Evaluation of Safe & Civil School Leadership Plus Start on Time: Effects on School Climate, Safety, and Student Behavior

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Take Home Message:

Principal training was promising and well received, but it did not reliably translate into measurable improvements in the school climate and safety experiences reported by teachers and students.

Abstract

This report presents findings from a group-randomized evaluation of Safe & Civil School Leadership plus Start on Time, a leadership training and coaching intervention designed to improve school safety, disciplinary structure, student behavior, and school climate. Forty-three schools in Oklahoma were randomly assigned to receive SCSL plus START or to a business-as-usual control condition. Data were collected from administrators, teachers, and students across four time points from 2017 to 2022, yielding valid responses from 265 administrators, 4,141 teachers, and 32,861 students. Outcomes included perceptions of school safety, disciplinary structure, academic expectations, student support, school problems, teasing and bullying, aggressive attitudes, and related school climate indicators. Multilevel models were used to estimate treatment effects while accounting for the nesting of respondents within schools and controlling for baseline measures, demographic characteristics, school context, and cohort effects. Results provided limited evidence of intervention impact. Administrator reports showed positive effects on disciplinary structure at two follow-up points, but these effects were not reflected in teacher or student reports. Teacher outcomes showed no statistically significant treatment effects, and student outcomes showed no positive effects, with negative effects on student-reported disciplinary structure and student support at one time point. Findings suggest that although SCSL plus START was well received and supported through training, coaching, and fidelity monitoring, the program did not produce consistent improvements in school climate or safety outcomes. The study highlights the challenges of translating principal-focused professional development into schoolwide changes experienced by teachers and students, particularly in the context of COVID-19 disruptions.

1. Introduction

Schools are expected to provide a safe and orderly environment for learning (Every Student Succeeds Act, 2015), yet many schools struggle to meet this mandate. For instance, over 1.3 million discipline incidents were documented in U.S. schools in 2013-14, and 65% of public schools reported one or more violent incidents in their building (National Center for Education Statistics, 2015).

Principals play a central role in creating a safe school environment; in fact, the "selection of an organizationally strong and visionary principal may be the single most important intervention that reduces the incidence of violence in a given school" (Astor, Benbenishty, & Estrada, 2009, p. 452). Consistent evidence points to school safety as the central organizational factor linking principal leadership to student outcomes (Sebastian & Allensworth, 2012, 2013; Sebastian, Allensworth, & Huang, 2014; Sebastian, Allensworth, & Stevens, 2014). Unfortunately, principals feel unprepared to implement practices that promote school safety and positive student behavior (Ricciardi & Petrosko, 2000). Leadership training programs and most PD training programs simply do not prioritize school safety and student behavior as critical leadership skills (Timmons, 2010). Enhancing school management practices holds promise as a strategy to reduce school crime and promote safety (Gottfredson et al., 2005).

This project addressed these challenges by evaluating a training program designed to equip school leaders with skills and strategies that promote safe and civil school environments. Safe & Civil School Leadership (SCSL) was developed over a decade ago and focuses specifically on developing leadership skills for promoting school safety and positive school climate. SCSL is a fully developed and widely disseminated leadership training program. Books, planning materials, and DVD's support implementation of this program in precise and repeatable ways. SCSL is the leadership component of the broader Safe & Civil Schools (SCS) series. Start on Time (START) is a companion program in the series designed to support principals in designing and implementing a unified approach to school-wide hallway management. START targets a valued school behavior (tardiness) through a step-by-step process involving all school staff. By quickly reducing tardiness with relatively simple staff behaviors, START helps principals build staff buy-in and commitment to other SCSL strategies for creating a safe, predictable, and nurturing school climate.

Major goals and objectives

The goal of this proposal was to evaluate the efficacy of SCSL plus START to improve school climate and safety by promoting effective school leadership skills and a unified approach to school-wide hallway management. The specific objectives of the proposed study were (1) To evaluate, utilizing a delayed treatment RCT design, whether the SCSL plus START program leads to improved leadership skills, school climate, and school safety as evidenced by reduced victimization and bullying/teasing and increased perceptions of safety in comparison to a business as usual (control) condition; and (2) To identify mediators of observed effects on the primary outcome, school safety, based on our theory of change. These mediators include improved leadership skills, use of data, climate (disciplinary structure and support), aggressive attitudes, and student compliance.

Research questions

Research Question 1: Will SCSL plus START schools have higher levels of principal and teacher efficacy in promoting school safety and positive student behavior, higher perceptions of school safety, lower rates of disruptive behavior, and higher levels of academic engagement and performance than the Control schools.

Research Question 2: Will improvements in leadership skills, use of data, climate (structure and support), and aggressive attitudes, and student compliance mediate intervention effects on any observed improvements on primary outcomes.

2. Method

Study Design

We used a group randomized design to answer our research question. Forty-three principals from schools throughout Oklahoma were randomly assigned to receive SCSL plus START or business as usual conditions. Data on primary outcomes and putative mechanisms were collected at baseline and 6 month, 1 year, and 2 year follow-up.

Participants

Forty-three schools across Oklahoma participated in the project. In these school, 43,540 students completed anonymous surveys about climate.

