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# Reappraising Academic and Social Adversity Improves Middle-School Students' Academic Achievement, Behavior, and Well-Being

Geoffrey D. Borman[a]

[a]School of Education, University of Wisconsin-Madison, Madison, WI 53706

Christopher S. Rozek[b]

[b]Department of Psychology, Stanford University, Stanford, CA 94305

Jaymes Pyne[c]

[c]Department of Sociology, University of Wisconsin-Madison, Madison, WI 53706

Paul Hanselman[d]

[d]Department of Sociology, University of California, Irvine, Irvine, CA 92697

**Corresponding Author:** Geoffrey D. Borman, School of Education, University of Wisconsin-Madison, Madison, WI 53706, geoffrey.borman@wisc.edu.

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*Abstract*

The period of early adolescence is characterized by dramatic changes, simultaneously affecting physiological, psychological, social, and cognitive development. The physical transition from elementary to middle school can exacerbate the stress and adversity experienced during this critical life stage. Middle school students often struggle to find social and emotional support, and many students experience a decreased sense of belonging in school, diverting students from promising academic and career trajectories. Drawing on psychological insights for promoting belonging, we fielded a brief intervention designed to help students reappraise concerns about fitting in at the start of middle school as both temporary and normal. We conducted the first district-wide double-blind experimental study of this approach with middle-school students (N=1,304). Compared to the control condition activities, the intervention reduced sixth-grade disciplinary incidents across the district by 34%, increased attendance by 12%, and reduced the number of failing grades by 18%. Differences in benefits across demographic groups were not statistically significant but some impacts were descriptively larger for historically underserved minority students and boys. A mediational analysis suggested 80% of long-term intervention effects on students' GPA were accounted for by changes in students' attitudes and behaviors. These results demonstrate the long-term benefits of psychologically reappraising stressful experiences during critical transitions and the psychological and behavioral mechanisms that support them. Furthermore, this brief intervention is a highly cost-effective and scalable approach that schools may use to help address the troubling decline in positive attitudes and academic outcomes typically accompanying adolescence and the middle school transition.

*Statement of Significance*

Without social and emotional support, adolescent students who have recently made the difficult transition to middle school experience decreased social belonging, waning academic performance, and increased risk of dropping out. This randomized field trial, conducted at scale across a Midwestern school district, reveals how a psychologically precise intervention for students supported transitioning sixth graders. Intervention materials taught students that middle-school adversity is common, short-lived, and due to external, temporary causes rather than personal inadequacies. As a result, students realized improved social and psychological well-being, fewer absences and disciplinary infractions, and higher grade point averages. Implemented at scale, this intervention holds potential to help to address the widespread academic underperformance by the nation's transitioning middle-school students.

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Adolescence introduces a dynamic period of human development, presenting both opportunities and challenges for positive physiological, psychological, social, and cognitive growth (1). A defining feature of this developmental stage is a heightened sensitivity to social acceptance, social comparisons, and sociocultural cues (2, 3). Amidst increasing self-awareness and independence, non-kin social networks become larger, more competitive, and more influential, leaving adolescents to find their place in an expanding social world at the same time they are only beginning to develop competencies to form meaningful and long-lasting relationships and connections to important institutions like schools. In particular, increased sensitivity to social acceptance during this period can raise questions concerning adolescents' sense of belonging, or their perception of having positive connections with peers, trusted adults, and important institutions (4). Since belonging is an essential human need (5), difficulties "fitting in" during adolescence can have significant and lasting negative consequences (6).

The developmental challenges of adolescence are often compounded by the transition to the new social and academic environment of middle school—a particularly disruptive and nearly universal experience in the United States (7). This transition typically entails the move from a familiar neighborhood elementary school to a new educational environment that is farther from home, larger, more bureaucratic, less personal, and more formal and evaluative (8). Though middle-schools were originally designed to meet the specific educational needs of adolescents and to prepare them for the academic rigors of high school, stage-environment fit theory highlights important mismatches between adolescents' developmental needs and the social-

organizational context of middle school (2). The typical middle school environment emphasizes academic evaluation and competition, often reflected in the onset of letter grades and differentiation between more and less advanced classes, which encourage negative social comparisons while students are forming their academic identities (2, 8). Social acceptance by peers and caring relationships with adults outside of the home are of particular importance to adolescents' positive development, and the physical transition disrupts prior school-based peer networks. Teacher-student relationships tend to become more distant, and potentially negative, as greater emphasis is placed on teacher control and discipline (2, 9, 10). Despite the best intentions of teachers and school leaders, the poor stage-environment fit of middle schools thus threatens students' academic and relational belonging in school.

Belonging concerns amid the transition to middle school contribute to decreases in academic engagement and well-being during this period. Research documents declining academic performance (7, 11), waning intrinsic motivation (2), rising disciplinary infractions (10), and emerging mental health problems (3) during middle school. Such trends reflect relatively common struggles of adolescents in school (2). As the implications of school performance for future educational and occupational attainment increase, these declines in adolescents' academic performance and well-being have troubling long-term implications (2, 8). On the other hand, this formative period of adolescence also offers a unique opportunity to challenge and change the potentially damaging personal narratives that students develop as they confront academic and relational adversities that can undermine their sense of belonging. In lieu of recent costly interventions to restructure middle schools (7), there may be ways to enhance

psychological supports that schools can apply to reduce the problem of nonbelonging in the middle school context.

**Social-Psychological Intervention to Improve School Belonging for Middle School Students**

Although declining academic engagement in middle school is rooted in developmental and social-organizational challenges, the importance of students' sense of belonging in these processes provides a potential point of leverage for mitigating these trends. Many of the challenges of middle school become detrimental through students' perception that they do not fit in at school. For instance, when students encounter cues that raise ambiguity about their belonging in middle school, such as not being able to find anyone to sit with in the lunchroom, they may view these problems as atypical (i.e., they are the only ones feeling this way) and attribute tenuous belonging to their own permanent inadequacies (4). This can further demotivate students and lead them to interpret new experiences in psychologically harmful ways (12, 13) as anxiety becomes the leading emotion (16). Thus, one way to intervene to promote belonging could be by targeting these attribution errors and encouraging students to reappraise their perspective on their difficulties (13, 14, 15). Proactively teaching students to make targeted shifts in perspective can have substantial impacts on students' self-assessments and motivation in school (4).

In this study, we test an intervention for middle school students that helps them reappraise adversity related to common worries that adolescents have concerning belonging in school. The hypothesized theory of change is summarized in Figure 1. The key messages of the intervention are that worries about students' belonging in middle school are normal, that they are short-lived, and that support is available. When students understand belonging worries as

common and surmountable, they are better able to interpret adversity as non-threatening and maintain a motivational orientation that supports better performance (4). The hypothesized immediate impact is that students will have greater well-being in the form of more positive attitudes about school. Increased positive attitudes reduce the cognitive resources devoted to stress management, freeing students' mental capacity for academic work (12, 16). Next, greater perceived fit at school can lead to changes in critical behavioral indicators of academic disengagement, including absences from school and instances of acting out (10). Finally, over time, shifts in student beliefs and behaviors improve academic performance, which then reinforce those positive beliefs (16, 17). This redirected, recursive cycle has the potential to foster long-term improvements in academic achievement and engagement in school (10, 16, 17).

This hypothesized theory of change draws on research among college students that supports the efficacy of targeted reappraisal messages for at least some social groups (13, 14, 15, 18, 19). Yet to date, most evidence is limited to selective universities, contexts in which a relatively small group of high-achieving young adults are navigating elite post-secondary institutions, and belonging concerns emerge only for specific, underrepresented groups. It is therefore unclear whether comparable reattribution messages are beneficial during adolescence and the widespread social challenges of middle school. The message that belonging concerns are common and surmountable may be even more critical during such a sensitive period. However, developmental features of adolescence present unique challenges to the external messages of interventions (1), and broader issues of stage-environment fit in middle school may mute the benefits of intervening on belonging.

