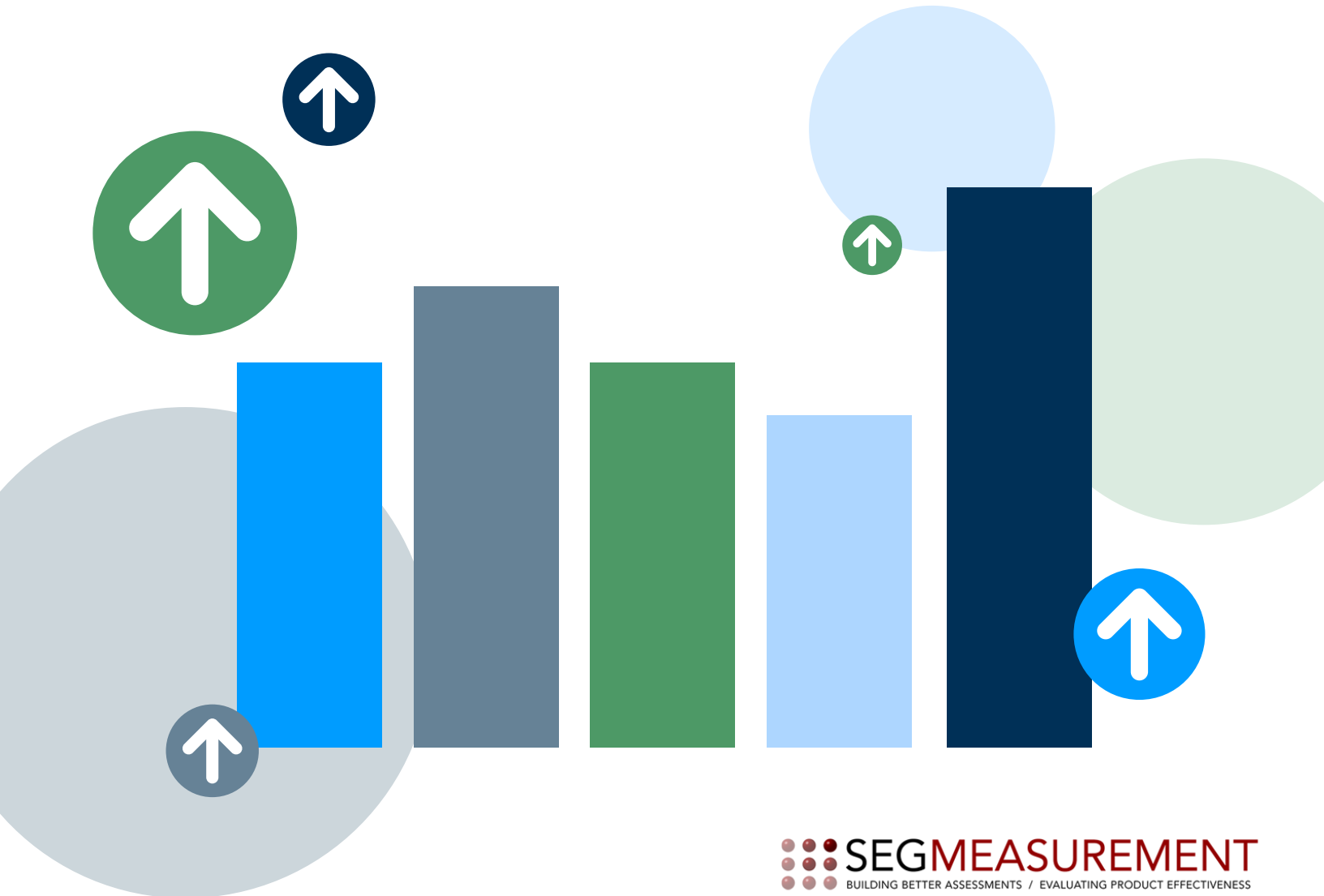


CAN SEL INSTRUCTION IMPROVE STUDENT BEHAVIOR?

The Impact of 7 Mindsets Instruction on Student Behavior and Social Emotional Skills Growth

Paper Presented at the Annual Meeting of AACE SITE, San Diego, April 2022



EXECUTIVE SUMMARY FOR 7 MINDSETS NEW CANEY ISD 2022 EFFICACY STUDY

Research Question

The primary research question answered by this study is:

Does providing 7 Mindsets instruction to middle school students reduce the frequency of teacher referrals for misbehavior and disciplinary actions for misbehavior?