Student characteristics are summarized below:

- Free-reduced price lunch status: 56.46% yes, 43.54% no
- IEP status: 11.95% yes, 28.50% no, 49.32% I don't know
- Gender: 48.26% male, 51.74% female
- Race: 49.22% White, 5.30% Black or African American, 10.99% American Indian or Alaska Native, 2.22% Asian, 0.83% Native Hawaiian or Pacific Islander, 31.44% 2 or more races
- Parent education level: 12.58% did not graduate from high school, 34.66% graduated from high school, 15.43% two-year college or technical school, 20.92% graduated from a four-year college, 16.42% completed post-graduate studies.
- How many parents at home: 2.80% 0, 26.34% 1, 70.87% 2.
- Intervention: 54.94% control group, 45.06% treatment group

School characteristics are summarized below:

- Intervention information: 23 schools in the treatment group and 20 schools in the control group
- School level: 25 middle schools, 11 high schools, and 7 multiple levels (ES+HS or MS+HS)
- School location: 29 rural, 9 suburban, and 5 urban

Description of the SCSL plus START Program

Principal Training Workshops. A certified trainer trained principals from all SCSL schools in two full day workshops offered in October and July. The SCSL model targets school leaders' use of effective schoolwide discipline practices by promoting positive relationships with all students and by strengthening the relevance and engagement of instruction. The acronym STOIC summarizes the guiding principles for creating effective and orderly interactions in all school settings: Structure/organize all settings for success; Teach students how to behave responsibly; Observe student behavior; Interact positively with students; and Correct irresponsible behavior fluently. SCSL is firmly grounded in rigorous principles of data based decision making. It is based on a cyclical process of reviewing data from multiple sources, revising the Schoolwide Behavior Plan (SBP) based on the review, adopting revised policies and procedures, and implementating new policies and maintaining current effective policies. All of these steps are taken in a collaborative fashion by the school "Behavior Leadership Team" that includes the school principal and various subgroups of the school staff. The SCSL training program provides detailed examples and practices for each of the topics. SCSL includes a host of well-developed and user-friendly materials to support teacher implementation of the practices. These include the companion books, The School Administrator's Guide to Safety, Climate & Discipline (formerly titled, The Administrator's Desk Reference of Behavior Management), the Teacher's Encyclopedia of Behavior Management: 100 Problems/500 Plans; Meaningful Work, and the Making Every Second Count DVD series. Additionally, SCSL includes online training materials with examples, practice exercises, and quizzes.

Online Training and Ongoing Coaching to Support High Implementation of SCSL in Schools. In addition to the SCSL Workshops, participants had access to online materials designed to supplement and enhance skill development, and a certified SCSL coach provided onsite coaching to intervention schools. The online training was available for both years of the project, and the coach prompted principals to complete simple assignments on a monthly basis. The SCSL coach met with each leadership team at least twice each year to review the content from the workshop, assess areas of difficulty with implementation, and problem solve any implementation barriers. Performance feedback data from observation data collected on leaders' use of effective school safety and student behavior management practices was provided during coaching meetings. The activities of each coaching visit were documented by the coach.

Assuring Principal Intervention Implementation. The dynamic, interactive workshop formats stimulate discussions and sharing of ideas among participants. The use of collaborative training facilitates the leadership implementation skills. Implementation of the intervention was assured with the following: (a) detailed training manuals; (b) session-by-session protocols for leadership activities, with videos and role plays specified; (c) online training materials and resources that were monitored for use and activity by each participant; (d) onsite coaching by the SCSL trainer; (e) development of a SCSL Buddy System to help principals provide support to one another; and (g) independent site observations with performance feedback given to principals.

Assuring Integrity of the SCSL Workshops. The SCSL trainer was selected and supervised by Dr. Sprick. The trainer had conducted dozens of SCSL trainings prior to this trial. During

each workshop the trainer used program agendas and checklists to ensure completion of required content. Dr. Sprick's role was limited specifically to supervising the workshops and SCSL coaching to ensure the model was conducted with high fidelity. He was not involved with recruitment or data collection, entry, or analysis.

Data Collection Procedures and Measures

Recruitment. We recruited 43 schools from Oklahoma. Only individuals with signed informed consent were included in the project.

Prevalence of Teasing and Bullying. The prevalence of teasing and bullying in a school was measured with a five-item scale. The scale asked about the extent of bullying and teasing observed at school as distinguished from personal victimization. Consistent with other measures of bullying (e.g., Juvonen, Nishina, & Graham, 2000; Olweus, 2007), item content was not limited to use of the term bullying, but included general forms of peer harassment associated with bullying.

Students completed a **Victimization index** based on Gottfredson's (1999) research. We excluded two relatively trivial forms of victimization (i.e., theft and damage of property worth less than $10) and relied on the remaining forms of student victimization, which ranged from theft of personal property worth to being physically attacked. Students answered "no", "one time", or "mre than once" for each form of victimization they had experienced in the past school year. This scale can be distinguished from the Prevalence of Teasing and Bullying scale because it asks students to report their own victimization experiences rather than how frequently they observed the victimization of others. Prior work has indicated a Cronbach's alpha of .72. Totals were calculated for each participant based on how many forms of victimization he or she reported.