In addition to the question of the effectiveness of promoting belonging during this developmental period, the unique context of the middle school transition highlights two central theoretical questions. The first is the mechanisms of interventions to promote school belonging, especially in terms of ongoing processes that support sustained benefits. Preliminary evidence on belonging in college suggests intervention impacts may operate through institutional engagement, such as likelihood of living on campus (15). But even as research begins to elucidate processes integral to college belonging, we should not expect all of the same mechanisms to apply in early adolescence, since theorized processes depend on features of the educational context. An instructive example is students' connection to their teachers. In college contexts where interactions are infrequent and diverse, initiating any contact with a professor may be valuable (15), but middle school students are placed in frequent and involuntary contact with teachers who hold much more influence over students' day-to-day lives. Student-teacher relationships also tend to be less positive and personal than in elementary school (where students most often interact with only one teacher), as middle school teachers set the tone for increased academic evaluation and more severe discipline for misbehavior (2, 10). Thus, building positive relationships with teachers is a key to experiencing a safe and more supportive educational environment, with potential consequences for whether and how students engage in middle school. As reflected in Figure 1, this leads to developmentally-specific hypotheses about attitudinal and behavioral mechanisms, especially related to school discipline.

Another key theoretical question raised by belonging interventions in middle school is the scope of the impacts of these interventions: for whom are such messages beneficial? In research in postsecondary settings, benefits are typically observed for groups at greatest risk for belonging

worries, such as African American students in an elite institution (6) and students from lower income backgrounds at a flagship state university (15). Theoretically, belonging concerns in these university contexts are consistent with a "cultural mismatch" hypothesis, which suggests that inequality is produced when cultural norms in mainstream university institutions do not match the norms prevalent among social groups who are underrepresented in those institutions (20). Though majority university students may experience doubts about their belonging, these concerns are likely less acutely felt than specific, group-based worries for racial/ethnic minority or first-generation students that "people like me" do not belong (15). These theories regarding belonging at the university transition contrast markedly with those related to the middle school transition, which specify a near-universal negative stage-fit involving all students navigating new educational environments that do not fit their developmental stage (2).

It is unclear whether racial or socioeconomic factors moderate interventions to promote belonging at the middle school transition. Given social stereotypes apply to adolescents just as they do to young adults (21), belonging interventions might confer group-specific benefits for disadvantaged and underserved groups of all ages. However, these differences might instead be muted by more universal concerns about belonging experienced during adolescence and at the transition to middle school, or group differences may vary across multiple local middle school contexts. Given ambiguity in potential explanations for moderation effects, it is important to thoroughly test our theory of belonging during the middle school transition for all students and for particular groups of students.

In summary, the challenges students experience in middle school provide an opportunity to address academic disengagement by reappraising middle school-specific concerns about

belonging as normal and temporary. Doing so at this critical developmental period (1) may set students on a more positive trajectory for success precisely at the time when students typically begin a decline in academic engagement and performance at the start of middle school that continues through high school and college (11). Moreover, the unique developmental and social organizational context of middle schools foregrounds important theoretical questions about school belonging and development: whether adversity reappraisal messages are meaningful at this stage, what the various mechanisms that support sustained benefits over time are, and how widely any benefits may apply. To test and explore these questions, we conducted a large-scale randomized field trial in which we implemented a middle school-specific intervention, measured developmentally appropriate attitudinal and behavioral mechanisms, and did so at the scale of an entire urban school district to test how intervention effects might differ across different groups of students and school contexts.

**The Current Study**

Since research done with college students on belonging may not directly apply to the middle school experience, we extend the broader theory underlying these approaches by testing a belonging intervention designed specifically for students making the transition to middle school, a near-universal milestone when structural changes and identify formation threaten belonging. We conducted our study in all middle schools in a Midwestern public school district (1,304 sixth-grade students). The largest racial/ethnic groups in the district's total K-12 student population were white (44%), Latino (19%), African American (18%), and Asian (9%). Standardized test scores for the district were average among all districts in the nation, but there were very large achievement disparities for historically underserved groups, including African

American and Latino students (see SI for details). Within each of the 11 schools, students were randomly assigned to the intervention or a control condition. The control exercises included the same amount of reading and writing but asked students to write about neutral middle-school experiences that were not related to school belonging.

We collected pre- and post-intervention survey data on students' reported social and emotional well-being and official school transcripts of student attendance, disciplinary records, and grades. We used these measures to assess the intervention's impact on theoretically important psychological, behavioral, and academic outcomes. We also tested how the psychological and behavioral measures served as mechanisms explaining intervention effects on academic achievement. Finally, we used demographic information to test theorized differences in intervention impacts by racial/ethnic groups and by gender.

## *Results*

### Balance Between Conditions on Pre-Intervention Variables

All group differences on baseline data for the control and intervention groups were not statistically significantly different from zero and smaller than 0.1 standard deviations, indicating successful randomization to condition (for individual experimental balance tests, see Table S1).

### Multiple Regression Models of Intervention Effects

**Analytic Details.** To assess the effect of assignment to the belonging intervention, we regressed each outcome of interest on the following centered contrast coded independent variables: experimental group (+1 for intervention and -1 for control), historically underserved minority group (+1 for African American, Latino, Native American, and multiracial students and -1 for white and Asian students), gender (+1 for female and -1 for male), and all of the two- and

three-way interactions between those variables. We also included a set of covariates including English-language learner status, disability status, free/reduced price lunch eligibility (a proxy for family economic disadvantage), a pre-intervention measure of each dependent variable, and school fixed effects. Random assignment at the student level, blocked by school, greatly reduces the threat of bias in the study design, and the inclusion of additional covariates serves to increase the precision of each estimate. To account for cases missing baseline covariates, we used full information maximum likelihood methods for all analyses. In the main manuscript, we report on the estimated effects of the intervention and full model results are included in the SI (Table S2).

**Results: Manipulation Check.** To assess whether the intervention exercises had the intended immediate effect on students' reappraisal of adversity (Figure 1), we included manipulation check questions for students at the end of each writing exercise (see Appendix B) focusing on academic worries that undermine school belonging (Exercise 1) and relational worries (Exercise 2). In each case, two questions assessed whether the students' assessments of previous 6$^{th}$ grade students reflected the messages that such worries are (a) common and (b) temporary. Results of these manipulation checks indicated that intervention group students reappraised both academic and relational worries as expected by rating previous students' worries as more common in 6$^{th}$ grade and less common in 7$^{th}$ grade than the control group (details in SI).

**Results: Main Outcomes**. Results for students' well-being were in the expected directions, with students in the intervention group reporting higher levels of school trust ($z$ = 4.37, $p < .001$, $\beta = .11$), social belonging ($z = 3.37$, $p = .001$, $\beta = .10$), and identification with school ($z = 2.80$, $p = .006$, $\beta = .06$), and lower levels of evaluation anxiety ($z = -2.74$, $p = .005$, $\beta$

= -.07) at the end of the school year. Figure 2 displays Cohen's *d* estimates with 95% confidence intervals of the effect of intervention on each outcome. Results presented for individual outcomes using school fixed effects are consistent with results from multilevel models in which students are nested in schools.

The intervention had substantively and statistically significant effects on students' GPA and the number of failing (D/F) grades. Results were in the expected direction, with students in the intervention group having higher GPAs ($z = 2.08$, $p = .038$, $\beta = .03$) and fewer Ds and Fs ($z = -2.04$, $p = .042$, $\beta = -.06$). There were also effects on behavioral outcomes, such that students in the intervention group received fewer behavioral referrals ($z = -2.89$, $p = .004$, $\beta = -.39$) and had fewer absences ($z = -2.41$, $p = .016$, $\beta = -.49$). Behavioral referrals results are robust to estimation with a negative binomial regression model. The magnitude of these impacts is small but meaningful. In aggregate, the intervention group experienced 545 fewer absences, 507 fewer behavior referrals, and 67 fewer D or F grades across the school district during the academic year following implementation of the intervention (Figure 3). These intervention impacts correspond to a 12% reduction in absences, a 34% reduction in behavior referrals, and an 18% reduction in receiving Ds or Fs, relative to control group levels, during the measurement period.

Estimated interactions with student demographics were generally in the favor of greater benefits for racial/ethnic minority and male students, but not precise enough to reject the null hypothesis of no difference despite the large sample size in this study. This may in part reflect relatively broad impacts (and smaller group differences) of the belonging message at this developmental stage when the threat to belonging is a largely universal experience.