Study Design And Measurement

- Study used a quasi-experimental design.
- Length of this study was five months.
- The independent variables examined were study group membership (treatment group receiving 7 Mindsets instruction and control group not receiving instruction using 7 Mindsets) and the student background characteristics.
- The number of disciplinary actions imposed by the school were the criterion measures of student behavior/misbehavior for the study.

Efficacy Study Findings

1. Students who received 7 Mindsets instruction received significantly fewer teacher referrals for behavior than for students who did not receive 7 Mindsets instruction.
2. Students who received 7 Mindsets instruction received significantly fewer after school detentions and in-school suspensions for misbehavior than those students who did not receive 7 Mindsets instruction.
3. 7 Mindsets instruction was equally effective with respect to gender, race, ethnicity, and free and reduced lunch eligibility. There were no significant differences in the interaction of 7 Mindsets instruction with gender, race, ethnicity, or free and reduced lunch eligibility.

Summary

7 Mindsets instruction can have a meaningful impact on student behavior. The implications of having a set of tools available to meaningfully improve student behavior are dramatic. A reduction in misbehavior contributes to safer schools with socially emotionally healthy and academically focused students. The impact on an individual student's social-emotional health and likelihood for academic and life success is perhaps even more profound.

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CAN SEL INSTRUCTION IMPROVE STUDENT BEHAVIOR?

THE IMPACT OF 7 MINDSETS INSTRUCTION ON STUDENT BEHAVIOR AND SOCIAL EMOTIONAL SKILLS GROWTH

By Scott Elliot, SEG Measurement

Schools are seeking effective tools to support the development of student social emotional skills (SEL) that are supported by scientific effectiveness evidence. Moreover, they are seeking flexible solutions, including both digital and traditional tools, that can be implemented within a wide range of environments, including face-to-face, in-class instruction and online, remote instruction.

During the 2019-2020 school year, SEG Measurement conducted a study of the effectiveness of 7 Mindsets in middle schools in the New Caney Independent School District (ISD) in Texas. We conducted the study to determine if 7 Mindsets instruction is effective in improving student behavior. Specifically, we wanted to determine if 7 Mindsets instruction decreases the number of teacher referrals for student misconduct and subsequent disciplinary actions. The growth in SEL as reflected in the reduction of referrals for misconduct and the reduction in disciplinary actions of a group of 7th and 8th grade students receiving 7 Mindsets instruction was compared to a matched group of students receiving traditional instruction that did not include 7 Mindsets, using a quasi-experimental design.

We found a statistically significant reduction in the number of teacher referrals for student misconduct (ES=.26), detention (ES=.09) and in-school suspension (ES=.14) for the treatment group compared to the control group. There was, however, no significant difference in out-of-school suspensions between the treatment and control group.

Introduction

A growing body of research points to the impact of social emotional learning (SEL) on academic achievement, workplace performance, and life success (Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D. & Schellinger, K. B.; 2011). This revelation has led

schools to more systematically including SEL in the pre-kindergarten through 12th grade education experience (J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D. & Schellinger, K. B.; 2011).

Schools are looking for products and services that are available in digital and traditional formats and that can be used effectively in a wide range of instructional settings including face-to-face, in-class and online, remote delivery to help educators address the social emotional skills of students. Moreover, schools are seeking SEL solutions with scientific evidence supporting the efficacy of those solutions.

Historically, social emotional learning (SEL) has been relegated to a relatively small role in the school curriculum. Cognitive development was seen as the more proper focus of schooling, with language arts, mathematics, science, and social studies capturing nearly all the instructional time available. But in recent years, SEL has taken a larger role in schools for a variety of reasons.

The increase in student misbehavior and misconduct in schools is among the more visible reasons for the growth of SEL's role in schools. As student misbehavior has increased, along with disciplinary action in response to infractions such as violence, bullying, defiance, disrespect, and aggression, schools have taken a more intense interest in SEL.

Schools and communities have an obligation to provide a safe environment and minimize disruptive behavior and student misconduct. Effective SEL helps promote prosocial behavior, reduce behavioral obstacles to

school success, and helps provide the skills students need to develop fundamental life skills. CASEL (Collaborative for Social and Emotional Learning) identifies these fundamental skills as: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. When students develop these skills, they experience more positive relationships with peers, engage in more prosocial behaviors, and are less likely to misbehave.

About 7 Mindsets

7 Mindsets is an instructional program designed to improve the social emotional skills of students and to equip students with the necessary skills and mindsets to reduce behavioral infractions and increase prosocial behavior. Positive mindsets discourage misbehavior, and they also explicitly teach individual and social expectations and accountability for one's own behavior.