Authoritative School Climate (ASC) Survey. The ASC Survey was developed by the Youth Violence Project research team at the University of Virginia with the support of the by the Office of Juvenile Justice and Delinquency Prevention, Office of Justice Programs, U.S. Department of Justice (Grant #2012-JF-FX-0062). Student and teacher perceptions of disciplinary structure, academic expectations, and student support were the main constructs used in measuring authoritative school climate (Gregory et al., 2010). Student and teacher versions of the survey have been reviewed using both multilevel confirmatory and exploratory factor analyses using data from over 200,000 respondents in both middle and high schools in Virginia and have shown favorable fit to the data at the group (school) and the individual (student or teacher) level (F. Huang et al., 2015; Konold et al., 2014). In addition, additional ASC scales also measured the prevalence of teasing and bullying (PTB), bullying victimization, student engagement, and aggressive attitudes (F. L. Huang, Cornell, & Konold, 2014; Konold et al., 2014). The scales have shown good internal consistency (both at the individual and group level), test-retest reliability, and construct validity. Response options for the survey items in the student version of the scales used a four point Likert-scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4= strongly agree).

Disciplinary Structure. The scale was composed of seven items selected to measure perceived fairness and strictness of school rules using items such as "The school rules are fair" and "The punishment for breaking school rules is the same for all students". Items

were derived from the Experience of School Rules scale from the School Crime Supplement to the National Crime Victimization Survey (NCES, 2005).

Academic Expectations. Five items asked student perceptions of how much teachers expected of students in their academic work. Items included "My teachers expect me to work hard" and "My teachers expect a lot from students."

Student Support. An eight-item scale was used to measure perceived supportiveness of student-teacher relationships with items such as "Most teachers and other adults at this school care about all students" and "There are adults at this school I could talk with if I had a personal problem" (see Table 1). Items were derived from the Willingness to Seek Help scale (Bandyopadhyay, Cornell, & Konold, 2009) and the School Climate Module of the California Healthy Kids Survey (WestEd, 2013).

Student Perceptions of School Safety. Eight items were taken from the U.S. Department of Education (2016) School Climate Survey (EDSCLS) and included items such as "I feel safe at this school" and "students at this school damage or destroy other students' property." As the Department of Education is conducting a national benchmarking study using this scale in 2017, schools in our study will also be able to compare scores with national benchmarking data when available.

Aggressive Attitudes. The aggressive attitudes scale (F. L. Huang et al., 2014) is a 6-item scale (see Table 1) that measured the prevalence of aggressive attitudes among students related to hitting, bullying, and fighting (i.e., "If someone threatens you, it is okay to hit that person"). Studies have shown that the scale is predictive of students willingness to report threats of violence (Millspaugh, Cornell, Huang, & Datta, 2015), suspensions, bullying, aggressive infractions, teacher safety, and gang activity (F. L. Huang et al., 2014)

We also use items from the **Trends Climate Survey** (Sprick et al., 1998; 2015) which was developed specifically as an online data tool for the SCSL intervention. Although Trends and ASC have a great deal of overlap, some items were unique to trends. In particular, we added Trend items regarding student report of specific areas of school were problematic interactions happen and safety in common areas. Principals in SCSL use data collected from the climate survey to inform school practices.

Use of Data. Use of the climate survey data helped serve as an indicator of data use within SCSL schools. In addition, all principals were asked to complete a 4 item scale about how often and effectively they use data to inform school practices and their perceptions of efficacy and importance in using data.

Measures of Fidelity and Comparison Group Practices.

Fidelity of SCSL Workshops conducted by SCSL Trainer. During each workshop the SCSL Trainer used program agendas and session checklists to ensure completion of required content. Detailed session-by-session protocols have been developed to keep careful records of training content covered and intervention activities. **Quality of Training.** Principals receiving the intervention completed a SCSL Workshop Evaluation form immediately following each SCSL Workshop. Principals rated the quality of the training, including the skill of the group leader, the appropriateness and usefulness of the video clips, role plays, and discussion, as well as usefulness of any written materials provided.

Fidelity of SCSL Coaching conducted by SCSL Trainer. During each coaching visit the SCSL Coach used session checklists to ensure completion of required content. **Fidelity of SCSL Online Activity**. Each participant's use of the online training material was documented on a monthly basis including duration of use, activities completed, and scores on quizzes. **Fidelity of SCSL Implementation**. Completed ongoing fidelity of implementation ratings of each school during each school visit.

Analysis Plan.

We assumed that schools would be balanced on both observed and unobserved characteristics due to the randomization of schools to the treatment and control conditions allowing the differences in the outcomes to be attributable to the treatment assignment. To assess group equivalency, a series of t-tests and chi-square tests were conducted to check covariate balance. Differences on the covariates were controlled for as well in the analytic models.

Aim 1: Primary Outcomes. As a result of the nested data structure (e.g., students within schools), random intercept, multilevel models (MLMs) were used. Analysis was done using R with the lmer package using restricted maximum likelihood. Three regression models were modeled separately for three time points controlling the baseline measure at the first spring (aggregated at school level). The general formula can be shown as:

$$y=x\_treatment\ \beta+w\gamma+\tau+\varepsilon,$$

where y is the standardized outcome measure at a specific time point (time 2, 3, or 4); x_treatment is a binary indictor of treatment with 1 = treatment group and 0 = control group; w is a set of covariates controlled in the model, such as baseline measure (school-level measure of y at Time 1), individual demographic variables (e.g., race/ethnicity, gender), school characteristics (school location and school level), and cohort dummies (for cohort effects). τ represents the random effects across schools and ε is the error term. As the outcome is standardized (i.e., M = 0, SD = 1), the treatment effect coefficients can be interpreted as effect sizes as well.

