reciprocal actions because of the relationship between behavioral engagement and academic outcomes. Behavioral engagement during academic activities (e.g., persistence, attention, and concentration; Birch & Ladd, 1997) can be seen as an indicator of cognitive and emotional engagement, which lead to enhanced academic achievement (Fredricks, Blumenfeld, & Paris, 2004; Greenwood, Horton, & Utley, 2002). For instance, the amount of time engaged in reading is positively associated with academic success, but competing behaviors (e.g., classroom disruptions, inattention) are negatively associated with the same outcomes (Finn, Pannozzo, & Voelkl, 1995). Moreover, a link between self-regulated task behaviors and academic outcomes has been established for elementary-age children (Howse, Lange, Farran, & Boyles, 2003).

Efforts to improve student classroom behavior must account for factors known to affect the likelihood of problem behavior. Larger class sizes, for example, appear to provide students greater opportunity to be off task and to engage in inappropriate behavior (Blatchford, 2003; Cooper, 1989; Smith & Glass, 1980). Economic factors, as measured by the percentage of students receiving free or reduced-price lunch (FRL) are also related to classroom behavior (Battistich, Solomon, Kim, Watson, & Schaps, 1995; Gorey & Cryns, 1995). Research suggests that socioeconomic disadvantage puts children at risk for behavioral and cognitive problems throughout later development (Duncan, Brooks-Gunn, & Klebanov, 1994; Pagani, Boulderice, & Tremblay, 1997). High amounts

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of student poverty in early grades led to increased amounts of school-level aggression in subsequent grades (Thomas et al., 2006). Although socioeconomic variables appear to be related to student behavior, classroom variables also affect the occurrence of aggressive or disruptive behaviors, and this trend generalizes across student demographics (Thomas, Bierman, Thompson, Powers, & Conduct Problems Prevention Research Group, 2008).

A diverse array of interventions and strategies has been developed to facilitate behavior improvements in schools and classrooms. Interventions based on the principles of behavioral psychology attempt to alter behavior through manipulating environmental stimuli that precede or follow behaviors. These interventions strive to decrease problem behaviors of individuals, groups of students, or entire systems (Fairbanks, Sugai, Giardino, & Lathrop, 2007). A popular approach that has proven effective in facilitating better behavior within schools is SWPBS (Sugai & Horner, 2006). This approach prevents or remediates problem behaviors within an entire school (Lewis & Sugai, 1999) by clearly communicating positively stated rules and implementing school-wide contingency systems. Schools select positively stated mottos, communicate expectations for and model examples of appropriate behavior, and provide extrinsic incentives for engaging in positive behavior (Lewis & Sugai).

Another school-wide approach to improving behavior focuses on altering the relational variables that occur in and around the classroom. The relational aspects of classroom environments have been shown to affect children's behavior (DiLalla & Mullineaux, 2008). The quality of a classroom, as characterized by teacher sensitivity, lessons that fit students' emotional and academic needs, stable routines, teacher-monitored engagement, and proactively managed behavior, was consistently linked to engagement in learning (Downer, Rimm-Kaufman, & Pianta, 2007; Pianta, La Paro, Payne, Cox, & Bradley, 2002). Moreover, efforts to facilitate social competence within the classroom led to improved academic and behavioral outcomes (Brock, Nishida, Chiong, Grimm, & Rimm-Kaufman, 2008; Greenberg et al., 2003; Kam, Greenberg, & Kusche, 2004). Social competence may improve student outcomes because supportive teacher–student relationships help students maintain motivation for academic and behavioral growth, which leads to better outcomes in both domains (Mashburn, Hamre, Downer, & Pianta 2006; Wentzel, 1998).

