

Brief intervention to encourage empathic discipline cuts suspension rates in half among adolescents

Jason A. Okonofua^{a,1}, David Paunesku^a, and Gregory M. Walton^a

^aDepartment of Psychology, Stanford University, Stanford, CA 94305

Edited by Susan T. Fiske, Princeton University, Princeton, NJ, and approved March 18, 2016 (received for review December 1, 2015)

Growing suspension rates predict major negative life outcomes, including adult incarceration and unemployment. Experiment 1 tested whether teachers ($n = 39$) could be encouraged to adopt an empathic rather than punitive mindset about discipline—to value students' perspectives and sustain positive relationships while encouraging better behavior. Experiment 2 tested whether an empathic response to misbehavior would sustain students' ($n = 302$) respect for teachers and motivation to behave well in class. These hypotheses were confirmed. Finally, a randomized field experiment tested a brief, online intervention to encourage teachers to adopt an empathic mindset about discipline. Evaluated at five middle schools in three districts ($N_{\text{teachers}} = 31$; $N_{\text{students}} = 1,682$), this intervention halved year-long student suspension rates from 9.6% to 4.8%. It also bolstered respect the most at-risk students, previously suspended students, perceived from teachers. Teachers' mindsets about discipline directly affect the quality of teacher-student relationships and student suspensions and, moreover, can be changed through scalable intervention.

teacher-student relationships | empathy | respect | school suspensions | discipline

Removal from mainstream education settings for discipline problems denies children opportunities to learn and thus predicts major negative life outcomes such as adult unemployment and incarceration (1). However, in the United States, the number of students suspended for misbehavior nearly tripled from 1.7 million in 1974 to more than 5 million in 2011 (3.7–11% of all students) (2, 3). Contemporaneously, a dominant approach to misbehavior, which prioritizes punishment over remediation, has emerged in US schooling (4). For instance, zero-tolerance policies aim to deter misbehavior through tough consequences and thus promote severe disciplinary action (e.g., suspensions) for even minor misbehavior (5).

Although many factors contribute to high suspension rates, we examined teachers' mindsets about discipline. We hypothesized that a punitive response to misbehavior can, ironically, alienate disaffected students and thus incite the destructive, oppositional behaviors it aims to prevent. A response that values students' perspectives and maintains high-quality relationships in disciplinary interactions may improve outcomes. Much research shows that feeling respect for and being respected by authority figures can motivate people to follow rules enforced by those figures, especially in conflicts (6). If teachers convey this respect while disciplining students, this may improve students' behavior.

Consistent with this hypothesis, the quality of students' relationships with teachers is one of the strongest predictors of classroom behavior (7). Relationships of trust and respect may be especially important in adolescence. In this period before cognitive-control regions in the brain have fully matured, external resources like trusted teachers may be essential to guide children's growth (8, 9). Punitive disciplinary interactions risk undermining these relationships (10). If students feel disrespected and subsequently misbehave, this may confirm in teachers' minds that the student is a "troublemaker," facilitating harsh responses to future misbehavior (11). Thus, a punitive approach to discipline

may give rise to a self-perpetuating cycle of punishment and misbehavior (12).

Three experiments tested whether teachers can be encouraged to adopt an empathic mindset about discipline and examined its impact on students. This mindset prioritizes valuing and understanding students' experiences and negative feelings that give rise to misbehavior, sustaining positive relationships with misbehaving students, and working with students within trusting relationships to improve behavior (9). For example, perspective-taking, the cognitive component of empathy, may help teachers understand students' experiences and internal states (13) and thus respond more appropriately to misbehavior (e.g., with greater concern for the needs of the student) (12, 14). Notably, even as many teachers are exposed to a default punitive approach to discipline (5), teachers also have, as a central plank of their profession, the goal to build and sustain positive relationships with students, especially struggling students (15). The existence of this alternative mindset suggests that it may be possible through relatively modest means to encourage a different approach to student misbehavior. We thus test whether an empathic mindset can change teachers' practices, whether this improves students' responses to discipline, and whether encouraging an empathic mindset in teachers can reduce suspension rates among students.

Experiment 1 tested whether a targeted message about empathic discipline would change teachers' approach to discipline. Thirty-nine K–12 teachers ($M_{\text{experience}} = 14$ y) were randomly assigned to an empathic- or a punitive-mindset condition. Teachers read a brief article, which reminded them either that "good teacher-student relationships are critical for students to learn self-control" (empathic mindset) or that "punishment is critical for teachers to take control of the classroom" (punitive mindset). Next, teachers were asked how this approach helps

Significance

There is increasing concern about rising discipline citations in K–12 schooling and a lack of means to reduce them. Predominant theories characterize this problem as the result of punitive discipline policies (e.g., zero-tolerance policies), teachers' lack of interpersonal skills, or students' lack of self-control or social-emotional skills. By contrast, the present research examined teachers' mindsets about discipline. A brief intervention aimed at encouraging an empathic mindset about discipline halved student suspension rates over an academic year. This intervention, an online exercise, can be delivered at near-zero marginal cost to large samples of teachers and students. These findings could mark a paradigm shift in society's understanding of the origins of and remedies for discipline problems.