3. Results

Baseline Equivalence

Table 1. Treatment vs. Control Schools baseline equivalence:

Stratified by intervention				
	Control	%	Treatment	%
Total n	18,053		14,808	
Female	9,385	52.0%	7,618	51.4%
Race				
American Indian or Alaska Native	1,831	10.1%	1,781	12.0%
Asian	419	2.3%	312	2.1%
Black or African American	662	3.7%	1,079	7.3%
Native Hawaiian or Pacific Islander	135	0.7%	137	0.9%
White	9,454	52.4%	6,720	45.4%
2 or more races	5,552	30.8%	4,779	32.3%
Free lunch status = yes	8,908	49.3%	9,645	65.1%
IEP status				
yes	2,144	13.1%	1,783	13.5%
no	5,253	32.2%	4,111	31.2%
I don't know	8,920	54.7%	7,288	55.3%
Parent education status				
did not graduate from high school	2,391	13.2%	1,742	11.8%
graduated from high school	5,922	32.8%	5,467	36.9%
two-year college or technical school	2,747	15.2%	2,323	15.7%
graduated from a four-year college	3,859	21.4%	3,015	20.4%
completed post-graduate studies	3,134	17.4%	2,261	15.3%
Parents at home				
0	467	2.6%	452	3.1%
1	4,410	24.4%	4,244	28.7%
2	13,176	73.0%	10,112	68.3%
Grade				
5	1,393	7.7%	834	5.6%
6	4,107	22.7%	3,345	22.6%
7	3,357	18.6%	3,893	26.3%
8	3,486	19.3%	2,942	19.9%

9	1,711	9.5%	1,790	12.1%
10	1,626	9.0%	836	5.6%
11	1,347	7.5%	679	4.6%
12	1,026	5.7%	489	3.3%

Final Sample Description

Principal (including assistant principals), teacher, and student datasets were used to analyze the effects of the intervention on school climate measures among fifth to twelfth grade from 43 public schools in Oklahoma. The schools were surveyed from 2017 to 2022. For each school, data was collected across four time points, using an online, anonymous Qualtrics survey, through two years by the research team. The intervention was a school-level variable as the randomization was done at the cluster (i.e., school) level. See the allocation between treatment and control schools in Table 2. After deleting invalid responses (e.g., students who had responded too quickly or had indicated that they were not telling the truth), we had a total of 265 principal and assistant principal responses, 4,141 teacher responses, and 32,861 student responses from 43 schools.

Table 2. Data collection information.

	Number of schools			**Collection time**			
	Treatment	Control	Total	Time 1	Time 2	Time 3	Time 4
Cohort 1	5	5	10	2017 S	2017 F	2018 S	2018 F
Cohort 2	2	2	4	2018 S	2018 F	2019 S	2019 F
Cohort 3	5	4	9	2019 S	2019 F	2020 S	2020 F
Cohort 4	5	4	9	2020 S	2020 F	2021 S	2021 F
Cohort 5	6	5	11	2021 S	2021 F	2022 S	2022 F
Total	23	20	43				

Note. S = Spring; F = Fall.

School Sample

A total of 43 schools participated in the survey from five time cohorts. Among 43 schools, 23 (53.3%) schools were in the intervention group and 20 (53.5%) schools were in the control group. Eleven (25.6%) high schools, 25 (58.1%) middle schools, and 7 (16.3%) schools with multiple school levels were located in urban (11.6%), suburban (20.9%), and rural (67.4%) regions in Oklahoma (see Table 3).

Table 3. School demographic information stratified by intervention condition.

	Control	%	Treatment	%
n	20	46.5	23	53.5
Setting				
rural	16	80.0	13	56.5
suburban	3	15.0	6	26.1
urban	1	5.0	4	17.4
School level				
high	4	20.0	7	30.4
middle	13	65.0	12	52.5
multiple	3	15.0	4	17.4

Administrator (Principal and Assistant Principal) Sample

There were 265 valid principal and assistant principal responses from four time periods. The valid response rate was 99.3% (265/267) after checking a response time indicator (response time > 4 minutes) and an attention indicator (I am reading this survey carefully = Somewhat Agree, Agree, or Strongly Agree). Table 4 shows the numbers of responses by school cohort and time.

Table 4. Principal responses by cohort and time.

	Time 1	Time 2	Time 3	Time 4	Total
Cohort 1	16	17	18	19	70
Cohort 2	5	6	5	5	21
Cohort 3	16	14	13	15	58
Cohort 4	15	11	14	11	51
Cohort 5	18	17	15	15	65
Total	70	65	65	65	265

Basic demographic information from principals and assistant principals were as follows:

- **Gender**: Male: 53.6%; Female: 45.7%; NA: 0.7%
- **Race/Ethnicity**: American Indian or Alaska Native: 7.6%; Black or African American: 4.2%; Hispanic or Latino: 0.7%; Two or more races: 5.7%; White: 81.1%; NA: 0.7%
- **Experience**: 1-2 years: 24.5%; 3-5 years: 28.3%; 6-10 years: 20.0%; more than 10 years: 26.4%; NA: 0.8%

Table 5 shows the principal demographic information (including assistant principals) by control and intervention group. There were 47.5% of responses in the control group and 52.5% of responses in the treatment group.

Table 5. Principal demographic information stratified by intervention condition.