Maintenance and generalization are considered to be key components of effective behavioral interventions (Baer, Wolf, & Risley, 1987), and the degree of maintenance contributes to the social validity of an intervention (Kennedy, 2002). Therefore, effective interventions should improve behaviors across time and settings. Interventions based on self-regulation could promote maintenance and generalization of positive behaviors beyond situations where that behavior is relationally dependent or reinforced. Student self-regulation of behavior is consistent with the definition of character education provided by the U.S. Department of Education (2005), “an explicit learning process from which students in a school community understand, accept, and act on ethical values such as respect for others, justice, civic virtue and citizenship, and responsibility for self and others.” By helping students act on these values, character education programs might be effective in reducing problem behaviors in schools and classrooms. Although character education programs come in a variety of forms with varying efficacy, theoretically derived and empirically validated programs have potential to promote student socioemotional and academic development (Berkowitz & Bier, 2004).

The current study examined the behavioral outcomes in classrooms implementing a theoretically based character education program designed to help children control their own behavior. The Smart Character Choices (SCC; Vance & Stockwell, 2002) program was founded on the tenets of Choice Theory and its extension into schools (Glasser, 1998, 1999). At the core of Choice Theory is the idea that behavior is influenced by individual wants and needs. The SCC program incorporates Choice Theory through systematic efforts to meet five basic human needs, including physiological survival, belonging, fun, freedom, and power (Glasser, 1998). Previous research found that the SCC

program resulted in positive ratings of student behavior by parents, teachers, and self-report and that the results were directly linked to a measure of Choice Theory implementation in the schools (Szadokierski, Vance, & Burns, 2010). The purpose of the current study was to further examine the effect of a theoretically based character education program on classroom behaviors while accounting for other variables that influence classroom behavior.

Two research questions guided the study: (1) How similar are the relationships between FRL, class size, and classroom problem behaviors in schools that use a school-wide character education program and those that do not? (2) To what extent does a character education program contribute to the prediction of classroom behavior while also considering known correlates of problem behaviors?

METHOD

Participants

Data were collected by observing students in 77 classrooms from 12 public schools throughout an Upper Midwest state. These classrooms were observed as part of a larger longitudinal study that used two cohorts to evaluate the effectiveness of the SCC program. Half of the schools were in the first 4-year cohort, and half were in the second. Each SCC school implemented the program for a total of 3 years after a year of preparation, with the second cohort beginning after the first cohort had completed 3 years of implementation. Data were available from the first cohort's last year of implementation (year 4) and the second cohort's first two years of implementation (years 2 and 3), resulting in data from each year of implementation (e.g., last year of cohort one; first two years of cohort two). Participating schools were randomly assigned to either a control condition or the character education (SCC program) condition.

Observations were conducted in Grades 1–5. The six control schools averaged 440.33 students (standard deviation [*SD*] = 209.58); 54.87% were White, 34.58% were Black, 1.93% were Hispanic, 3.07% were Asian American, .83% were Native American, and 4.72% were multicultural. The six SCC schools averaged 535.17 students (*SD* = 259.78); 83.9% were White, 11.28% were Black, 1.6% were Hispanic, 1.02% were Asian American, 1.62% were Native American, and .58% were multicultural. All observations took place while academic activities occurred within the classroom. The average class size for observations in the control schools was 18.29 students (*SD* = 4.41) and for the SCC schools was 20.15 (*SD* = 4.84).

A measure of socioeconomic status (SES) was collected using the proportion of students participating in the FRL program as a proxy (Ensminger et al., 2000). In the control schools, 55% (*SD* = 30%) of the students qualified for FRL, and 41% (*SD* = 28%) of the students in the character education schools qualified for FRL. This difference was significant ($t(75) = 2.168, p = .035$), indicating that there were more students of lower SES in the control schools.