With a focus on self-awareness, self-management, social awareness, relationship skills, and responsible decision-making, 7 Mindsets reduces behavioral infractions and minimizes the need for disciplinary responses consistent with a school's behavioral goals. Given these objectives, we would expect to see students receiving 7 Mindsets instruction to increase prosocial behavior, reduce disciplinary teacher referrals, and decrease punitive school-based discipline practices, such as detention, suspension, and expulsion.

Positive mindsets discourage misbehavior, and they also explicitly teach individual and social expectations and accountability for one's own behavior.

Theory of Practice: Mindsets

Mindsets have been defined by the University of Chicago as beliefs and attitudes about oneself, the external world, and the interaction between the two. They are the persistent, default lenses that individuals use to process everyday experiences. Mindsets reflect a person's unconscious biases, natural tendencies, and past experiences. Shickler and Waller (2011) describe 7 Mindsets or practices that can help an individual live a life of joy, meaning, and fulfillment. These 7 mindsets include: Everything Is Possible, Passion First, We are Connected, 100% Accountable, Attitude of Gratitude, Live to Give, and The Time is Now.

7 Mindsets Effectiveness Study Overview

During the 2019-2020 school year (August 2019 to December 2019) in all middle schools in the New Caney School District in Texas, SEG Measurement conducted a study of the effectiveness of 7 Mindsets. We conducted the study to determine if 7 Mindsets instruction is effective in improving the behavioral environment. Specifically, we wanted to determine if 7 Mindsets instruction decreases the number of teacher referrals for student misconduct and subsequent disciplinary actions. The 7 Mindsets providers assert that instruction of the 7 Mindsets successfully improves social emotional skills and behavior of students as reflected in a reduced level of teacher referrals for student misbehavior and fewer disciplinary actions.

The study investigated differences in the number of teacher referrals and school disciplinary actions between students receiving 7 Mindsets instruction and those not receiving 7 Mindsets instruction. Matched groups of seventh- and eighth-grade students, both those receiving and those not receiving 7 Mindsets instruction, served as the treatment and control groups.

Using a quasi-experimental design, we compared the reduction in teacher referrals and reduction in school imposed disciplinary actions for students receiving 7 Mindsets instruction (treatment group) and students who did not receive 7 Mindsets instruction (control group). Social emotional skill growth was operationalized as the decrease in teacher referrals (TR) and school disciplinary actions for student misbehavior. The number of TR and school disciplinary actions for the treatment and control students were statistically compared to determine if there were differences in SEL skill level improvement between students receiving 7 Mindsets instruction (treatment group) and those not provided with 7 Mindsets instruction (control group).

STUDY PROCEDURES

Research Question

The primary research question answered by this study is:

Does providing 7 Mindsets instruction to middle school students reduce the frequency of teacher referrals for misbehavior and disciplinary actions for misbehavior?

Study Design

SEG Measurement used a quasi-experimental design to evaluate the effectiveness of the 7 Mindsets program. This design is widely used in effectiveness research and is recognized by the professional educational research community and complies with ESSA’s (Every Student Succeeds Act) guidance for Tier 2 research (moderate evidence; U.S. Department of Education, 2016).

A group of students receiving instruction using 7 Mindsets (treatment group) was compared to a matched group of students not receiving instruction using 7 Mindsets (control group). The differences in the number of teacher referrals for misbehavior and disciplinary actions for both the treatment and control group for the prior year (pretest) and at the end of the study year (posttest) were compared. The treatment and control group were matched using a statistical procedure called propensity score matching; the two groups were matched based on prior year prevalence of teacher referrals and additional student background characteristics.

7 Mindsets Treatment Implementation

At the treatment schools, the leadership team participated in leadership training and coaching, where they were introduced to 7 Mindsets and learned best practices for implementing social and emotional learning solutions that were relevant to their schools’ needs. The leadership team worked with their assigned 7 Mindsets SEL coach to begin formulating the SEL implementation plans.

The 7 Mindsets trainer executed an on-site training for all educators at participating schools and monthly 30-minute coaching calls were executed by their 7 Mindsets coach. During these calls, the team reviewed with their coach how implementation is progressing, what teacher and student feedback is like, how they are supporting the teachers in their own SEL development, campus-wide projects, and any issues since the last session.