	Control	%	Treatment	%
n	126		139	
Gender				
Male	53	42.1	89	64.0
Female	73	57.9	48	34.5
NA	0	0.0	2	1.4
Race/Ethnicity				
American Indian or Alaska Native	11	8.7	9	6.5
Black or African American	5	4.0	6	4.3
Hispanic or Latino	0	0.0	2	1.4
Two or more races	10	7.9	5	3.6
White	100	79.4	115	82.7
NA	0	0.0	2	1.4
Experience				
1-2 years	16	12.7	49	35.3
3-5 years	36	28.6	39	28.1
6-10 years	35	27.8	18	12.9
More than 10 years	39	31.0	31	22.3
NA	0	0.0	2	1.4

Teacher Sample

There were 4,141 valid teacher responses from four time periods. The valid response rate was 81.9% (4,141/5,058) after checking a response time indicator (response time > 4 minutes) and an attention indicator (I am reading this survey carefully = Agree or Strongly Agree). Table 6 shows the numbers of responses by school cohort and time.

Table 6. Teacher responses by cohort and time.

	Time 1	Time 2	Time 3	Time 4	Total
Cohort 1	379	373	387	344	1,483
Cohort 2	53	65	66	67	251
Cohort 3	226	195	170	164	755
Cohort 4	172	152	177	128	629
Cohort 5	339	260	215	209	1,023
Total	1,169	1,045	1,015	912	4,141

Basic demographic information from teacher responses:

- **Gender**: Male: 26.4%; Female: 69.0%; NA: 4.6%
- **Race/Ethnicity**: American Indian or Alaska Native: 7.3%; Asian or Native Hawaiian or Pacific Islander: 0.5%; Black or African American: 2.7%; Hispanic: 2.8%; Two or more races: 6.4%; White: 75.7%; NA: 4.7%

- **Experience**: 1-2 years: 11.2%; 3-5 years: 14.3%; 6-10 years: 17.1%; more than 10 years: 52.8%; NA: 4.7%
- **Position**: Teacher (General): 74.7%; Teacher (Special Education): 9.0%; Other: 16.3%
- **Teach School Level**: Middle: 39.2%; High: 24.2%; Other: 36.6%

Table 7 shows the teacher demographic information by control and intervention group. There were 52.1% of responses in the control group and 47.9% of responses in the treatment group.

Table 7. Teacher demographic information by intervention condition.

	Control	%	Treatment	%
n	2,157		1,984	
Gender				
Male	538	24.9	555	28.0
Female	1,521	70.5	1,335	67.3
NA	98	4.5	94	4.7
Race/Ethnicity				
American Indian or Alaska Native	181	8.4	120	6
Asian or Hawaiian or Pacific Islander	15	0.7	4	0.2
Black or African American	49	2.3	62	3.1
Hispanic or Latino	60	2.8	57	2.9
Two or more races	141	6.5	123	6.2
White	1,611	74.7	1,523	76.8
NA	100	4.6	95	4.8
Position				
Teacher (General)	1,586	73.5	1,508	76.0
Teacher (Special Education)	188	8.7	184	9.3
Other	383	17.8	292	14.7
Experience				
1-2 years	275	12.7	187	9.4
3-5 years	293	13.6	301	15.2
6-10 years	386	17.9	320	16.1
More than 10 years	1,101	51.0	1,084	54.6
NA	102	4.7	92	4.6
Grade Level				
Middle	631	29.3	994	50.1
High	590	27.4	410	20.7
Other	936	43.4	580	29.2

Student Sample

There were 32,861 valid student responses from four time periods. The valid response rate was 75.5% (32,861/43,540) after checking a finished survey indicator (35,711 finished) and passing six validity checks (e.g., I am telling the truth on this survey). Table 8 shows the numbers of valid responses by cohort and time.

Table 8. Student responses by cohort and time.

	Time 1	Time 2	Time 3	Time 4	Total
Cohort 1	3,266	3,204	3,466	3,770	13,706
Cohort 2	729	753	779	781	3,042
Cohort 3	1,963	1,771	168	1,266	5,168
Cohort 4	692	1,515	1,346	1,131	4,584
Cohort 5	2,138	1,601	1,385	1,137	6,261
Total	8,788	8,844	7,144	8,085	32,861

Basic demographic information from student responses:

- **Gender**: Male: 48.3%; Female: 51.7%
- **Race/Ethnicity**: American Indian or Alaska Native: 9.3%; Asian or Native Hawaiian or Pacific Islander: 2.4%; Black or African American: 4.7%; Hispanic: 23.5%; Two or more races: 15.6%; White: 44.5%
- **Free-reduced price lunch status**: Yes: 56.5%; No: 43.5%
- **Disability status**: Yes: 13.8%; Other (No or I don't know): 86.2%
- **Parent education level**: Did not graduate from high school: 12.6%; Graduated from high school 34.7%; Two-year college or technical school: 15.4%, Graduated from a four-year college: 20.9%; Completed post-graduate studies: 16.4%
- **How many parents at home**: None: 2.8%; One parent: 26.3%; Two parents: 70.9%
- **Grade (5 - 12)**: 6.8%, 22.7%, 22.1%, 19.6%, 10.7%, 7.5%, 6.2%, 4.6%

A noticeable difference in the student responses by cohort are the lower responses from Cohort 3, Time 3 (n = 168) and Cohort 4, Time 1 (n = 692). This time period specifically was spring 2020 where schools shut down around the country and moved to virtual learning platforms due to the Covid-19 pandemic. As a result, most students did not fill out the surveys provided at that time. Cohorts 1 and 2 were pre-Covid, cohorts 4 and 5 were during Covid, and cohort 3 had half of the responses recorded pre-Covid and half of the responses were during Covid.