**Structural Equation Model**

To assess mechanisms of intervention impacts, we tested elements of our theory of change (Figure 1) using structural equation modeling (Figure 4). In this model, we tested if the effect of the intervention on students' GPA was mediated by effects on students' attitudes (school trust, social belonging, evaluation anxiety, identification with school) and by effects on students' behaviors (number of behavioral referrals and absences).

All predictors in the individual outcome models were included as predictors of each variable in the structural equation model (i.e., intervention, race, gender, interactions between intervention, race, and gender, and demographic covariates). The model included post-intervention student behaviors and survey measures of student attitudes as mediators. We report estimates from a simple model omitting pre-intervention measures of those variables, as including these covariates did not alter conclusions. Our theory informs a fully saturated structural equation model which imposes no restrictions of possible paths. Direct intervention effects on student attitude measures were comparable to regression results reported above (see SI). Below, we focus on the mediation pathways, but full model results are reported in the SI and in Table S4.

**Well-being as predictors of student behaviors.** Our theoretical model posits that positive student attitudes lead to fewer behavioral referrals and absences. In support of that hypothesis, we found that higher school trust was associated with fewer behavioral referrals ($z$ = -2.46, $p$ = .014, $\beta$ = -.12) and fewer absences ($z$ = -2.34, $p$ = .019, $\beta$ = -.09). Higher levels of social belonging were marginally associated with fewer absences ($z$ = -1.73, $p$ = .083, $\beta$ = -.08).

**Well-being and student behaviors as predictors of GPA.** Four independent variables in the model significantly predicted GPA: identification with school ($z$ = 4.08, $p$ < .001, $\beta$ = .07),

school trust ($z = 2.17$, $p = .030$, $\beta = .05$), number of behavioral referrals ($z = -5.46$, $p < .001$, $\beta = -.23$), and number of absences ($z = -8.55$, $p < .001$, $\beta = -.19$).

**Indirect effects and mediation.** We tested two types of indirect pathways. We first tested the total indirect effect of intervention through well-being measures on behavior outcomes (i.e., behavioral referrals and absences). The effect on behavioral referrals was mediated by well-being pathways ($z = -2.50$, $p = .013$); the combined indirect effects were 23% of the total effect of the intervention. The effects on absences were also mediated by well-being ($z = -2.48$, $p = .013$)—these indirect effects were 20% of the total intervention impact. Second, we tested the total indirect effect of intervention through well-being and behavior variables on GPA. These variables mediated the total impact on GPA ($z = 2.88$, $p = .004$), and these indirect effects were 80% of the total effect, suggesting that much of the effect of the belonging intervention worked through changes in student attitudes and behaviors. Recognizing limitations of the SEM approach for identifying causal mediation effects due to confounding influences (22), we conducted supplemental tests of the Average Causal Mediation Effects for each potential mediator (see SI), which led to a similar conclusion.

## *Discussion*

The belonging intervention we fielded helped adolescent students making the transition to middle school adopt a mindset that worries about belonging are common among their peers and can be overcome with time and effort. In doing so, the intervention unlocked greater potential for positive well-being and academic outcomes for students. Our results trace how changes in students' perspectives about school and stronger engagement in school contribute to improved academic performance.

There are several important implications of these findings. First, although previous studies have focused largely on college students, we show that reappraising adversity can be effective during the earlier, and critical, period of adolescence. It is notable that brief reappraisal messages were beneficial given two particular challenges of adolescence: (a) a wide array of developmental and environmental belonging challenges that may overwhelm any messages to the contrary (2, 3), and (b) adolescents' resistance to outside messages about how they should think, especially from adults (1). Yet, effectiveness of the adversity reappraisal approach demonstrates the value of targeted, contextually appropriate messages both for psychological well-being, as reflected in lasting increases in students' fundamental attitudes about their school and their place within it, and for ultimate academic success. Because we conducted this test in an entire district that shares demographic and achievement similarities with the nation as a whole (see SI), these benefits may apply in many other settings, but future research is needed to directly test the broader generalizability of these results.

Second, a key contribution of this study is in tracing intervention mechanisms through students' attitudes, behavioral indications of school engagement, and grades. The results advance the theory encapsulated in Figure 1, highlighting the sequential importance of both a multifaceted psychological sense of belonging in middle school and behavioral engagement. In particular, our findings indicate that fostering trust and positive relationships between middle school students and their teachers appears especially important for promoting students' academic and behavioral outcomes. Connections to key institutional agents are hypothesized to reinforce lasting psychological change and create recursive benefits of our brief intervention.

Future research should build on this evidence by exploring how teachers' actions sustain or subvert specific belonging intervention impacts in middle school.

A third important implication of our results is that they suggest widespread benefits of the belonging intervention in middle school. We did not find definitive evidence in support of the hypothesis of greater benefits for more socially marginalized groups. This may reflect nearly universal benefits of promoting belonging during middles school because it is a period of widespread developmental and environmental belonging challenges, compared to particular post-secondary settings where belonging worries may be most acute for particular groups (6, 18, 19). That said, our estimates cannot rule out larger benefits for under-represented minority and male students, and future research is needed to assess these patterns independently in other settings. We note that the present school district was relatively well-resourced, and despite some of the largest racial achievement gaps in the nation, we observed negligible demographic differences in belonging measures prior to the intervention; both factors may contribute to relatively wide and uniform benefits of increased school belonging.

Layered upon these three key implications is the novelty of scale in this study—the first study of this approach across an entire public school district—which provides unique insight about policy relevance. The reappraisal intervention was effective at scale, and if a school district were to adopt the interventions for administration, the cost for doing so would be extremely low. Specifically, replication would require the printing costs for the exercises and, potentially, the opportunity costs of allocating teachers' time to administering the exercises rather than to some other classroom activity. Our estimate of the cost of implementing this intervention suggests the typical school system could sustain delivery of the intervention's

two exercises at a cost of approximately $1.35 per student, per academic year (see SI for details). This compares quite favorably to the typical costs of other social-emotional learning interventions reviewed by Belfield and colleagues (23), who found average costs of $581 per student across the six interventions that they reviewed.

Finally, though these outcomes highlight the practical importance of this intervention for reappraising middle-school adversity, they also call attention to the more prominent issue of addressing the social-psychological needs of middle-school students more generally. Given the significant personal, social, and economic consequences of dropping out of school, greater attention should be directed toward preventing the process of disengagement, which often takes root at the start of middle school. Indeed, poor attendance, misbehavior, and declining grades in sixth-grade are early warning flags, which more often than not predict students' dropping out of high school (24). With timely and credible reassurances of middle-school students' belongingness, the intervention tested here can be useful for schools as an additional tool in their larger overall toolkit to help students succeed through the difficult transition to middle school.

## *Materials and Methods*

### Intervention

The belonging materials were based on social-psychological theory (4), and designed by Goyer and colleagues (25), building on previous intervention research on reappraisal and social belonging (13, 4, 26). Small modifications for the local context were made with feedback from preliminary surveys and focus groups conducted with prior sixth-graders in the participating school district. The final exercises (see SI) featured quotations and stories ostensibly from a

"survey" of the prior year's sixth-grade students about their experiences. These accounts were designed to align with students' sentiments in focus groups but were written by researchers to highlight the core messages of the intervention. These messages included: (a) reassurance that nearly all students at their school feel they struggle to fit in and feel capable of succeeding in school at first but, over time, come to realize they do belong, (b) advice on and examples of ways to engage in the school's social and academic environment, and (c) confirmation that other students and teachers are there to help and support them. The first exercise focused on concerns about belonging due to academics, while the second focused on concerns about interpersonal relationships with adults and peers. In both cases, to promote internalizing these messages, students were then asked to reflect in writing on the information they read, considering how they could address their own difficulties and how those difficulties will become easier to manage over time. Ultimately, the intervention was meant to provide reassurance and advice from their peer group that difficulties occur for everyone entering middle school (not just particular students or groups) and suggest that they, too, will overcome these difficulties.