Author contributions: J.A.O., D.P., and G.M.W. designed research; J.A.O. and D.P. performed research; J.A.O. and D.P. contributed new reagents/analytic tools; J.A.O. and D.P. analyzed data; and J.A.O. and G.M.W. wrote the paper.

The authors declare no conflict of interest.

This article is a PNAS Direct Submission.

¹To whom correspondence should be addressed. Email: okonofua@gmail.com.

This article contains supporting information online at www.pnas.org/lookup/suppl/doi:10.1073/pnas.1523698113/-DCSupplemental.

Table 1. Teacher responses to minor student misbehavior as a function of condition (experiment 1) ($n = 39$)

Response or theme	Punitive-mindset condition	Empathic-mindset condition
Discipline response	"He would be given one warning. Once he left his seat the second time, he would be sent to the hall. If he continues to disrupt from the hall, he would be sent to the office."	"I would give the class some work to do and then I would talk to [the student] privately. He has a need that is not being met. I would try to understand the need and try to meet it."
Coded theme(s)	Threaten student; involve administrator	Talk with student
Discipline response	"Sit down with the disruptive student and the assistant principal to discuss why the behavior is disruptive. ... If the behavior continued, then another meeting with the Assistant Principal and the parents/guardians would take place."	"I would establish or re-affirm a policy and procedure regarding appropriate times to get up. I would see if rearranging desks ... would help. I would discuss the issue with the student to work together on an equitable solution."
Coded theme(s)	Involve administrator	Rearrange classroom; talk with student

teachers "maintain control over a class." Teachers then reviewed three counterbalanced incidents of minor misbehavior drawn from middle-school referral records (e.g., disrupting class by throwing away trash). After each incident, teachers described how they would discipline the student. Last, they reported the likelihood they would consider the student a troublemaker (1, not at all; 7, extremely).

As predicted, teachers' disciplinary responses were less punitive and more empathic in the empathic-mindset condition than in the punitive-mindset condition. Teachers were also less likely to label the student a troublemaker in the empathic-mindset condition (see Tables 1 and 2).

How do students respond to empathic discipline? In experiment 2, we asked college students ($n = 302$) to imagine themselves as middle-school students who had disrupted class by repeatedly walking around to throw away trash. Their teacher, Mrs. Smith, responded in a manner reflective of each condition in experiment 1: by assigning detention and referring them to the principal's office (punitive-discipline condition) or by asking them about their misbehavior and moving the wastebasket closer to their desk (empathic-discipline condition). Next, participants reported the respect they would have for the teacher (six items; e.g., "I think Mrs. Smith deserves my respect"; $\alpha = 0.85$) and the motivation they would have to behave well in the future (two items; e.g., "It is important to me that I follow rules in this class"; $\alpha = 0.83$) (1, strongly disagree; 7, strongly agree).

As predicted, college students reported that, as middle-school students, they would respect the teacher far more in the empathic-mindset than in the punitive-discipline condition ($M = 5.23$, $SD = 1.14$ versus $M = 2.47$, $SD = 1.09$), $t(300) = 20.98$, $P < 0.001$, $d = 2.42$. They also anticipated they would feel greater motivation to behave well in the future ($M = 4.38$, $SD = 1.41$ versus $M = 3.79$, $SD = 1.56$), $t(300) = 3.43$, $P < 0.001$, $d = 0.40$ (see Fig. 1).

Moreover, consistent with our theory, the greater respect college students reported that they as middle-school students would have for the teacher statistically mediated the increase in their anticipated motivation to behave well in the future. Using mediation procedures with model 4 of the Statistical Package for the Social Sciences (SPSS) macro mediation analysis package (PROCESS) (16) and 10,000 bias-corrected bootstrap resamples, we tested a model with "condition \rightarrow respect (mediator) \rightarrow behave well." As noted, the total effect of condition on students' anticipated motivation to behave well was significant ($b = 0.59$, $SE = 0.17$, $P = 0.001$). In step 1, the total effect of condition on the mediator (respect) was significant ($b = 2.02$, $SE = 0.11$, $P < 0.001$). In step 2, we regressed the dependent variable (behave well) on the mediator and condition. The effect of respect was significant ($b = 0.59$, $SE = 0.08$, $P < 0.001$), and the effect of condition was reduced ($b = -0.60$, $SE = 0.23$, $P = 0.011$). In step 4, the predicted mediation (indirect path from condition \rightarrow respect for teacher \rightarrow motivation to behave well) was significant [$b = 1.19$, $SE = 0.19$, confidence interval (CI) = 0.82, 1.58].