Table 9 shows the student demographic information by control and intervention group. There were 54.9% of responses in the control group and 45.1% of responses in the treatment group.

Table 9. Student demographic information by intervention condition.

	Control	%	Treatment	%
n	18,053		14,808	
Gender				
Male	8,668	48.0	7,190	48.6
Female	9,385	52.0	7,618	51.4
Race/Ethnicity				
American Indian or Alaska Native	1,536	8.5	1,520	10.3
Asian or Hawaiian or Pacific Islander	440	2.4	362	2.4
Black or African American	559	3.1	978	6.6
Hispanic or Latino	4,636	25.7	3,077	20.8
Two or more races	2,505	13.9	2,623	17.7
White	8,377	46.4	6,248	42.2
Free-reduced price lunch status: Yes	8,908	49.3	9,645	65.1
Disability status: Yes	2,466	13.7	2,062	13.9
Parent educational status				
Did not graduate from high school	2,391	13.2	1,742	11.8
Graduated from high school	5,922	32.8	5,467	36.9
Two-year college or technical school	2,747	15.2	2,323	15.7
Graduated from a four-year college	3,859	21.4	3,015	20.4
Completed post-graduate studies	3,134	17.4	2,261	15.3
How many parents at home				
0	467	2.6	452	3.1
1	4,410	24.4	4,244	28.7
2	13,176	73.0	10,112	68.3
Grade				
5	1,393	7.7	834	5.6
6	4,107	22.7	3,345	22.6
7	3,357	18.6	3,893	26.3
8	3,486	19.3	2,942	19.9
9	1,711	9.5	1,790	12.1
10	1,626	9.0	836	5.6
11	1,347	7.5	679	4.6
12	1,026	5.7	489	3.3

Administrator (Principal and Assistant Principal) Outcomes

Results from administrator responses are shown in Table 10. After controlling for potential confounding variables, statistically significant intervention effects were shown in school disciplinary structure measures at the second (fall) and third (spring) time period. However, no statistically significant effects were shown in perceptions of school safety, academic expectations, and school problems. A negative treatment effect was shown at the fourth (fall) time period on the student support measure.

Table 10. Treatment effects on main outcomes for administrator responses.

	School Disciplinary Structure	Perceptions of School Safety	Academic Expectations	School Problems	Student Support
T2 Treatment	0.617*	-0.090	0.220	-0.342	-0.102
	(0.304)	(0.247)	(0.323)	(0.239)	(0.314)
Size (n)	64	64	64	64	64
T3 Treatment	0.599*	0.058	0.161	-0.363	-0.040
	(0.270)	(0.274)	(0.299)	(0.241)	(0.234)
Size (n)	65	65	65	65	65
T4 Treatment	-0.202	0.101	-0.273	-0.077	-0.543*
	(0.327)	(0.304)	(0.328)	(0.358)	(0.249)
Size (n)	65	65	65	65	65

*Note. * p< .05. Standard errors within parenthesis. Each model controls gender, race, year of experience, school level, school location, cohort effects, and baseline measure at spring 1.*

We also analyzed secondary outcomes related to school climate (see Table 11). However, for four outcomes (i.e., concerns about safety and discipline, student aggression toward teacher, prevalence of teasing and bullying, and willingness to seek help), there were no statistically significant intervention effects during the data collection periods. For the outcome of respect for students, a decline in the intervention group was shown at the last time point.

Table 11. Treatment effects on secondary outcomes for administrator responses.

	Teacher/Staff Concerns about Safety and Discipline	Student Aggression Toward Teachers	Prevalence of Teasing and Bullying	Respect for Students	Willingness to Seek Help
T2 Treatment	0.418	-0.113	-0.018	-0.048	-0.096
	(0.323)	(0.242)	(0.242)	(0.321)	(0.316)
Size (n)	64	64	64	64	64
T3 Treatment	0.020	-0.133	-0.065	-0.103	-0.004
	(0.273)	(0.326)	(0.225)	(0.262)	(0.269)
Size (n)	65	65	65	65	65
T4 Treatment	-0.480	0.405	-0.287	-0.600*	-0.421
	(0.273)	(0.332)	(0.305)	(0.285)	(0.274)
Size (n)	65	65	65	65	65

*Note. *p < .05. Standard errors within parenthesis. Each model controls gender, race, year of experience, school level, school location, cohort effects, and baseline measure at spring 1.*

Teacher Results

For teachers' measures, the results are shown in Table 12 and Table 13. There were no significant treatment effects for the five main outcomes (including school disciplinary structure, perceptions of school safety, academic expectations, school problems, student support). There were two school discipline subscale measures for teachers (i.e., the justness and fairness subscales). However, for the two subscales, no statistically significant treatment effect was found. Table 13 indicates the results for secondary outcome measures related to school climate. None of them showed statistically significant treatment effects in all time periods after controlling for other variables.

Table 12. Treatment effects on main outcomes for teacher responses.