Measures

Systematic direct observations (Hintze, Volpe, & Shapiro, 2008) in the classroom were conducted to measure the effect of the character education program on classroom behavior. Observations examined the proportion of 15-second intervals in which the target behavior was observed during a 20-minute observation period. The target behaviors were disruptions, verbal aggression, and physical aggression. Disruptions were operationally defined as any action or verbalization that interrupted the instructional flow by distracting at least one other student in the class for more than 2 seconds (e.g., turning head in the direction of the disrupting student) and/or requiring that the teacher stop the classroom activity to redirect the student (Northup et al., 1995). Verbal aggression was operationally

defined as any verbalization that was directed at an individual that was loud enough for the victim to hear, described physical aggression (e.g., “I’m going to hurt you”), was brusquely disrespectful (“shut up”) or offensive (e.g., racial slurs), and resulted in signs of annoyance or distress by the victim (Tapper & Boulton, 2004). Physical aggression was defined as an intentional act of physical contact that was severe enough to cause discomfort (e.g., hitting, kicking, pushing, pulling, and/or wrestling) and led to signs of annoyance or distress (e.g., crying, turning away) by the victim (Archer, Pearson, & Westerman, 1988). A composite problem behavior variable was also created by summing the total number of disruptions, verbal aggression, and physical aggression in each observational period and dividing that number by the total number of intervals.

Character Education Program

The SCC program is composed of five components that target character education through Choice Theory. The components are (a) a comprehensive and intensive professional development program for all school staff, (b) intensive supervision of implementation of program components, (c) teaching character through examples using the specific SCC American History Curriculum, (d) teaching school-wide and classroom procedures and routines to students, and (e) teaching social protocols to students (Vance & Stockwell, 2002). Each of the five components was in place at the treatment schools. Control schools participated only for purposes of data collection, and were not engaged in any formal character education programs.

Professional development activities for staff members focused on the following: building staff awareness of the importance of character education and how character is acquired; support for school leaders to continually improve instruction; explaining choice theory, how to use it with students, and how to help students use it to make good choices; and the provision of resources to support adult learning and collaboration. The professional development activities occurred in the first year of the program, before implementation began, and also included staff preparations to integrate program activities system-wide, incorporate parent involvement, and develop an SCC American History Curriculum that emphasized positive role models throughout history.

Program implementation was ensured primarily through supervision that included four full days of training prior to school beginning the first year, additional training sessions each month, and support and observation of program application into classroom practice by school leaders. Training focused on Choice Theory in addition to establishing school wide and classroom routines, procedures, and social protocols. During subsequent years of implementation, all new staff received intensive training before the school year began.

The school wide and classroom procedures were complemented by systematic teaching of social protocols to students. To accomplish this, teachers dedicated time at the beginning of the year to teach specific classroom and school-wide social protocols (e.g., attention in large groups, restroom use). The goal was to assist students in developing effective character traits (e.g., kindness, optimism, respect, responsibility, and work ethic) that help them to interact with others positively and meet basic needs. Specific social protocols were implemented following the work of Dowd (1992), in which each school selected protocols that were of high importance to the school, and teachers introduced them to students and reinforced them using the same strategies developed within the preparation year of the study.

Procedure

Data collection for this study took place in May each year. Each May, observations in all of the treatment and control schools were conducted within one calendar week. The order of observations

for each school was randomly chosen each year. The observations for each school were conducted in 1 day by entering the school in the morning and randomly selecting two classrooms each from early elementary (first and second grades), middle elementary (third and fourth grades), and upper elementary (fifth grade).

During data collection the observers sat in an inconspicuous corner of the classroom, visually scanned the students in the classroom every 15 seconds, and recorded disruptive, verbally aggressive, and physically aggressive behaviors at each interval. The presence of a problem behavior during any portion of the 15-second interval resulted in a positive recording for that interval. Moreover, the three types of behavior were all recorded separately, and it was possible to observe and record more than one type of behavior at each interval (e.g., verbally aggressive and disruptive).

The observers were a male faculty member of a school psychology program with expertise and extensive experience in behavioral observations, a female school psychology doctoral student, and a male school psychology doctoral student. Both of the student observers completed coursework in behavioral observations and received training in the observation protocol for this study before collecting the data.

Treatment Fidelity and Inter-Observer Agreement

The implementation plan for the SCC program addressed implementation fidelity by placing at each school project coordinators who were trained in the concepts of the program and who also received ongoing professional development in SCC. The coordinators were responsible for oversight of all project initiatives, providing school-level reports to the project director, and applying problem-solving methods to any issues that arose during the implementation.