**Study Implementation**

Using procedures approved by the Institutional Review Board at the University of Wisconsin, students were recruited to participate in the study (including student assent and parental consent) in August and September. Participating students were block randomized within the 11 schools in the district to the intervention or a control condition with identical coversheets; non-participating students were provided alternate but similar individual activities during the same time. The two administrations were conducted early in the year (September and last week of October or first week in November). The exercises were administered by regular teachers

during appropriate class time (39% in Homeroom, and 61% in English Language Arts classes). Teachers received training and instructions for distributing the materials and returned completed activities to researchers. Teachers were asked to administer the exercise as a normal reflective or free-writing activity and to refrain from describing it as research or an assessment. Throughout all phases of implementation, students, parents, and teachers were not informed of the specific study hypotheses (the study was described generally as an effort to learn about middle-school students' opinions) and were blind to experimental condition.

Surveys were administered separately from the writing exercises by research staff to all sixth-grade students in September one to two weeks prior to the first exercise and in May at the end of the school year.

**Data**

Data were compiled from district administrative records and student surveys administered at the beginning and end of the school year. Among participants randomized to condition, 9% of observations were removed due to missing outcome data, not differential by condition ($\chi^2 = 0.14$, $df=1$, $p = 0.71$). The resulting sample consists of 1,304 participants for whom data from both fifth and sixth grades were available, representing 73% of the district's total sixth-grade enrollment. Consistent with prior theoretical interpretations and empirical results (21), we also identified students from historically underserved groups (African American, Latino, Native American, and multiracial, 44% of sample) as most at-risk for belonging challenges and low academic achievement.

**Student Survey Measures.** The student survey assessed the social and emotional well-being of participants in terms of attitudes related to aspects of school experiences (School Trust,

Social Belonging, Evaluation Anxiety, Identification with School; (27)). All survey items use a five-point Likert scale ranging from one (Strongly disagree) to five (Strongly agree). School trust measured the degree to which students believe that adults in the school care about them and treat them fairly (α=.74; e.g., "The teachers at this school treat students fairly"). Social belonging assessed a student's fit within school (α=.78; e.g., "I feel like I belong in my school"). Evaluation anxiety measured the negative thoughts students might have about evaluation in school (α=.80; e.g., "If I don't do well on important tests, others may question my ability"). Identification with School captured the degree to which a person places importance on doing well at an activity (α=.78; e.g., "I want to do well in school").

**School Records**. Students' grades, behavioral referrals, and absences were coded from their official school records. For academic outcomes (GPA, number of Ds and Fs) we used cumulative records from terms 2-4 of the study year, which represent grades received after implementing the intervention exercises. For behavior outcomes, we similarly only included incidents that occurred after the implementation of the intervention exercises.

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*Figure Legends*

*Figure 1*. Theory of change. This figure depicts the recursive psychological and behavioral processes that the intervention is intended to set in motion to promote a sustained positive effect on academic and well-being outcomes.

*Figure 2*. Intervention effects on academic, behavioral, and well-being outcomes. Note: Dots are Cohen's d effect sizes, bars are 95% confidence intervals. Standard errors are clustered at the school level. Models also include controls for gender, race, prior achievement, disability status, free/reduced price lunch eligibility, English language learner status, and two- and three-way interactions for race, gender, and experimental group. GPA = Grade point average, Ds&Fs = Number of D's and F's received.

*Figure 3*. Differences in number and rate of absences, behavioral referrals, and D's/F's between intervention and control groups. Note: Figure represents unadjusted aggregate intervention minus control group differences. Behavior referrals and absences for each student are top-coded at 35 and 45 incidents, respectively, to account for outliers.

*Figure 4*. Empirical path model. Note: Path coefficients are standardized. Standard errors are clustered at the school level. Solid lines indicate path coefficients statistically significant at $p < .05$. Dashed lines indicate path coefficients statistically significant at $p = .05$ to $p < .10$. Path coefficients at $p = .10$ or greater are not shown, but all paths between variables were included in the model. The model also included controls for gender, race, prior achievement, disability status, free/reduced price lunch eligibility, English language learner status, and two- and three-way interactions for race, gender, and experimental group. Both student well-being measures and behavior measures were allowed to covary.

Figure 1. Theory of change.

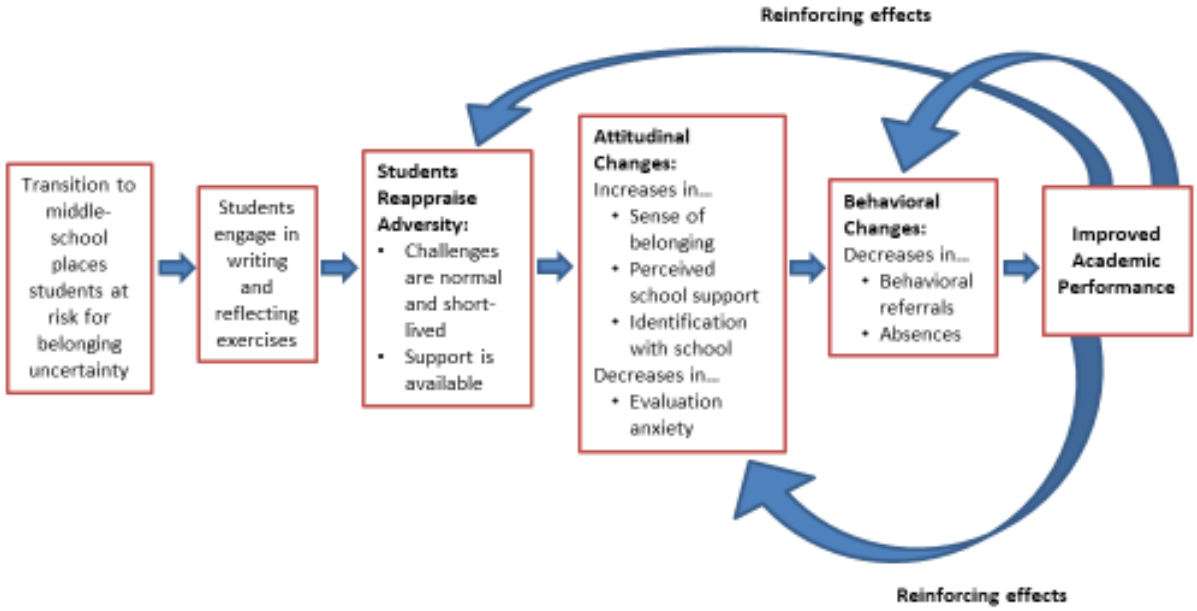


Figure 2. Intervention effect on academic, behavioral, and well-being outcomes.