	School Disciplinary Structure	Perceptions of School Safety	Academic Expectations	School Problems	Student Support
T2 Treatment	0.034	-0.091	-0.009	0.010	-0.044
	(0.101)	(0.117)	(0.086)	(0.123)	(0.096)
Size (n)	993	993	993	993	993
T3 Treatment	0.001	-0.113	0.043	-0.036	-0.080
	(0.101)	(0.106)	(0.089)	(0.118)	(0.105)
Size (n)	974	974	974	974	974
T4 Treatment	-0.025	0.094	0.018	-0.210	-0.019
	(0.129)	(0.121)	(0.098)	(0.151)	(0.107)
Size (n)	868	868	868	868	868

Note. Standard errors within parenthesis. Each model controls gender, race, position, year of experience, school level, school location, year effects, and baseline measure at spring 1.

Table 13. Treatment effects on secondary outcomes for teacher responses.

	Teacher/Staff Concerns about Safety and Discipline	Student Aggression Toward Teachers	Prevalence of Teasing and Bullying	Respect for Students	Willingness to Seek Help
T2 Treatment	0.141	0.087	0.023	0.001	-0.069
	(0.109)	(0.084)	(0.105)	(0.087)	(0.096)
Size (n)	993	993	993	993	993
T3 Treatment	0.058	0.032	0.023	-0.033	-0.103
	(0.104)	(0.083)	(0.090)	(0.088)	(0.109)
Size (n)	974	974	974	974	974
T4 Treatment	-0.049	0.100	0.012	-0.031	0.001
	(0.136)	(0.087)	(0.098)	(0.102)	(0.104)
Size (n)	868	868	868	868	868

Note. Standard errors within parenthesis. Each model controls gender, race, position, year of experience, school level, school location, year effects, and baseline measure at spring 1.

Student Results

For student-level measures, the results are similar (Table 14). We saw no statistically significant treatment effects on perceptions of school safety, academic expectations, school problems, and aggressive attitude. However, the negative treatment effects were shown in school disciplinary structure and student support at the second spring when controlling for other variables.

Table 14. Treatment effects on main outcomes for student data.

	School Disciplinary Structure	Perceptions of School Safety	Academic Expectations	School Problems	Student Support	Aggressive Attitude
T2 Treatment	-0.057	-0.046	-0.026	0.020	-0.080	0.055
	(0.062)	(0.081)	(0.053)	(0.062)	(0.070)	(0.055)
Size (n)	7996	7996	7996	7679	7996	7996
T3 Treatment	-0.121*	-0.133	-0.084	0.043	-0.155*	0.053
	(0.057)	(0.099)	(0.045)	(0.080)	(0.064)	(0.061)
Size (n)	6446	6446	6446	6000	6446	6446
T4 Treatment	-0.034	-0.140	-0.045	0.118	-0.102	0.089
	(0.062)	(0.083)	(0.065)	(0.093)	(0.063)	(0.055)
Size (n)	7022	7022	6570	7022	7022	7022

*Note. *p < .05. Standard errors within parenthesis. Each model controls gender, race, free lunch status, disability status, number of parents at home, parent education degree, school level, school location, cohort effects, and baseline measure at spring 1.*

Overall, there were some statistically significant intervention effects of school disciplinary structure measure from principals, but not from teachers and students. For most school climate measures, we saw non-statistically significant intervention effects from three time periods (i.e., the first fall, the second spring, and the second fall) when controlling the baseline measure from the first spring. However, approximately half of data was collected during or after COVID-19 which may have affected results as well.

4. Discussion

This project evaluated the efficacy of the Safe & Civil School Leadership plus Start on Time program in improving school climate, safety, disciplinary structure, and related student and staff outcomes. The study was motivated by the expectation that schools provide safe and orderly environments for learning, as well as by prior evidence suggesting that principals play a central role in shaping school safety and climate. Because many school leaders report limited preparation in addressing student misbehavior, school discipline, and school safety, SCSL plus START was designed to strengthen principals' leadership skills, promote data-based decision-making, and support a unified schoolwide approach to hallway management, student behavior, and positive school climate.

Using a group randomized design, 43 schools in Oklahoma were assigned to either the SCSL plus START intervention or a business-as-usual control condition. Data were collected from administrators, teachers, and students across four time points from 2017 to 2022. The final analytic sample included 265 administrator responses, 4,141 teacher responses, and 32,861 student responses. The study included a diverse set of school contexts, with most schools located in rural areas and with participating schools including middle schools, high schools, and schools serving multiple grade levels. The intervention was implemented through principal training workshops, online training resources, coaching, leadership team meetings, fidelity monitoring, and performance feedback.

Overall, the findings provided limited evidence that SCSL plus START produced measurable improvements in school climate and safety outcomes. Administrator reports showed statistically significant positive intervention effects on school disciplinary structure at Time 2 and Time 3, suggesting that principals and assistant principals in intervention schools perceived stronger disciplinary structure during the first fall and second spring follow-up periods. However, these effects were not consistently reflected in teacher or student reports. Administrator reports also showed a negative treatment effect on student support at Time 4 and a decline in respect for students at the final time point. These findings should be interpreted cautiously, particularly because administrator outcomes were based on a relatively small number of respondents and may reflect changes in leaders' awareness, expectations, or critical appraisal of school conditions following training.