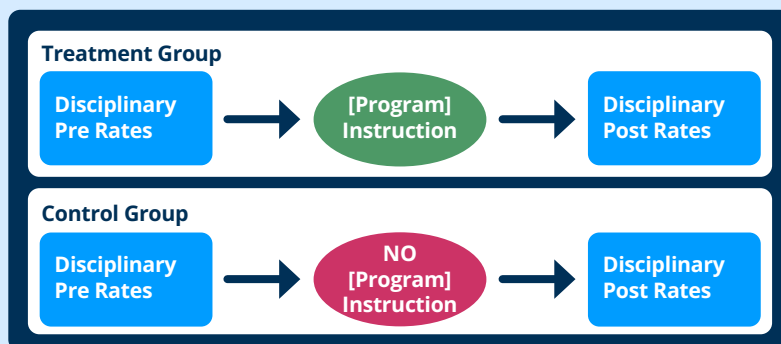
The middle school teachers delivered the 7 Mindsets SEL course in the classroom setting. More specifically, lessons were delivered every Monday and Tuesday during homeroom in 15-30-minute increments with additional activities infused throughout the week in other classes and school events.

The treatment was defined as explicit social emotional skills/mindsets-based instruction targeted at the five core SEL skills (self-awareness, self-management, social-awareness, relationship skills, and responsible decision making), using the 7 Mindsets for middle-level students. Students in the treatment group received 7 Mindsets instruction

between August 2019 and December 2019.

Treatment fidelity was confirmed through ongoing interaction between the 7 Mindsets coaches and leadership teams to confirm that the instruction was provided as prescribed on an ongoing basis.

FIG. 1



Measurement

The independent/predictor variables examined were study group membership (treatment group receiving 7 Mindsets instruction and control group not receiving instruction using 7 Mindsets) and the student background characteristics. The criterion/dependent measures consisted of the number of teacher referrals and number of disciplinary actions levied upon students and recorded by the district. This information was provided in the form of electronic data files from New Caney ISD. This is described in more detail below.

Teacher Referrals/Disciplinary Actions

The number of teacher referrals (TR) was the primary indicator of student misconduct. The number of disciplinary actions imposed by the school were the outcome/criterion measures of student behavior/misbehavior for the study. The number of teacher referrals, as well as the number and type of disciplinary actions, were routinely recorded by the school. Misbehaving students typically were referred to the principal or other administrator at the school level to determine the appropriate level of intervention. Commonly charged disciplinary actions are tracked and recorded by the schools. Disciplinary actions levied on students include: after school detention (DET), in-school suspension (ISS), out-of-school suspension (OSS), transfer to a school with specialized ability to cope with behavioral problems (DAEP), and expulsion (EXP).

The levying of these interventions depends on several factors, including the severity of the infraction, past history with the infraction, and other behavioral issues. Like most districts, New Caney ISD maintains the number of teacher referrals and disciplinary actions in a database. Certain specific disciplinary actions are tracked over time. These tracked actions include detentions (DET), in-school suspensions (ISS), out-of-school suspensions (OSS), transfers to alternative educational programs (DEAP), and expulsion (EXP).

Student Background Characteristics

In addition to the disciplinary actions, the district provided to SEG Measurement individually identifying information and background information for each student (grade level, ID, gender, race, ethnicity, and free and reduced lunch eligibility).

Baseline Number of TR (Pretest Covariate) – For most analyses, the baseline used was the total number of disciplinary actions (TR) for the prior school year (August to December 2018 served as the pretest). This allowed us to place both treatment and control group students on a common baseline (starting point).

Concluding Number of TR (Posttest Outcomes) – For most analyses, the total number of disciplinary actions (TR) for the study period (August to December 2019) served as the criterion posttest measure.

Data Collection

At the outset of the study, a data file containing the information on seventh- and eighth-grade students was created with the number of TR and disciplinary events recorded for each student during the prior school year baseline period (August to December 2018) as a “pretest” for both the treatment and control students. This file also included the student background and descriptive information.

From August 2019 to December 2019, the treatment group received 7 Mindsets instruction as prescribed. The control group did not receive 7 Mindsets instruction. Following instruction, a data file containing the total number of TR and disciplinary events for each student for the study period from August 2019 to December 2019 as the posttest was merged with the baseline pretest data.

Sample

The population explored in this study were seventh- and eighth-grade middle school students enrolled in the four middle schools in New Caney ISD. Approximately 1,850 students, including 612 treatment students and 1,242 students not receiving 7 Mindsets instruction, were the basis for creating the matched treatment and control groups.