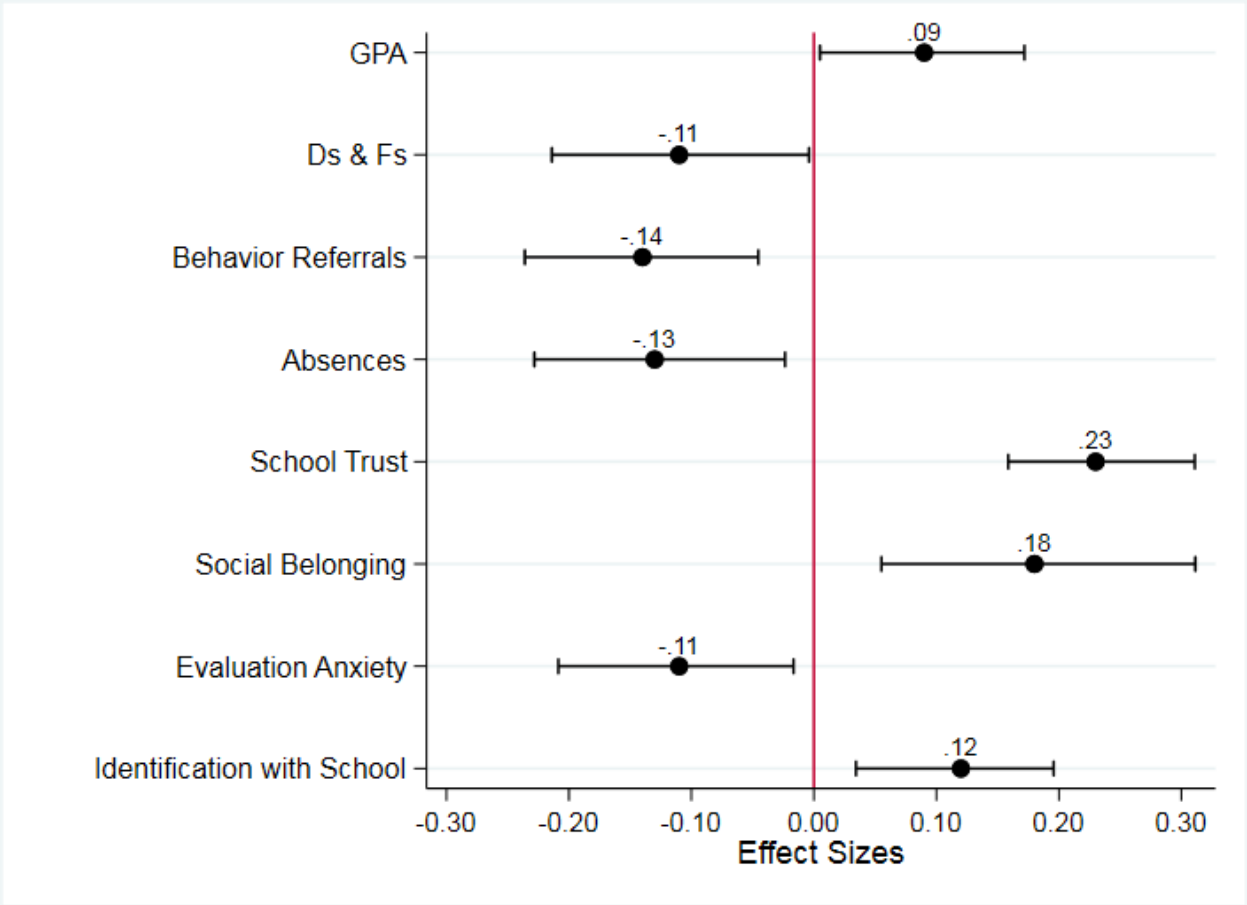


Figure 3. Differences in number and rate of absences, behavioral referrals, and D's/F's between intervention and control groups.

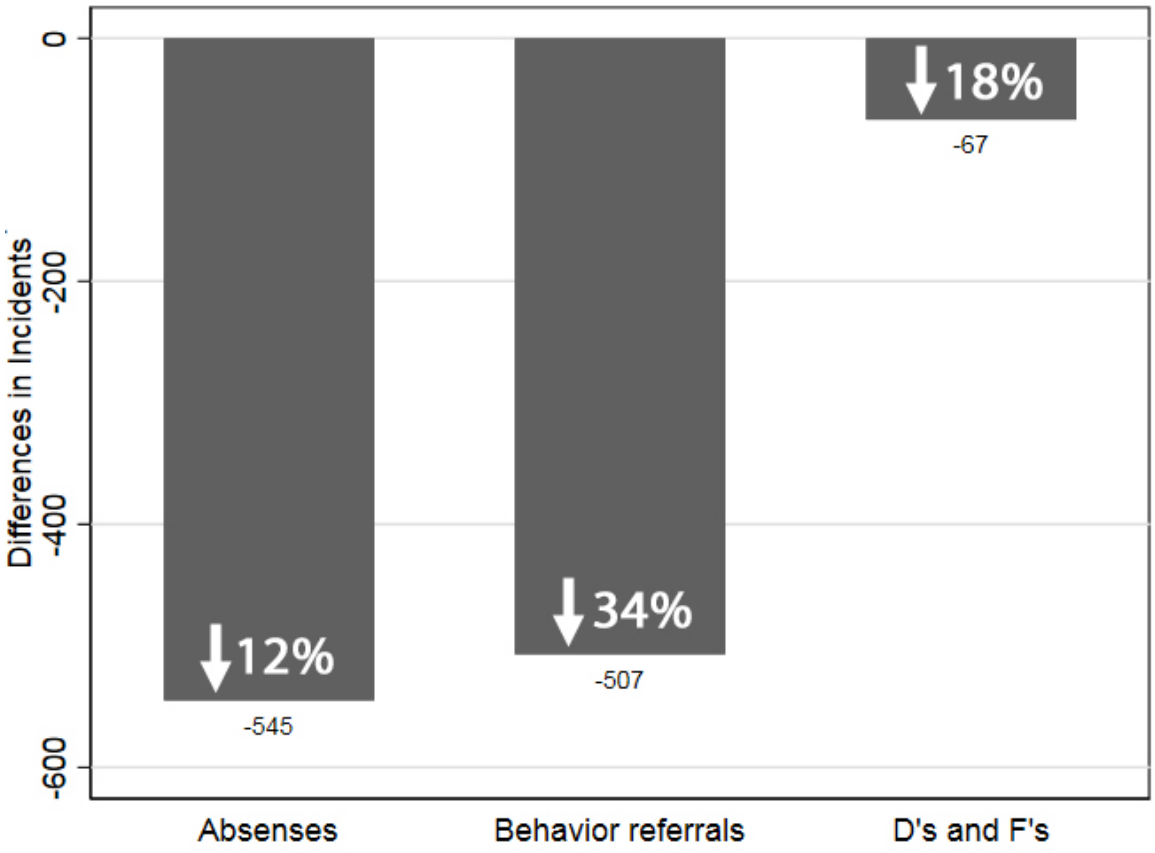
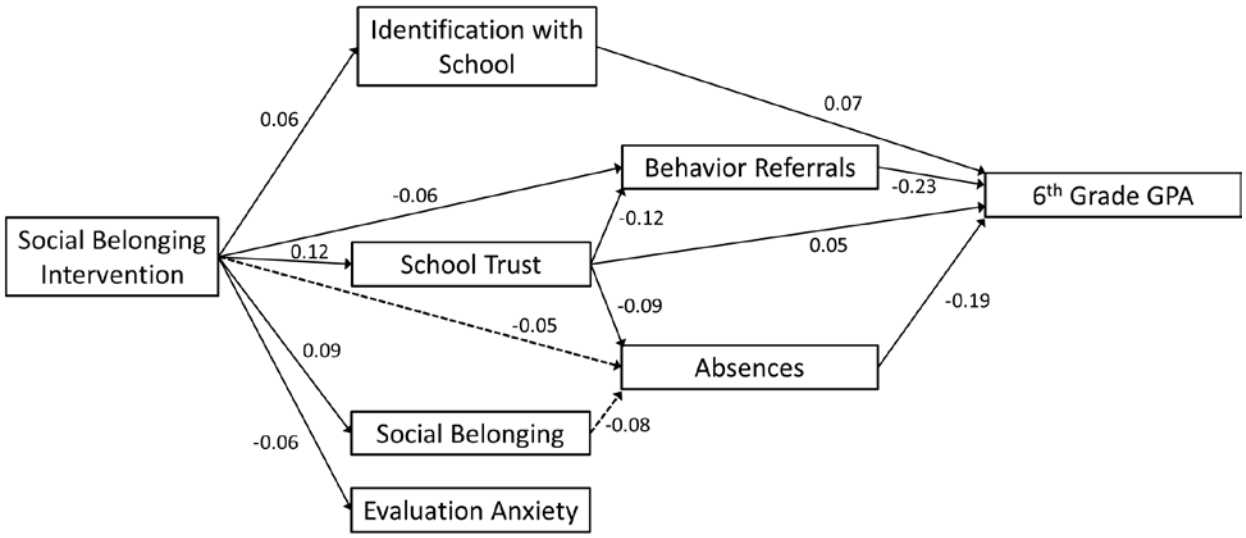


Figure 4. Empirical path model.