Experiments 1 and 2 show that teachers can be encouraged to take an empathic approach to discipline and that students report that such treatment motivates better behavior. Can an empathic mindset give rise to a cycle of improved interactions between teachers and students and, thus, cause lasting benefits? Experiment 3, a longitudinal randomized placebo-controlled field experiment, tested whether encouraging an empathic mindset about discipline in teachers would reduce student suspension rates over an academic year.

Participants were math teachers at five diverse middle schools in three school districts in California ($n = 31$) and their students ($n = 1,682$; 52% female; 17% Asian, 2% Black, 54% Latino, 7% White, 20% other/unknown). This sample represents 91.12% of recruited faculty, 83% of math faculty, and 55.57% of students at

Table 2. Coded disciplinary responses and teacher judgments (experiment 1) ($n = 39$)

Outcomes	Punitive-mindset condition	Empathic-mindset condition	t	P
Coded disciplinary responses: Punitive themes				
Assign detention (proportion per incident)	0.18 (0.22)	0.08 (0.17)	-1.64	0.11
Threaten to punish student (proportion per incident)	0.65 (0.31)	0.47 (0.31)	-1.79	0.082
Involve an administrator (proportion per incident)	0.44 (0.34)	0.24 (0.24)	-2.16	0.038
Average number of punitive responses/incident	1.28 (0.64)	0.79 (0.48)	-2.67	0.011
Coded disciplinary responses: Empathic themes				
Rearrange classroom to accommodate student (proportion per incident)	0.20 (0.23)	0.35 (0.02)	2.10	0.043
Talk with the student about his or her behavior (proportion per incident)	0.37 (0.24)	0.52 (0.24)	1.99	0.055
Average number of empathic responses per incident	0.57 (0.35)	0.87 (0.36)	2.64	0.012
Teachers' judgment of the student				
Likelihood would consider the student "a troublemaker" (1-7)	4.25 (1.45)	3.11 (1.29)	-2.61	0.013

SDs are shown in parentheses.

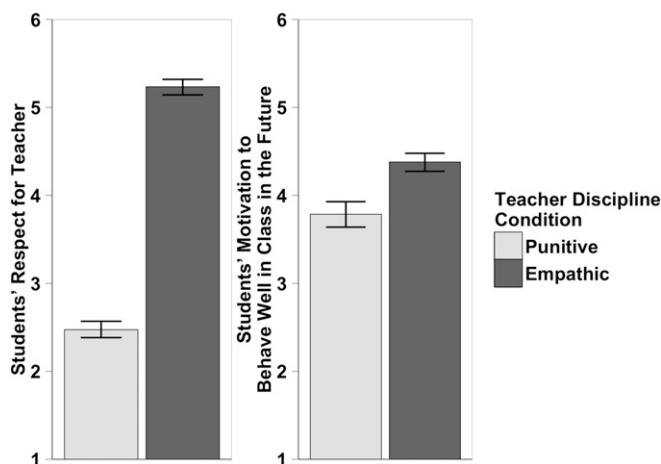


Fig. 1. College students ($n = 302$) who imagined themselves as middle-school students being disciplined in an empathic rather than a punitive manner reported that they would respect the teacher more and be more motivated to behave well in the future (experiment 2). The y axes represent the full range of the scales. Error bars represent 95% CIs after 10,000 bootstraps.

these schools. For school characteristics, see [Table S1](#). The intervention comprised one 45-min and one 25-min online module. Teachers were told that the purpose of the exercise was to review common but sometimes neglected wisdom about teaching and to collect their perspectives as experienced teachers on how best to handle difficult interactions with students, especially disciplinary encounters. Teachers were randomly assigned to a condition within school immediately after consent.

The first module was completed midway through the Fall semester. First, teachers read an article that described non-pejorative reasons why students sometimes misbehave in class and how positive relationships with teachers can facilitate students' growth (e.g., "[the] social and biological changes of adolescence can make middle school students insecure . . . worries [about unfair treatment] can cause students to experience stress, to over-react, and sometimes to disengage from school"). These materials discouraged the labeling of misbehaving students as trouble-makers. Instead, they encouraged teachers to understand and value students' experiences and negative feelings that can cause misbehavior and to sustain positive relationships when students misbehave. Teachers were reminded that "a teacher who makes his or her students feel heard, valued, and respected shows them that school is fair and they can grow and succeed there." These ideas were reinforced through stories from students (e.g., "One day I got detention, and instead of just sitting there, my teacher talked with me about what happened. He really listened to me. . . . It felt good to know I had someone I could trust in school. . . ."). Teachers then wrote how they incorporate or could incorporate these ideas in their own practice. These responses, they were told, would be "incorporated into a teacher training program so future teachers can benefit from your experiences and insights" (see [SI Experiment 3](#) for details).