The matched sample for the treatment and control groups was created using propensity score matching. The matched groups included in the sample for the final study analyses after attrition included 1,056 students (512 students in the control group and 544 students in the treatment group).

There was a significant difference in the initial ability of the students in the treatment and control group ($t=4.38$; $df=1/1054$; $p=.01$). However, there was less than a quarter of a standard deviation difference between the control and treatment means (Mean SD Difference=.24), which is within the widely accepted .25 guideline for the maximum advisable difference. There were no statistically significant differences ($p<.05$) between the treatment and control group with respect to gender, race, ethnicity, and free and reduced lunch eligibility.

Attrition was acceptable based on U.S. Department of Education guidelines. Attrition is defined as students enrolled at the outset of the study with baseline data available, removing those students who left the district or who did not otherwise have a complete record of interventions during the study period. The attrition rate was 14% (168 students), 16% (100) from the control group and 11% (68) from the treatment group.

Analysis and Findings

We analyzed the effect of 7 Mindsets instruction on the number of teacher referrals for misbehavior, the number of after school detentions (DET), the number of in-school suspensions (ISS), and the number of out-of-school suspensions (OSS). There were insufficient numbers of cases available for the analysis of transfer to a school with specialized ability to cope with behavioral problems (DAEP), and expulsion (EXP). As might be expected, the severe interventions (expulsion and school transfer) were rarely used, while the more mild and moderate interventions were used more frequently. There were no expulsions in the baseline period and only 33 school transfers.

The effectiveness of 7 Mindsets instruction (independent variable) for reducing teacher referrals and school disciplinary actions (dependent variable) was evaluated using Analysis of Covariance (ANCOVA); the differences in behavioral intervention outcomes between the treatment and control group (independent variable), adjusting for any differences in the baseline frequency of TR (Covariate), were examined.

The average number of detentions (DET) across all students was .11 and the average number of in-school suspensions (ISS) was about .09 across the population. The average number of out-of-school suspensions (OSS) was .06 across the total sample. There were 351 detentions, 438 in-school suspensions, and 250 out-of-school suspensions.

We then examined the interaction between study group membership, and grade, gender, race, ethnicity, and free and reduced lunch eligibility to evaluate whether 7 Mindsets instruction was particularly effective for any population subgroups.

Finding: Students who received 7 Mindsets instruction received significantly fewer teacher referrals behavior than for students who did not receive 7 Mindsets instruction (ES=.26).

Students who received instruction using 7 Mindsets showed a significantly greater reduction in TR than did students who did not receive 7 Mindsets instruction. We examined the difference in TR between students receiving 7 Mindsets instruction (treatment) and students who did not receive instruction using 7 Mindsets (control), controlling for students' baseline, prior school year frequency of TR (covariate). Using ANCOVA, we found a statistically significant difference in number of TR between the treatment group and the control group when controlling for students' baseline referrals ($F=40.70$; $df=1/1055$; $p<.01$). The treatment group achieved an average (Mean) TR (post) of .10, while the control group achieved an average (Mean) TR (post) of .38; this is an effect size of .26 (Cohens D).

Finding: Students who received 7 Mindsets instruction received significantly fewer after school detentions (DET) (ES=.09) and in-school suspensions (ISS) for misbehavior than those students who did not receive 7 Mindsets instruction (ES=.14).

We compared the number of actions reported by the district for the treatment and control groups. Specifically, the total number of disciplinary actions reported during the study period (August to December 2019; posttest) for each treatment group student was compared to the total number of actions reported for the control group students (independent variable). The comparison was adjusted for the total number of actions in each group reported for the comparable period in the previous year (pretest; covariate) to ensure that students would be compared on a common baseline.

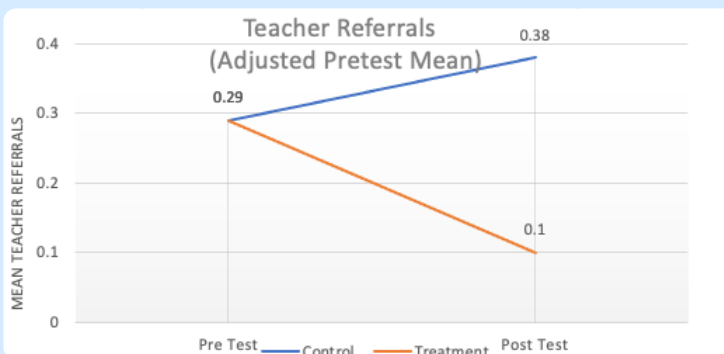
The results found that students receiving 7 Mindsets instruction were levied with significantly fewer behavioral interventions than those students who did not receive 7 Mindsets instruction. There was a statistically significant difference ($F= 40.70$; $df=1/1053$; $P<.01$) between the treatment and control groups; the mean number of behavioral interventions seen in the treatment group was .10, while the mean number of behavioral interventions seen in the control group was .38, with an effect size of .26 (Cohen’s D).