*SI*

**Supplemental Information on Methods**

**Research Setting**. The setting for our study was a Midwestern school district in a locale defined as a "midsize city" by the National Center for Education Statistics enrolling over 20,000 students. According to official state records, the district's racial/ethnic demographics for all students were 44% White, 19% Latino, 18% African American, 9% Asian, and 8% two or more groups, and 2% other groups. In addition, 48% were eligible for free or reduced price lunch and 19% were classified as English Language Learners. In many respects, the demographic and achievement characteristics in the district reflected features of the student population of the United States, which was 52% White, 26% Latino, 16% African American, 5% Asian, and 47% eligible for free or reduced-price lunch, and 9% English Language Learners.

To contextualize academic performance, we compared average achievement characteristics from the district to districts in the nation using the Stanford Education Data Archive (SEDA) (SI-1). The study district was average (0.00 in standardized units) in terms of both average achievement during grades 3-8 and achievement growth over those grades.

Despite overall achievement that was average in the nation, there were large racial/ethnic achievement gaps in the study district. According to SEDA estimates combining mathematics and language arts scores in grades 3-8, the average gaps between White and African American students and between White and Latino students were more than a standard deviation (corresponding to more than 3 grade levels), gaps that were among the largest 5% of all districts in the nation. However, the growth in achievement gaps during the school year, which researchers have argued is an indicator of school-age learning opportunities (SI-2: Reardon et al.

2019), was less pronounced. White-African American disparities grew by 0.01 standard deviations per year (73rd percentile in the nation) and White-Latino gaps decreased by 0.02 standard deviations per year (28th percentile). Asian students were relatively high achieving in this district, with mean achievement one third of standard deviation higher than White students on average.

In short, the research setting was typical in terms of overall composition and achievement (and size, among districts classified as urban by NCES), but academic disparities for African American and Latino students were large and widely known. Even if the origins of these differences were complex and shaped by factors outside of school, race/ethnicity was a salient educational characteristic in this setting, and addressing these achievement gaps was a stated priority of district and community leaders during the time of the study. The potential relevance of race and ethnicity for educational processes in this district led us to plan analyses of racial/ethnic differences in the effects of the belonging intervention with an emphasis on historically underserved racial/ethnic minority groups. Although correlated, poverty was less prominent in district and community discussions, and therefore not a planned focus in this study.

**Study materials and implementation.** Study materials for both sessions of the belonging intervention consisted of teacher instructions and the student activities. Researchers' direct interactions with teachers were limited to a 15-minute orientation meeting prior to the school year in which the study was described generally as a study about student perspectives on the transition to middle school (teachers were blind to the experimental hypotheses, conditions, and group assignments) and teachers were asked to incorporate the sessions into their normal

classroom activities. Instructions were provided for each administration. For teacher instructions associated with each of the two exercises, see Appendix A.

Student exercises were personalized according to experimental condition (i.e., control group students received a control group packet with their name on it whereas intervention group students received an intervention group packet with their name on it). They were administered entirely by teachers. The personalized copies were delivered to the school prior to each implementation and the completed packets were collected afterward. To view the templates for Exercises 1 and 2, see Appendix B.

**Stable Unit Value Treatment Assumption (SUTVA)**. Our impact estimates are unbiased under the assumption that the potential outcomes under the intervention and control condition for an individual are not affected by the intervention status of other individuals. The most plausible way this assumption would be violated if there are virtuous spillovers of positive impacts, such as social norms that promote belonging and a better learning environment due to less acting out. In that case, control students in the current study would have enjoyed indirect benefits of the belonging message. Thus, we expect the estimates from the current design may understate the benefits of the intervention if implemented widely. This is a hypothesis that can be tested by future research that randomizes the intervention at the school level, including designs that randomly vary the proportion of intervention students across schools.

**Manipulation check measures.** Manipulation checks in the form of five-point Likert items (from “Not at all” to “A Lot”) were included at the end of both exercises. Exercise 1 items addressed worries about academic underperformance in school that could undermine students’ middle school belonging (How much do you think 6$^{th}$ graders last year worried about taking

important tests in middle school?; How much do you think those same students worry now about taking important tests as 7th graders?). Exercise 2 manipulation check measures addressed relational worries at school (How much do you think 6th graders last year worried about whether they "fit in" or "belonged" at your school?; How much do you think those same students worry now as 7th graders about whether they "fit in" or "belong" at your school?).

**Additional information on survey measures.** Measurement properties of the scales are described by Pyne and colleagues (SI-3). The school trust scale contained three items (The teachers at this school treat students fairly; At this school, students are supported; The adults at this school care about the students;). The social belonging scale was comprised of four items (People in my school accept me; I feel like I belong in my school; I feel like an outsider in my school [reversed]; I feel comfortable in my school). The Evaluation Anxiety measure was comprised of four items (People will look down on me if I do not do well in school; If I don't do well on important tests, others may question my ability; If I do poorly on an important test, people will look down on me; People will think I have less ability if I do not do well on important tests). Identification with School scale was comprised of two-items (It is important for me to do well in school; I want to do well in school).

Pre-intervention characteristics by historically underserved group membership and gender are in Table S3. We found generally small (less than 0.1 standard deviations) and statistically insignificant group differences in reported well-being measures prior to the intervention, including for the key mediating variables of school trust and social belonging. The exceptions were racial/ethnic differences in evaluation anxiety (0.23 SD, $p < .05$) and gender differences in identification with school (0.17 SD, $p < .05$; Table S3), dimensions least

associated with intervention effects (see below). These baseline demographic similarities might contribute to similar benefits of the intervention, but more evidence is needed to definitively establish group differences in this context and whether group patterns hold in other local settings.

**Student achievement measures**. Our achievement outcomes of interest were sixth-grade students' post-intervention grade point average (GPA) and accumulated D and F letter grades. Because the intervention exercises occurred in the first quarter of the academic year, we averaged GPA and summed failing grades for terms 2-4 of sixth grade, purposely excluding term 1. Grade point average is based on a 4-point scale and Ds and Fs are counted for every course in a term. Prior-year achievement is each student's score on the Measures of Academic Progress test, a formative, computer adaptive assessment administered in spring of the prior ($5^{th}$ grade) school year.

**Student behavioral measures**. The measure of behavior referrals is each student's total post-intervention office disciplinary referrals for their sixth-grade school year, from the second, and final, intervention session (depending on classroom implementation date) to the end of the year. The measure of student absences was the total number of days absent in terms 2 through 4 as recorded by district records, and corresponded to the post-intervention portion of the school year. Both variables were skewed, given that most students had zero or very few instances of either behavior; to mitigate the influence of outlier observations, we top-coded values for the largest half a percent of values, at 35 behavioral referrals and 45 absences.

**Supplemental Information on Results and Analysis**

**Tables corresponding to main analyses.** Table S1 indicates that experimental balance was achieved across conditions. Table S5 displays full results of regression models for

manipulation check outcomes. Standard errors were clustered at the school level for all multiple regression and path models. Table S2 displays full results from individual regression analyses and corresponds to results reported in Figure 2. Table S4 displays full results from the path analysis reported in Figure 4. For readers interested in associations between covariates and outcome variables, Tables S2, S4 and S5 report the effects from all variables in the models.

**Manipulation check analyses.** To assess whether the intervention exercises had the intended immediate effect on students' attitudes, we included manipulation check questions for students at the end of each writing exercise (i.e., after all reading and writing parts of each exercise were completed; see Appendix B) that asked about academic and relational worries. The intervention was designed to help students consider that all students have those worries at the beginning of sixth-grade (i.e., the message that worries are normal); however, after some time, students realize that they do not need to be so worried (i.e., the message that anxiety is temporary). Therefore, students were asked two questions: one about how much current seventh-grade students at their school had worries when they began sixth-grade and a second question that asked how much seventh-graders had those worries currently (Table S5).

Results of the manipulation check questions for Exercise 1 indicated intervention group students changed attitudes about academic worries that could undermine belonging as expected. Specifically, intervention group students rated students as having more worries at the beginning of sixth-grade than control group students ($z = 2.16$, $p = .031$, $\beta = .07$) and reported that students had lower levels of worry in seventh-grade than control group students ($z = -8.62$, $p < .001$, $\beta = -.22$), suggesting that intervention group students viewed academic worries that could undermine belonging as more normal and temporary than control group students.