This representation of the exercise and interactive elements draws on other successful social-psychological interventions (17–20). Teachers were treated as experts and agents of positive change for others, not as recipients of remediation. They were exposed to powerful stories on which they elaborated in guided writing exercises, allowing them to take ownership of the intervention message, to connect it to their own practice, and to advocate for it to others (21) (see [SI Experiment 3](#) for details). (Students completed separate randomized materials at this time,

which did not affect the primary outcomes examined here; [SI Experiment 3](#).)

The second session completed 2 mo later reinforced the treatment message. Teachers were reminded that "students' feelings about and behavior in school can and do improve when teachers successfully convey the care and respect students crave." They reviewed a story from a teacher who described a teacher of hers who had eased her worries about mistreatment by showing her respect and how she tried to convey the same respect to her students. Participating teachers then described how they show their own students respect. Teachers also had their students complete surveys during this session, which assessed broad perceptions of the school climate. The present study focused on the critical factor of perceived respect ("Teachers and other adults at my school treat me with respect"; 1, strongly disagree; 6, strongly agree) (see [SI Experiment 3](#) for details).

It is important to note what the empathic-mindset intervention does not do. Even as this intervention encourages teachers to understand and value students' perspectives, it does not ask teachers to share students' perspective or to think that that perspective is reasonable, which it may not be. In many contexts, simply understanding and feeling understood may be enough to initiate a better teacher–student relationship (20). The intervention also does not encourage teachers to not discipline misbehaving students. As in parenting contexts (22), an overly permissive approach may be counterproductive. It may cause teachers to lose control of the class and deny misbehaving children the understanding and supportive feedback they need to improve. Instead, the intervention encourages teachers to discipline students in a context of mutual understanding and trust.

The control exercise was similar in form and interactivity but discussed ways to use technology to promote learning (see [SI Experiment 3](#) for details). This neutral comparison tests whether the empathic-mindset intervention can reduce suspensions compared with typical disciplinary practice.

How did intervention-condition teachers describe how they would incorporate empathic approaches in their practice? When asked how they "would like . . . to improve your relationships with your students?" teachers powerfully echoed the intervention themes: For example, "[I] greet every student at the door with a smile every day no matter what has occurred the day before"; "[I] answer their questions thoughtfully and respectfully no matter what their academic history with me has been"; and "I NEVER hold grudges. I try to remember that they are all the son or daughter of someone who loves them more than anything in the world. They are the light of someone's life!" (see [SI Experiment 3](#) for details).

The primary outcome was students' year-long suspension rates. (Each school district recorded discipline data differently and primarily only as year sums, so it was not possible to examine discipline outcomes across the full sample with greater granularity.) Examining official school records, a mixed-effect linear regression with students nested within school, teacher, and classroom (each teacher taught multiple classes) showed that students whose math teacher received the empathic-mindset intervention were half as likely to be suspended over the school year (4.6%) as students of control teachers (9.8%) [odds ratio (OR) = 0.42, $z = -3.33$, $P = 0.001$; see [Fig. 2](#)]. The effect remained significant controlling for student race, gender, and prior-year suspension status (OR = 0.49, $z = -2.37$, $P = 0.018$). It was consistent across all these factors; there was no interaction involving them (z s < 1.85, P s > 0.05). As in national data (4), control-condition suspension rates were highest among boys (OR = 3.21, $z = 4.16$, $P < 0.001$), African American and Latino students (OR = 2.48, $z = 2.30$, $P = 0.021$), and students with a history of suspensions (OR = 17.34, $z = 1,420.00$, $P < 0.001$). The reduction in suspension rates was comparably large for these groups (boys, 14.6–8.4%; African