Teacher-reported outcomes did not show statistically significant treatment effects across the primary or secondary school climate measures. Specifically, there were no significant differences between intervention and control schools in teacher perceptions of disciplinary structure, school safety, academic expectations, school problems, student support, concerns about safety and discipline, student aggression toward teachers, teasing and bullying, respect for students, or willingness to seek help. This pattern suggests that the intervention did not produce detectable changes in teachers' day-to-day perceptions of school climate or student behavior during the study period.

Student-reported outcomes also showed little evidence of positive intervention effects. Students in intervention schools did not report significantly higher perceptions of school safety, academic expectations, reduced school problems, or lower aggressive attitudes. In fact, statistically significant negative treatment effects were observed at Time 3 for student-reported school disciplinary structure and student support. These findings suggest that, from the student perspective, the intervention did not improve core aspects of authoritative school climate and may have coincided with lower perceived structure and support at one follow-up point. Because these effects were limited to one time point and occurred during a period affected by COVID-19 disruptions, they should be interpreted with caution.

Taken together, the findings suggest that SCSL plus START was well-received and implemented with substantial training and coaching support, but did not produce consistent improvements in the primary outcomes measured by students, teachers, or administrators. This distinction is important. Positive feedback from school leaders and evidence of program delivery do not necessarily mean that the intervention changed the daily experiences of students and teachers. The results highlight the challenge of translating

principal-focused professional development into schoolwide changes that are visible to staff and students.

One possible interpretation is that the intervention may have influenced administrator knowledge, awareness, or attention to school discipline systems more than it changed schoolwide practices. The positive administrator-reported effects on disciplinary structure may indicate that school leaders perceived improvements in policies, procedures, or consistency. However, the lack of corresponding effects among teachers and students suggests that these perceived changes may not have been fully implemented, communicated, or experienced across the broader school community. In schoolwide climate interventions, the pathway from principal training to leadership team action, from leadership team action to staff implementation, and from staff implementation to student experience is complex and may require more intensive supports than the intervention provided.

A second possible interpretation is that the intervention dose or implementation mechanisms were insufficient to change adult behavior throughout the school. Although principals and leadership teams received workshops, coaching, webinars, and online materials, meaningful changes in school climate often require consistent participation from teachers, staff, and students. Because SCSL plus START relied heavily on principal leadership and leadership team implementation, effects may have been diluted if practices were not adopted consistently by classroom teachers, hallway supervisors, or other school personnel. This may be especially relevant for START, which depends on a unified schoolwide approach to hallway management and timely transitions.

A third interpretation concerns the timing and context of implementation. Approximately half of the data were collected during or after the COVID-19 pandemic, and the pandemic substantially disrupted school operations, student attendance, routines, relationships, and learning environments. Spring 2020 response rates were especially affected, and schools shifted to virtual or hybrid formats during key points in the study. Because the intervention was designed to improve in-person school routines, hallway management, disciplinary consistency, and school climate, pandemic-related disruptions may have weakened implementation and made treatment effects more difficult to detect. The pandemic may also have changed the interpretations of school climate measures, particularly those related to safety, student support, school problems, and student behavior.

The findings also raise important questions about measurement and informant differences. Administrators, teachers, and students occupy different positions within the school system and may perceive climate differently. Administrator reports may be more sensitive to changes in formal policies and leadership practices, whereas teacher and student reports may better capture whether those changes are enacted consistently in daily interactions. The discrepancy between administrator-reported improvements in disciplinary structure and the absence of teacher and student improvements suggests that future studies should continue using multiple informants and should examine whether leadership interventions affect different levels of the school system in different ways.

Despite limited evidence of impact, this study makes an important contribution. It provides a rigorous test of a widely disseminated leadership and school climate intervention in a real-

world sample of Oklahoma schools. The results suggest that improving school safety and climate through principal professional development is difficult, particularly when schools are operating amid major contextual disruptions. The study also underscores the importance of testing popular and promising programs through randomized designs rather than relying solely on satisfaction data, case studies, or pre-post reports.

For practice, the findings suggest that leadership training programs focused on school safety and behavior may need to be paired with stronger implementation supports at the teacher and staff level. Future versions of SCSL plus START or similar programs may benefit from more direct staff coaching, clearer implementation benchmarks, stronger accountability structures, more frequent feedback loops, and supports for adapting practices during disruptions. Programs may also need to focus explicitly on how leadership teams move from planning to consistent schoolwide enactment.

For research, future analyses should examine implementation variability across schools, including whether schools with stronger fidelity or greater staff participation showed more favorable outcomes. It may also be useful to examine whether effects differed by school level, rural versus urban context, baseline climate, administrator experience, or pandemic exposure. Mediation analyses may help determine whether changes in leadership skills, data use, disciplinary structure, student support, or aggressive attitudes operated as hypothesized, even if overall intervention effects were limited. Finally, future work should consider whether pandemic-affected cohorts should be modeled separately or whether sensitivity analyses are needed to better understand how COVID-19 influenced both implementation and outcomes.

In conclusion, SCSL plus START addressed a critical and well-established need: helping school leaders create safe, structured, and supportive school environments. However, the results of this randomized trial did not provide consistent evidence that the program improved student, teacher, or administrator-reported school climate and safety outcomes. The study suggests that principal-focused training and coaching may be necessary but not sufficient to change schoolwide climate, particularly when implementation is disrupted by broader contextual events. The central lesson is that improving school safety requires not only leadership development, but also sustained, systemwide implementation that changes what teachers do, what students experience, and how school routines are enacted every day.

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