Results of the manipulation check questions for Exercise 2 indicated intervention group students changed attitudes about relational worries that could undermine belonging as expected. Specifically, intervention group students reported that students had higher levels of relational worries at the beginning of sixth-grade than control group students ($z = 8.86$, $p < .001$, $\beta = .23$) and thought that seventh-graders had lower levels of relational worries than control group students ($z = -2.10$, $p = .035$, $\beta = -.07$), suggesting that intervention group students viewed relational worries as more normal and temporary than control group students.

**Structural equation model: Direct effects on student well-being.** We used baseline covariates and the intervention indicator and interactions to examine the effect of the belonging intervention on each of the four student well-being measures. Consistent with individual model results presented in Figure 2, there was an intervention effect on all student well-being measures, such that students in the intervention group had higher identification with school ($z = 2.76$, $p = .006$, $\beta = .06$), higher school trust ($z = 5.19$, $p < .001$, $\beta = .12$), higher social belonging ($z = 2.86$, $p = .004$, $\beta = .09$), and lower evaluation anxiety ($z = -2.48$, $p = .013$, $\beta = -.06$), as compared to control group students.

**Structural equation model: Direct effects on behavior and GPA.** Baseline covariates, the intervention indicator and interactions, and student well-being measures predicted behavior referrals and absences in the model. Thus, if student well-being measures mediated part of the intervention effect on student behaviors, then the direct effect would be smaller than the previously reported total effect. With the inclusion of student attitude mediators as predictors in the model, there remained a direct intervention effect on behavior referrals half the size of the total effect ($z = -3.52$, $p < .001$, $\beta = -.06$) and a direct effect on number of absences two-fifths of

the total effect ($z$ = -1.72, $p$ = .086, β = -.05). Among student attitudes predicting behaviors, higher school trust was associated with fewer behavioral referrals ($z$ = -2.46, $p$ = .014, β = -.12) and fewer absences ($z$ = -2.34, $p$ = .019, β = -.09). Higher levels of social belonging were marginally associated with fewer absences ($z$ = -1.73, $p$ = .083, β = -.08).

Four independent variables in the model significantly predicted GPA: identification with school ($z$ = 4.08, $p$ < .001, β = .07), school trust ($z$ = 2.17, $p$ = .030, β = .05), number of behavioral referrals ($z$ = -5.46, $p$ < .001, β = -.23), and number of absences ($z$ = -8.55, $p$ < .001, β = -.19).

**Supplemental Analysis: Heterogeneity across school contexts**. This study was not designed to investigate heterogeneity across local schools. Eleven schools is a small sample size for this purpose, and the sites were not selected to maximize contextual variation. However, an important theoretical question is whether social belonging processes and the effect of the belonging intervention vary across local social environments, and we therefore conducted two exploratory analyses of school variation.

First, we decomposed the variance in pre-intervention variables between schools to assess whether there was meaningful school variation in local contexts. There were small but meaningful differences between schools in terms of prior achievement: 11% of the variance in the 5$^{th}$ grade achievement measure was between schools. However, there was much less of a distinction between schools in terms of prior absences (less than 1% of variation), prior behavioral referrals (3%), or any of the initial social-psychological variables (2% between schools for school belonging, social belonging, and less than 1% for evaluation anxiety). This pattern of results suggested that although school settings are not monolithic, they did not vary

widely in terms of the focal conditions related to belonging (at least as students are starting 6th grade).

Second, to assess how universally the benefits of the intervention may apply across school contexts, we estimated multilevel varying-effects models (SI-4) to test for variability in intervention impacts across the 11 sites. The estimated standard deviation of impact estimates across sites was less than 0.0001, implying no evidence for school-level heterogeneity. However, this result must be interpreted with the caution that these data are not well-powered to detect variability. The minimum detectable standard deviation of the true distribution in effects across sites for the study is 0.08, which is large relative to the overall impact estimate for the main outcome (0.09).

**Supplemental analysis: Intervention effect heterogeneity by implementation classroom type.** To assess whether the type of implementation classroom (English language arts or homeroom) influenced the benefits of the intervention, we added to each of the regression models in the main document an interaction between intervention condition and classroom type. These analyses showed no evidence of meaningful moderation of intervention impacts by classroom type.

**Supplemental analyses: Estimates of average causal mediation effects**. We present the structural equation model in the main text because it provides a cohesive summary of the system of associations between theoretically relevant variables. However, mediation estimates from this approach may not correspond to precisely defined causal mediation parameters (SI-5).

We conducted supplemental mediation analyses following the approach presented by Imai et al. (SI-5), which provides a formal counterfactual definition of causal mediation effects,

explains assumptions required for non-parametric identification, and provides a method for estimating causal mediation parameters. In the current setting, we highlight that the study design is well suited to meet the two sequential ignitability assumptions required to identify causal mediation effects. The first, unconfoundedness of treatment with the mediator and outcome, holds due to random assignment. The second, unconfoundedness of the mediator with outcome, is reasonable because we collected (and conditioned on) pre-intervention measures of the social-psychological mediators, behavioral measures, and academic outcomes.

Our parameters of interest were the Average Causal Mediation Effects (ACME), the average causal effect of intervention on the outcome variable due to changes in the mediator induced by the intervention, and the Average Direct Effect (ADE), the average causal effect of the intervention that does not operate through the mediator. We also considered the proportion of the total effect represented by the ACME. We used the general algorithm proposed by Imai et al. to estimate these parameters, with linear models of the mediator and outcome, and simulation-based inferential statistics. We included all pre- intervention covariates (demographics, prior achievement, prior attendance, prior disciplinary referrals, and pre- intervention measures of the social-psychological variables) in all models. We conducted separate analyses for each theorized mediator and outcome.

Results of these causal mediation analyses are presented in Table S6. Our conclusions mirror the key substantive results from the SEM model described above. First, both social-psychological and behavioral variables mediate substantial portions of the intervention impacts on GPA (18-46%, with the exception of evaluation anxiety). Second, among social-psychological variables, school trust and social belonging are most important, mediating 18-27%

of the GPA impact and a portion of the impacts on both behavioral referrals and absences (16-24%). Third, there is little evidence that evaluation anxiety is an active mechanism, and effects via identification with school do not operate through behavioral referrals or attendance.

A limitation of this approach is that it does not allow us to draw conclusions about the combined indirect effects of multiple mediators. The mediation effects are not additive. Nonetheless, the pattern of separate individual mediation results is consistent with the conclusions presented in the main text based on the SEM model.

**Supplemental exploratory analyses: Heterogeneous intervention effects by SES.** Although not predicted by the authors *a priori*, at reviewers' request, we tested for heterogeneity of effects of the intervention due to students' socioeconomic background using free/reduced price lunch (FRL) participation as a proxy for social class. Additionally, to test for intersectional effects of historically underserved minority group membership and social class, we also examined the three-way interaction between experimental group, FRL and historically underserved group.

We turn first to models with the two-way interaction between the intervention and FRL participation. These models are functionally similar to those in the main text, (i.e., with centered contrast-coded interactions between intervention, historically underserved group, and gender, including covariates and school fixed effects) but add a two-way interaction term between the intervention indicator and a centered contrast-coded free/reduced price lunch participation indicator for each outcome. Results in Table S7 indicate that main effects of intervention generally remain statistically significant and similar in size to main text results, even with additional predictors in the models. There are no statistically significant or substantively

meaningful experimental group-by-FRL interactions for any of the achievement, behavior, or survey outcome models. This is also true of models with three-way interactions that examine whether intervention effects differ by race and social class, with a potential hypothesis that the most highly psychologically threatened students might be students from historically underserved racial/ethnic minority groups and low socioeconomic status backgrounds (Table S8). Although main effects of the intervention remain consistent with results in Table S7 and those in the main text, there are no statistically significant two-way interactions between experimental group and FRL or three-way interactions between experimental group, FRL and historically underserved group membership.

We should note that these models were not part of the original hypotheses when designing the study; the resulting proliferation of numerous non-hypothesized tests increases the risk of observing statistically significant effects by chance alone. As such, these results should be interpreted as exploratory. Future studies designed with these hypotheses in mind can better assess whether interventions have effects for students from low SES backgrounds.