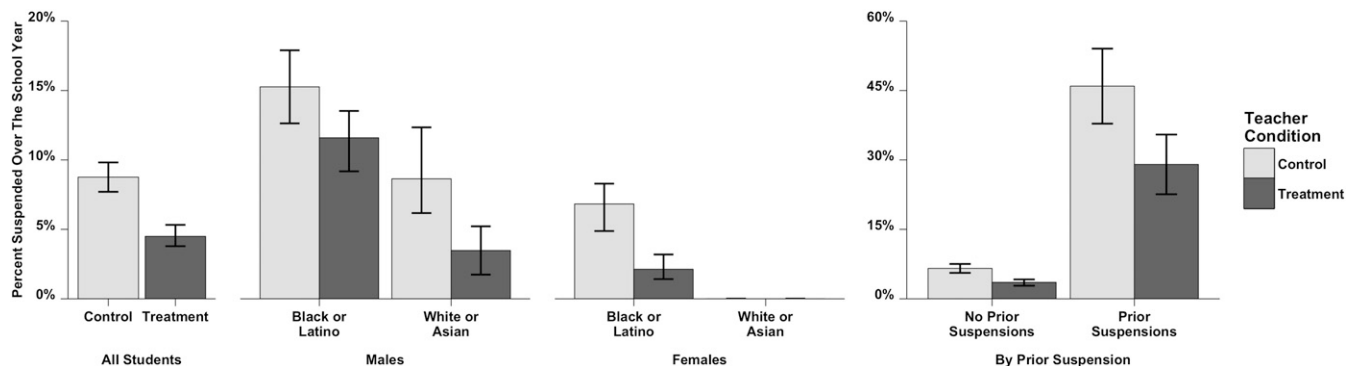


Fig. 2. Middle-school students ($n = 1,682$) whose math teacher ($n = 31$) completed the empathic-mindset intervention compared with randomized control materials were half as likely to be suspended over the school year (experiment 3). Error bars represent 95% CIs after 10,000 bootstraps.

Americans and Latinos, 12.3–6.3%; previously suspended students, 51.2–29.4%).

Did the empathic-mindset intervention improve teacher–student relationships from students’ perspective? It did for the most at-risk students, those with a history of suspensions. An initial mixed-effect linear regression on students’ reports of respect from teachers with students nested within school, teacher, and classroom revealed a main effect of prior suspension status, $t(1,440) = -2.01$, $P = 0.045$, and no main effect of condition ($t < 1.25$). (We used Satterthwaite approximations to estimate degrees of freedom with the lmerTest package in R.) However, a subsequent model revealed a significant Prior Suspension \times Treatment interaction, $t(1,438) = 2.57$, $P = 0.010$ (see Fig. 3). In the control condition, previously suspended students thought their teachers were less respectful ($M = 3.85$) than did students with no history of suspension ($M = 4.53$), $t(1,434) = -3.20$, $P = 0.001$, $d = 0.56$. This effect was eliminated by the intervention, $t(1,430) < 1$. Students with a history of suspension felt more respected by their teachers when their math teacher had been treated ($M = 4.70$) than when the teacher had not ($M = 3.85$), $t(1,439) = 2.68$, $P = 0.008$, $d = 0.77$.

The present research demonstrates how a punitive climate can create in teachers a punitive approach to discipline and how this approach undermines students’ feelings of respect for teachers and motivation to behave well in class (experiments 1 and 2). A brief, online intervention to encourage an empathic mindset in teachers about discipline halved year-long suspension rates among 1,682 students in five diverse middle schools (experiment 3). Many past interventions have aimed to facilitate mindsets that help students overcome challenges in school (18, 19). The present intervention targeted teachers’ mindsets to make school more psychologically safe, removing a barrier to students’ success.

Importantly, the empathic-mindset intervention did not attempt to teach teachers new skills for interacting with students or introduce new policies for how to discipline students (23). Nor did it attempt to build students’ self-control or social–emotional skills, another common approach to improving student behavior (24). Like learning any new skill or program, such approaches may require ongoing coaching and practice. Instead, we assumed that teachers were capable of building better relationships with students and that students could behave more positively with more supportive treatment. The intervention simply encouraged teachers to view discipline as an opportunity to facilitate mutual understanding and better relationships and empowered teachers to do so in a manner effective for them and their students. The findings suggest that, at least in the school contexts examined here, punitive mindsets about discipline serve as a critical barrier to better teacher–student relationships. Moreover, insofar as relatively brief, online modules can encourage teachers to take a

more empathic approach, the results suggest the potential for effective, scalable intervention to improve discipline outcomes.

However, our emphasis on teachers’ mindsets does not diminish the importance of punitive discipline policies; rather, it illustrates one reason why such policies matter. They create a context that discourages teachers from prioritizing building strong relationships with students at critical junctures. Efforts to change discipline policies and to encourage empathic mindsets about discipline thus go hand-in-hand.

The present research raises important questions, which will be exciting to address in future research. First, a notable finding was that the randomization of a single teacher to treatment versus control condition caused a reduction in suspensions that arise from misbehavior in all school settings; indeed, supplementary analyses provide evidence that the intervention effect extended beyond a reduction in suspensions referred by math teachers (*SI Experiment 3*). Although striking, this finding is consistent with research suggesting the importance for children of having at least one teacher in school whom they trust (20). It will be important to further understand how, when, and why improvement in a single teacher–student relationship causes reverberating benefits for students. Second, it is important to further explore the