Implementation fidelity was assessed in May of each year of the final 2 years by having the staff anonymously complete an online version of the Character Plus Implementation Survey (CPIS; Cooperating School Districts, 2001). The CPIS is a 30-item scale that uses a 5-point Likert scale with anchor points of Not Evident (0), Low (1), Middle (2), High (3), and Exemplary (4). Coefficient alphas were .96 for Year 2 and .97 for Year 3. Total scores of approximately 90 would suggest high implementation, and scores that approximate or exceed 120 would suggest exemplary implementation. The mean total score for the total of the 30 items was 89.72 ($SD = 18.70$) for Year 2 and 91.74 ($SD = 21.46$) for Year 3. These data suggest that the teachers in the SCC schools perceived high implementation fidelity.

Inter-observer agreement data were collected for approximately 20% of the observations by having a second person observe the classroom for the 20-minute duration. The total number of intervals that were consistently rated by both observers (e.g., both rated as no problem behavior, or both observed disruptive behavior) was divided by the number of agreements plus the number of disagreements (e.g., one observed disruptive behavior and one observed no problem behavior, or one observed physical aggression and one observed disruptive behavior), then was multiplied by 100. The mean agreement was 96%, ranging from 88% to 100%.

Analyses

The first research question was investigated by analyzing the different correlation coefficients between SES, class size, and the problem behaviors for each condition. Fisher z transformations were used to directly compare coefficients between individual predictors and problem behaviors across conditions. For the second question, multiple regression analyses examined the individual and combined effect of the program and predictors (i.e., FRL and class size) on the occurrence of problem behaviors in the classroom.

Table 1
Means and SD Values for Percentage of Intervals with Problem Behaviors

	SCC Schools		Control	
	Mean	SD	Mean	SD
Behavior Problem Composite	10.67%	8.56%	15.14%	10.68%
Disruptions	9.00%	7.08%	11.82%	8.10%
Verbal Aggression	.79%	1.80%	1.95%	3.87%
Physical Aggression	.85%	1.64%	1.08%	1.90%

RESULTS

Descriptive statistics for means and *SD* values for each problem behavior across conditions are shown in Table 1. Overall, more problem behaviors were observed in control schools than in SCC schools. Classroom disruptions were the most common problem behavior for both SCC and control classrooms. Verbal and physical aggression occurred in less than 2% of observed intervals for both conditions.

The first research question examined the relationship between FRL and class size with problem behavior in the SCC and control schools. The inter-correlations between the predictors and problem behaviors for treatment and control schools are shown in Table 2. Problem behaviors had a tendency to be significantly inter-correlated for both groups. FRL and class size tended to be significantly correlated with select problem behaviors in the control schools, but neither was correlated with problem behaviors in the treatment schools. Fisher *z* transformations were used to compare the correlation coefficients between each condition for class size, FRL, and problem behaviors. As shown in Table 3, the difference between the larger correlations in the control condition and the smaller correlations in the treatment condition was significant for both disruptions and the problem behavior composite, but only for FRL. No differences for the correlations with class size were significant.

The second research question investigated the contribution of the SCC program to classroom behavior, specifically for the problem behavior composite. A multiple regression analysis was conducted, and class size, FRL, and condition were entered into separate blocks to discern main effects of each. Table 4 summarizes the results for the composite variable. Condition emerged as the

Table 2
Correlation Coefficients between Predictors and Measures of Problem Behavior

	Class Size	FRL	Disruptions	Verbal Aggression	Physical Aggression	Behavior Composite
Class Size		.14	.22	-.06	-.05	.15
FRL	-.58*		-.01	.10	-.02	.01
Disruptions	.18	-.44*		.27	.31*	.94*
Verbal Aggression	.37*	-.11	.19		.52*	.53*
Physical Aggression	.02	-.23	.49*	-.05		.56*
Behavior Composite	.28	-.45*	.93*	.52*	.52*	

Note. Treatment schools are above and control schools are below the diagonal.
* *p* < .05.