Students who received instruction using 7 Mindsets showed a significantly greater reduction in detentions levied than did students not receiving 7 Mindsets instruction. We examined the difference in total number of detentions between students receiving 7 Mindsets instruction (treatment) and students not receiving instruction using 7 Mindsets (control), controlling for students’ baseline, prior school year detentions (covariate). Using ANCOVA, we found a statistically significant difference in number of detentions levied between the treatment group and the control group when controlling for students’ baseline detentions levied ($F=4.48$; $df=1/1055$; $p<.03$). The treatment group achieved an average (Mean) detention (post) of .08, while the control group achieved an average (Mean) detention (post) of .13; this is an effect size of .09 (Cohens D; $ES=.09$). There was no significant difference in the number of out-of-school suspensions (OSS) for misbehavior between those students who received 7 Mindsets instruction and those students who did not receive 7 Mindsets instruction ($F=3.29$; $df=1/1055$; $p<.07$).

Finding: There was a statistically significant interaction between study group and grade level.

We used Analysis of Covariance (ANCOVA) to compare the number of TR for the treatment and control groups, in both grade 7 and grade 8. The comparison was adjusted for the total number of TR in each group and at each grade reported for the comparable period in the previous year (pretest; covariate) to ensure that students would be compared on a common baseline. 7 Mindsets instruction was more effective at the seventh-grade level than the eighth-grade level (Effect Size=.25). The interaction between 7 Mindsets instruction and grade level was significant; the impact of 7 Mindsets was meaningful at the seventh-grade level ($F=4.62$; $df=1/1056$; $p<.03$). The grade 7 treatment group showed a mean number of referrals of .09 and the grade 7 control group not receiving the 7 Mindsets intervention showing a mean of .36 referrals ($ES=.25$).

FIG. 2 Comparison of Treatment and Control Group



Finding: 7 Mindsets instruction was equally effective with respect to gender, race, ethnicity, and free and reduced lunch eligibility. There were no significant differences in the interaction of 7 Mindsets Instruction with gender ($F=3.34$; $df=4/1055$; $p<.07$), race ($F=.588$; $df=1/1053$; $p=.67$), ethnicity ($F=.567$; $df=1/1053$; $p=.45$), or free and reduced lunch eligibility ($F=.2.89$; $df=4/1053$; $p=.06$).

Discussion

As 7 Mindsets is designed to improve students' social emotional skills and behavior (SEL), we would expect 7 Mindsets instruction to have an impact on reducing student misbehavior. In this study, SEG Measurement did find that 7 Mindsets instruction can have a meaningful impact on student behavior. We saw a substantial reduction in teacher referrals for misbehavior and school disciplinary actions taken to address student misbehavior.

Students in the treatment group receiving instruction using 7 Mindsets were referred for misconduct (TR) substantially less than students not receiving 7 Mindsets instruction, with a 26% of a standard deviation ($ES=.26$) greater reduction in teacher referrals. And students receiving 7 Mindsets instruction were given the most common disciplinary actions, detention (DET) ($ES=.09$) and in-school suspensions (ISS) ($ES=.14$), at a significantly lower rate than students who did not receive 7 Mindsets instruction. We did not see a statistically significant difference in the number of less common out-of-school suspensions between the treatment and control group.

The implications of having a set of tools available to meaningfully improve student behavior are dramatic. On the school and district level, a reduction in misbehavior contributes to safer schools with socially emotionally healthy and academically focused students. The impact on an individual student's social-emotional health and likelihood for academic and life success is perhaps more profound. These findings are particularly impressive considering the length of the study (5 months) and that SEL-related instruction receives less attention than core subject areas.

If these findings are sustained in our ongoing research, we can conclude that 7 Mindsets instruction is an effective intervention for reducing student misbehavior and contributing to student academic and broader life success. We are continuing to explore 7 Mindsets use in different environments and the conditions (e.g., instructional delivery mode) under which 7 Mindsets is most effective.

These study findings support the conclusion that providing 7 Mindsets instruction to middle school students significantly reduced student misbehavior requiring school-level discipline.

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