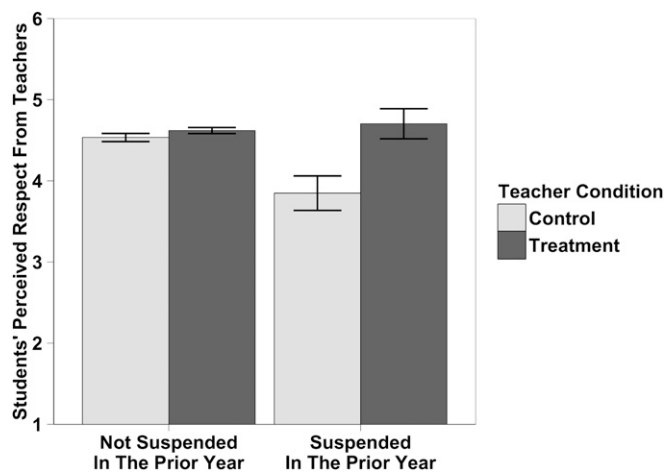


Fig. 3. Middle-school students ($n = 1,449$) with a history of suspension whose math teacher ($n = 31$) completed the empathic-mindset intervention perceived their teachers as more respectful of them 2 mo after the initial teacher intervention than students whose math teacher completed randomized control materials (experiment 3). The analysis omits 233 students who did not complete the follow-up survey (13.85%). Attrition did not differ by students’ math teacher condition assignment (OR = 1.24, $z < 1$, non-significant). Error bars represent 95% CIs after 10,000 bootstraps.

psychological and social-relational changes induced by the intervention and how these improve discipline. Using a chain of experiments, the present research identified key causal relationships (25) linking an empathic mindset and treatment to greater feelings and perceptions of respect and reduced suspensions. An important next step is to include periodic assessments of teachers' and students' attitudes and developing relationships and observations of their interactions in future trials. Such measures may further clarify how and when an empathic approach to discipline can become enduring in teachers' minds and embedded in teacher-student interactions and support statistical tests of mediation (26). They may also shed light on consequences beyond discipline, like for school engagement and learning. Ideally, these assessments will be unobtrusive so as not to lead teachers to feel scrutinized or to undercut the honorific representation of the exercise, which could undermine intervention effectiveness.

In changing teachers' mindsets to improve a social system, the present research suggests a new frontier for psychological intervention. Many past interventions help students navigate the social world of school more effectively (18–20, 27). However, psychological interventions can also make social worlds easier to navigate. Racial-minority students can be held back by teachers' feelings of dissimilarity to them (28). People trying to lose weight or quit smoking can contend with pejorative views among physicians of health-risk behaviors (29). In circumstances like these, the mindsets of a few can undermine the outcomes of many. Where else can we alter the mindsets of powerful social actors to improve the functioning of systems as a whole?

Methods

All ethical protocols, including informed consent from all participants, were followed in conducting the three experiments, and approval was obtained from Stanford University's Institutional Review Board and a principal at each school (experiment 3).

Experiment 1.

Participants and design. A total of 39 K–12 teachers ($M_{\text{experience}} = 14$ y; $M_{\text{age}} = 41$; 73% male; 92% White, 3% Asian, 8% Black, 3% unknown) recruited from the websites of school districts across the country took part and were randomized to a two-cell (punitive mindset vs. empathic mindset) design.

Procedure and stimuli. All teachers read that "misbehavior can disrupt the flow of the class and distract other students ... teachers can work best when students behave properly and pay attention in class." Next, teachers in the empathic-mindset condition read the following: "Good teacher-student relationships help students learn how to appropriately conduct themselves in the classroom ... [they] help students understand self-control at the time of a disruption, which can improve interactions with the student that day." Teachers in the punitive-mindset condition read the following: "Consequences lead students to appropriately conduct themselves in the classroom ... punishment allows teachers to take control of the class at the time of a disruption, which can help to get the class back on track that day." Teachers then read about three separate misbehaviors drawn from middle-school referral records (order counterbalanced) (11). After each incident, teachers described how they would respond to the incident:

- "Darnell is consistently disrupting the class environment by strolling around the classroom at random intervals, getting tissues from the tissue box multiple times during a 50-minute class, throwing items away constantly; in general, Darnell circulates around the room and up and down the rows to see what other students are doing, the students have eyes on him, and he disrupts the flow of the lecture or activity the class was participating in."
- "Darnell is sleeping in class. You tell him to pick his head up and get to work. He only picks his head up. He chooses to rest it on his hand and continue to sleep. So you ask him one more time, and again, Darnell refuses to do work. You ask him to leave class and go to the office to tell them that he won't do his work and chose to sleep instead. He refuses to do this as well."
- "Darnell is sitting in the back of the classroom. He is not paying attention to the lessons that you are teaching in class. Instead, Darnell is talking

to other students. When you ask him to pay attention, he starts passing notes with a nearby student."