Table 3

Fisher z Transformation to Compare Correlations among Class Size, Percentage of Students Eligible for FRL, and Problem Behaviors between Condition

	Disruptions	Verbal Aggression	Physical Aggression	Composite
Class Size	−0.17	1.34	0.28	0.56
FRL	−1.92*	−0.86	−0.90	−2.07*

Note. The direction of the z value indicates whether the control or treatment schools had a larger correlation, in real number terms. A negative value means that the correlation for the control schools was smaller (in terms of the real number line) than the treatment schools.

* $p < .05$.

Table 4

Hierarchical Regression Results for Problem Behavior with Condition, Class Size, and Number of Students Eligible for FRL as Predictors

	B	$SE\ B$	β	R^2
Problem Behavior Composite				
Class Size	.004	.002	.17	.03
SES	−.07	.04	−.22	.04
Condition	−.07*	.02	−.34*	.10
Total R^2				.15
$F(3, 69) = 3.99, p = .01$				

Note. For condition, treatment = 1; control = 0.

* $p < .01$.

only significant unique predictor in the context of class size and FRL. The presence of the program explained approximately 10% of the variance in problem behaviors.

The significant relationship between condition and classroom disruptions was further analyzed to detect potential interactions among the predictor variables. In these analyses, FRL or class size, condition, and the interaction between condition and FRL or class size were entered into separate blocks. Table 5 summarizes the results for both interaction models. In these models, condition continued to be a significant predictor of classroom disruptions, explaining 6% of the unique variance in disruptions when compared to FRL, and 7% of the unique variance when compared to class size. Only the Condition \times FRL interaction model was significant [$F(3, 73) = 4.59, p < .01$] perhaps because the control schools had more students eligible for FRL, although the current analyses permit only suggestions for researching this possibility further.

DISCUSSION

The current study examined the occurrence of problem behavior in classrooms with and without a theoretically based character education program. In answering the first research question, the character education program did appear to influence the relationship between typical predictor variables (i.e., FRL and class size) and the problem behaviors. Whereas the control group showed significant correlations between predictors and problem behaviors, those variables in the treatment group showed no significant relationship. This finding may suggest that, in the treatment classrooms, problem behaviors occurred more as random instances and less as a function of the relationship with FRL (Gorey & Cryns, 1995) or class size (Blatchford, 2003). For example, an interpretation of this

Table 5
Hierarchical Regression Results for Problem Behavior Composite Based on Interaction Model Between Condition and Percentage of Students Eligible for FRL and Condition and Class Size

Problem Behavior	<i>B</i>	<i>SE B</i>	β	<i>R</i> ²
Condition \times SES				
FRL	-.07	.04	-.22	.04
Condition	-.06*	.02	-.29*	.08
Interaction	.16*	.07	.24*	.06
Total <i>R</i> ²				.16
<i>F</i> (3, 73) = 4.59 <i>p</i> < .01				
Condition \times Class Size				
Class Size	.01	.002	.22	.05
Condition	-.06*	.02	-.30*	.08
Interaction	-.004	.01	-.10	.01
Total <i>R</i> ²				.12
<i>F</i> (3, 69) = 3.00, <i>p</i> = .04				

Note. For condition, treatment = 1; control = 0.
* *p* < .05.

finding could be that large classrooms have an environment susceptible to undesirable behavioral contingencies (i.e., less teacher interaction may increase the reinforcing value of problem behaviors that elicit teacher attention), whereas effective character education may preclude those contingencies through such practices as modeling appropriate social protocols. The current data are correlational, however, and the causal mechanisms of the findings are unknown.

The results regarding the second research question showed that the SCC program accounted for significant amounts of variance in the occurrence of problem behaviors. In addition, the interaction models showed that the effect of the treatment condition may have been especially prominent in schools with high numbers of students eligible for FRL. Thus, the SCC program appeared to have an effect on problem behaviors in classrooms where the intervention was ongoing. A tentative interpretation of this finding is that character education programs that facilitate student control of behavior might also have behavioral correlates in the classroom. Whether these correlates in classroom behavior also lead to the academic benefits associated with behavioral engagement (Finn et al., 1995; Fredricks et al., 2004) would be a valuable area of future research.