Coding teacher responses from pilot study. Two coders blind to the condition reviewed teachers' responses and recorded whether or not each disciplinary action involved (i) each of three punitive responses: (a) assigning detention, (b) threatening to punish the student, or (c) involving an administrator (e.g., principal); and (ii) each of two empathic responses: (d) talking with the student about why he or she was misbehaving or (e) rearranging the classroom to accommodate the student (for sample responses, see Table 1). There was moderate agreement among raters ($\kappa_s = 0.54$ – 0.81 ; see Table S2). Thus, we averaged the two judges' ratings of each response category. We then averaged across the three incidents to provide the likelihood the student received a given response per disciplinary incident. Finally, we summed the likelihood of the three punitive responses and the two empathic responses to provide the average number of punitive and empathic responses a student received per incident. We then submitted the data to *t* tests (see Table 2).

Experiment 2.

Infraction manipulation. To examine how students would respond to teachers who used an empathic compared with a punitive approach to discipline, we asked college students ($n = 302$; 51% female; 48% White, 13% Black, 13% Asian, 19% Latino, 6% Other, 1% unknown) to imagine having committed a single infraction as a middle-school student and having received either an empathic or a punitive teacher response, based on the responses provided in experiment 1. The infraction and teacher responses by condition were as follows:

(For the punitive condition) "You leave your seat to get tissues from the tissue box multiple times during a 50-minute class. Mrs. Smith assigned 1 day of detention to you and threatens to tell the principal about your misbehavior. Later, you get up and throw items away in the wastebasket on the other side of the room. Mrs. Smith has the principal talk to you about your misbehavior."

(For the empathic-discipline condition) "You leave your seat to get tissues from the tissue box multiple times during a 50-minute class. Mrs. Smith asks you why you are moving around the class so much. Later, you get up and throw items away in the wastebasket on the other side of the room. Mrs. Smith rearranges the room so that the wastebasket and tissue box are closer to your desk."

Measures. Students completed six items assessing the extent to which they respected the teacher: "I think Mrs. Smith deserves my respect"; "I think Mrs. Smith is a fair teacher"; and "I get along with Mrs. Smith" (1, strongly disagree; 7, strongly agree); and "Mrs. Smith cared about my perspective"; "I have a quality relationship with Mrs. Smith"; and "Mrs. Smith is biased against me" (reverse-coded) (1, not at all; 7, extremely) ($\alpha = 0.85$). Next, participants completed two items assessing their motivation to behave well in class in the future: "It is important to me that I follow rules in this class" and "I want to behave in this class" (1, not at all; 7, extremely) ($\alpha = 0.83$).

Experiment 3.

Participants. We recruited all math faculty at three participating middle schools and, at the request of the principals, 67% and 50% of math faculty at the remaining two schools (34 in total). Three recruited teachers did not begin the module and thus were not assigned to a condition or exposed to experimental materials, leaving a sample of 31 teachers (77% female; 39% sixth grade, 29% seventh grade, 32% eighth grade). This represents a teacher participation rate of 91.12% and 83.4% of all math faculty at the five schools. Schools provided data for 2,069 students. Data from 387 students were not included in the analyses: 172 were not taught by a teacher randomized to a condition, and 215 could not be matched to school discipline records for the year before or the year of the intervention (they likely transferred to or from the school district within the 2-y period). The lack of matches to discipline records did not differ by teachers' condition assignment ($\chi^2 < 1.75$, non-significant). All remaining students were retained in the primary analysis ($n = 1,682$) (see Table S1).

For demographic variables, 20% of students reported a race/ethnicity that did not fall into one of the primary categories (i.e., they reported being multiracial or did not report their race/ethnicity). They were treated as a category in analyses including student race. Three students did not report their gender. They were omitted from analyses including student gender. Thus, 1,679 students were included in analyses controlling for student race, student gender, and prior suspension status.

Missing data. A total of 233 students did not complete the follow-up survey assessing respect perceived from teachers (13.85% of participating students). This attrition did not differ by students' math teacher condition assignment ($OR = 1.24$, $z < 1$, nonsignificant). Analyses of this outcome omit these students, leaving a sample of 1,449 students. This approach to missing data maximizes the transparency of our analyses and keeps it as close as possible to our experimental design.

Procedure. Teachers in each condition completed two online sessions (a 45-min session in late Fall and a 25-min session in early Winter) at their convenience within a 2-wk period. In the first session, teachers read an introduction to the activity, an article including stories from students

describing their experience in school and relationships with teachers, and responded to several writing prompts. In the second session, teachers in both conditions read another article about the same topic that included a story from a teacher's perspective. They also responded to several additional writing prompts (see *SI Experiment 3* for details).

ACKNOWLEDGMENTS. We thank C. Dweck, J. Zaki, the Dweck–Walton laboratory, and the Race and Social Inequality Lab for feedback; the participating school districts, administrators, and teachers for their time and effort; the New Teacher Center for facilitating this project; and the Project for Education Research That Scales (PERTS) for technical and logistical support.