The current results provide some support for applying character education programs in schools. Character education efforts may be effective when implemented rigorously and with a scientific foundation, which are requirements frequently omitted from character education programs (Davis, 2003). Moreover, character education approaches similar to the SCC program, which has a theoretical orientation toward building stimulus control within the child, may effectively facilitate maintenance and generalization, which are the end goals of an effective learning process (Haring, Lovitt, Eaton, & Hansen, 1978). This is a hypothesis in need of further empirical scrutiny.

Despite findings that appear to support the conclusion that the SCC program significantly affected problem behavior, the results and associated implications should be interpreted cautiously. First, there were no baseline data collected, which prevented more definitive interpretations. The aforementioned results and interpretations therefore should be considered in terms of identified relationships between important variables acting on classroom behavior, the results of which suggest avenues for future research. In addition, the direction of the significant correlation between FRL

and disruptions was opposite of what was expected. Although the relationship was significantly negative, more research is needed to clarify how character education programs might affect the relationship of FRL with classroom disruptions. Third, the time-sampling procedure used may not have been adequately sensitive to the aggressive classroom behaviors, which could be a meaningful problem given that less frequent, but intensive aggressive behaviors can have a considerable impact on classrooms. Moreover, some of the behavioral definitions, although taken from previous research, were somewhat arbitrary (2-second criterion for disruptive behavior) or subjective (signs of annoyance or distress and intentional acts). Fourth, the data collection techniques employed for this study had additional limitations associated with systematic direct observation. It was assumed that time samples taken at random were representative of classroom behavior, but there are limits to systematic direct observations, such as generalizability of data collected (Hintze & Matthews, 2004) and observer reactivity (Merrell, 2003). Moreover, individual components of the SCC program have not been studied, such as whether representation across racial subgroups for role models or whether adopting social protocols for individual schools' needs would be more or less beneficial, with the effects on the current study remaining unknown. Finally, implementation integrity was assessed with self-report data, which may have overestimated the treatment fidelity due to social desirability of the results.

An additional limitation is that the presence of the SCC program in the treatment schools could be conceptualized as an environmental manipulation and could overlap with the interventions discussed earlier. Therefore, the results presented here must be discussed similarly to the results of other ongoing programs, regardless of the novel theoretical orientation of the current intervention. Until subsequent studies that are designed to compare the effects of the current program with the effects of other programs, the only conclusion that can be made is that the current intervention appears to influence problem behavior. Thus, the lack of maintenance or generalization measures is a considerable limitation to the current study. As the purpose was to find initial evidence for the effectiveness of the approach to improving problem behavior, this limitation was accepted as a necessary step in this line of system-wide behavioral intervention research.

Future research might examine the longitudinal and cross-situational effects of this type of intervention in a number of ways. Follow-up data could be collected, and would necessarily be taken when the program was no longer ongoing. One potential longitudinal design might be to implement the treatment in young, grade-level cohorts and track them through later elementary grades when the program is not in place. Other options might isolate the cross-situational effects of the program, and could track participating students who transfer schools.

Other future studies may alter the types of dependent variables used. For instance, office discipline referrals may be especially amenable to measuring the effects of system-wide interventions (Sugai, Sprague, Horner, & Walker, 2000). These measures could provide converging evidence for the effectiveness of the program. Moreover, office discipline referral systems that include locations and type of referral (e.g., verbal or physical aggression) may better measure the effects of the intervention on low-incidence, high-impact behaviors. This would allow for a broader interpretation of the effects of the current program across settings and behaviors.

Finally, future efforts should examine the effects of the current approach for different demographics of students. The current results suggest that efforts to improve positive behavior in classrooms via interventions that strive to empower students to control their own behavior might be effective, but only within a limited population and a limited age range. Subsequent efforts could look for effects across geographic locales and in rural settings, as well as for potential effects for older students. Although additional research is needed, the importance of a classroom environment that is conducive to learning and the promising results of this study suggest that additional research is warranted.

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