- Rocque M, Paternoster R (2011) Understanding the antecedents of the "school-to-jail" link: The relationship between race and school discipline. *J Crim Law Criminol* 101(2):633–666.
- Wald J, Losen DJ (2003) Defining and redirecting a school-to-prison pipeline. *New Dir Youth Dev* 99(99):9–15.
- Office for Civil Rights (2012) Civil Rights Data Collection (US Department of Education, Washington, DC).
- Weiner B (2003) The classroom as a courtroom. *Sch Psychol Ed* 6(1):3–15.
- Skiba RJ, Peterson RL (2000) School discipline at a crossroads: From zero tolerance to early response. *Except Child* 66(3):335–346.
- Colquitt JA, Conlon DE, Wesson MJ, Porter COLH, Ng KY (2001) Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *J Appl Psychol* 86(3):425–445.
- Roorda DL, Koomen HM, Split JL, Oort FJ (2011) The influence of affective teacher-student relationships on students' school engagement and achievement: A meta-analytic approach. *Rev Educ Res* 81(4):493–529.
- Steinberg L (2008) A social neuroscience perspective on adolescent risk-taking. *Dev Rev* 28(1):78–106.
- Vygotsky LS (1978) Interaction between learning and development. *Mind in Society: The Development of Higher Psychological Processes*, eds Cole M, John-Steiner V, Scribner S, Souberman E (Harvard Univ Press, Cambridge, MA), pp 71–91.
- Carter P (2005) *Keepin' It Real: School Success Beyond Black and White* (Oxford Univ Press, Oxford, UK).
- Okonofua JA, Eberhardt JL (2015) Two strikes: Race and the disciplining of young students. *Psychol Sci* 26(5):617–624.
- Okonofua JA, Walton GM, Eberhardt JL (2016) A vicious cycle: A social-psychological account of extreme racial disparities in school discipline. *Perspect Psychol Sci*, in press.
- Vorauer JD (2013) The case for and against perspective taking. *Advances in Experimental Social Psychology*, eds Zanna MP, Olson J (Academic, San Diego), Vol 48, pp 59–115.
- Richardson DR, Hammock GS, Smith SM, Gardner W, Signo M (1994) Empathy as a cognitive inhibitor of interpersonal aggression. *Aggress Behav* 20(4):275–289.
- Johnson J, Yarrow A, Rochkind J, Ott A (2009) *Teaching for a Living: How Teachers See the Profession Today* (Public Agenda/Education Week, New York).
- Hayes AF (2013) *Introduction to Mediation, Moderation, and Conditional Process Analysis* (Gifford, New York).
- Yeager DS, Walton GM (2011) Social psychological interventions in education: They're not magic. *Rev Educ Res* 81(2):267–301.
- Paunesku D, et al. (2015) Mind-set interventions are a scalable treatment for academic underachievement. *Psychol Sci* 26(6):784–793.
- Walton GM, Cohen GL (2011) A brief social-belonging intervention improves academic and health outcomes of minority students. *Science* 331(6023):1447–1451.
- Yeager DS, et al. (2014) Breaking the cycle of mistrust: Wise interventions to provide critical feedback across the racial divide. *J Exp Psychol Gen* 143(2):804–824.
- Aronson E (1999) The power of self-persuasion. *Am Psychol* 54(11):875–884.
- Baumrind D (1991) The influence of parenting style on adolescent competence and substance use. *J Early Adolesc* 11(1):56–95.
- Allen JP, Pianta RC, Gregory A, Mikami AY, Lun J (2011) An interaction-based approach to enhancing secondary school instruction and student achievement. *Science* 333(6045):1034–1037.
- Durlak JA, Weissberg RP, Dymnicki AB, Taylor RD, Schellinger KB (2011) The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Dev* 82(1):405–432.
- Spencer SJ, Zanna MP, Fong GT (2005) Establishing a causal chain: Why experiments are often more effective than mediational analyses in examining psychological processes. *J Pers Soc Psychol* 89(6):845–851.
- Bullock JG, Green DP, Ha SE (2010) Yes, but what's the mechanism? (Don't expect an easy answer). *J Pers Soc Psychol* 98(4):550–558.
- Cohen GL, Garcia J, Purdie-Vaughns V, Apfel N, Brzustoski P (2009) Recursive processes in self-affirmation: Intervening to close the minority achievement gap. *Science* 324(5925):400–403.
- Gehlbach H, et al. (2016) Creating birds of similar feathers: Leveraging similarity to improve teacher-student relationships and academic achievement. *J Educ Psychol*, in press.
- Gudzune KA, Beach MC, Roter DL, Cooper LA (2013) Physicians build less rapport with obese patients. *Obesity (Silver Spring)* 21(10):2146–2152.