**Supplemental exploratory analyses: Heterogeneous intervention effects by race.** Although not predicted by the authors *a priori*, at reviewers' request, we tested heterogeneous effects of the intervention by separate race/ethnicity categories rather than by the combined historically underserved group. As reflected in the primary statistical models, we hypothesized that students from different historically underserved racial/ethnic groups would experience the intervention similarly. As with the SES tests above, the numerous non-hypothesized tests added here increase the risk of observing statistically significant effects by chance. In addition, due to

smaller group sizes, there is also less power to detect differences. As such, these results should be interpreted as exploratory.

These analyses support the general lack of differences in the benefits of the intervention due to race that are shown in the main analyses (i.e., 20 out of 24 new two-way racial group by intervention interactions and 22 out of 24 of new three-way race-gender-intervention interactions are not statistically significant, indicating an inability to distinguish intervention effects across racial groups).

These models differ slightly from primary models in that we added predictors for individual racial groups and accompanying interactions with experimental group. Here, we use dummy-coded intervention and gender indicators along with dummy-coded race/ethnicity variables with African American students as the reference category. These models also exclude 18 students designated as part of a racial or ethnic group that is not African American, White, Latino or Asian since this group was too small to analyze for differences in intervention effects. Results in Table S9 indicate effects for African American students remain statistically significant and meaningful for GPA, number of D/Fs, absence and school trust. Effects on behavior through ODRs for African American students is marginally significant in this alternative non-hypothesized model. African American /White student differences in the number of D/Fs are statistically significant in this alternate model, as are differences between African American /Latino students on GPA and number of D/Fs, and between African American and Asian students on levels of School Trust.

**Supplemental Information.** To provide additional context, we report descriptive characteristics of outcome variables by potentially academic racial/ethnic group and by gender (Table S10).

**Cost estimates**. Our estimate in the discussion for the cost of deploying this intervention in other middle school contexts is based on the following calculations. Assuming two 15-minute writing exercises, each teacher would invest approximately 30 minutes of time over the course of the academic year. According to the Bureau of Labor Statistics, the average secondary school teacher in the U.S. earns an annual salary of $56,760. Over a 40-hour work week, this annual salary would equal a pay rate of $27.28 per hour. Assuming an average class size of approximately 25 students, we estimate the opportunity costs for 30 minutes of a teacher's time to be $0.55 per student. With the four-page student exercise and an approximate printing cost of $0.10 per page, the two interventions can be produced at a cost of $0.80 per student. Therefore, the typical school system could sustain delivery of the intervention's two exercises at a cost of approximately $1.35 per student, per academic year.

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Table S1. Experimental Balance on Pre-intervention Covariates

| VARIALBES | Full Sample (N=1,304) | Intervention (N=652) | Control (N=652) | I/C Difference (SD) |
|---|---|---|---|---|
| Prior Achievement | 495 | 495 | 495 | 0.00 |
| | (56) | (56) | (55) | |
| Prior D's and F's | 0.40 | 0.39 | 0.41 | -0.02 |
| | (0.98) | (0.96) | (0.99) | |
| Prior Behavior Referrals | 0.04 | 0.04 | 0.04 | 0.00 |
| | (0.20) | (0.19) | (0.21) | |
| Prior Attendance | 0.74 | 0.73 | 0.74 | -0.02 |
| | (0.44) | (0.44) | (0.44) | |
| Fall School Trust | 4.23 | 4.23 | 4.22 | 0.02 |
| | (0.61) | (0.59) | (0.63) | |
| Fall Social Belonging | 4.06 | 4.06 | 4.07 | -0.02 |
| | (0.65) | (0.66) | (0.64) | |
| Fall Evaluation Anxiety | 2.76 | 2.76 | 2.77 | -0.01 |
| | (0.82) | (0.82) | (0.83) | |
| Fall Identification with School | 4.72 | 4.72 | 4.71 | 0.02 |
| | (0.48) | (0.46) | (0.51) | |
| English Language Proficiency | 0.16 | 0.17 | 0.15 | 0.06 |
| | (0.36) | (0.37) | (0.35) | |
| Free/Reduced Lunch Price Status | 0.85 | 0.83 | 0.87 | -0.04 |
| | (0.97) | (0.97) | (0.97) | |
| Disability Status | 0.11 | 0.11 | 0.12 | -0.03 |
| | (0.32) | (0.32) | (0.32) | |
| Female | 0.49 | 0.48 | 0.50 | -0.04 |
| | (0.50) | (0.50) | (0.50) | |
| HU | 0.43 | 0.44 | 0.43 | 0.02 |
| | (0.50) | (0.50) | (0.50) | |

Note: HU = student is a member of a historically underserved racial/ethnic minority group (African American, Latino, Native American or multiracial). First row for each variable in the first three columns is the mean. Second row in parentheses is the standard deviation. The final column value is the standard deviation differences between intervention and control group averages. The p-values for all tests of groups differences were greater than 0.05

Table S2. Multiple Regression Results for Academic, Behavior, and Well-being Outcomes

| VARIABLES | GPA | Ds and Fs | Behavior Referrals | Absences | School Trust | Social Belonging | Evaluation Anxiety | Identification with School |
|---|---|---|---|---|---|---|---|---|
| Experimental Group | 0.03* | -0.06* | -0.39** | -0.49* | 0.11*** | 0.10*** | -0.07** | 0.06** |
| | (0.02) | (0.03) | (0.14) | (0.20) | (0.03) | (0.03) | (0.02) | (0.02) |
| | 2.08 | -2.04 | -2.89 | -2.41 | 4.37 | 3.37 | -2.74 | 2.80 |
| HU | -0.07*** | 0.11** | 0.60*** | 0.34 | -0.01 | -0.02 | -0.00 | 0.06 |
| | (0.02) | (0.03) | (0.18) | (0.41) | (0.04) | (0.03) | (0.05) | (0.04) |
| | -3.95 | 3.22 | 3.30 | 0.83 | -0.30 | -0.68 | -0.07 | 1.56 |
| Gender (Female=1) | 0.13*** | -0.13*** | -0.65*** | -0.27 | -0.03 | -0.09*** | 0.05* | 0.10*** |
| | (0.02) | (0.03) | (0.18) | (0.27) | (0.03) | (0.02) | (0.02) | (0.03) |
| | 8.28 | -4.83 | -3.73 | -1.03 | -1.17 | -4.77 | 2.35 | 3.88 |
| Exper Group X HU | 0.02 | -0.05 | -0.18 | -0.44 | 0.06 | 0.02 | -0.01 | 0.02 |
| | (0.01) | (0.03) | (0.12) | (0.24) | (0.03) | (0.03) | (0.02) | (0.03) |
| | 1.71 | -1.56 | -1.50 | -1.86 | 1.93 | 0.79 | -0.64 | 0.58 |
| Exper Group X Female | -0.01 | 0.03 | 0.15 | 0.40* | 0.04 | 0.03 | -0.03 | -0.02 |
| | (0.01) | (0.03) | (0.14) | (0.18) | (0.03) | (0.02) | (0.03) | (0.02) |
| | -0.73 | 1.04 | 1.10 | 2.24 | 1.73 | 1.37 | -0.89 | -0.87 |
| HU X Female | 0.01 | -0.05** | -0.34*** | -0.09 | 0.00 | -0.01 | -0.03 | -0.04 |
| | (0.01) | (0.02) | (0.09) | (0.15) | (0.03) | (0.02) | (0.03) | (0.02) |
| | 0.46 | -3.01 | -3.93 | -0.61 | 0.09 | -0.20 | -1.09 | -1.57 |
| Exper Group X HU X Female | 0.00 | 0.02 | 0.12 | 0.37 | -0.03 | 0.02 | 0.00 | -0.00 |
| | (0.02) | (0.03) | (0.17) | (0.26) | (0.03) | (0.02) | (0.02) | (0.02) |
| | 0.03 | 0.56 | 0.71 | 1.41 | -1.03 | 0.88 | 0.02 | -0.22 |
| Free/Reduced Lunch | -0.23*** | 0.34*** | 0.99*** | 1.45*** | -0.08* | -0.01 | 0.07** | -0.06 |
| | (0.02) | (0.06) | (0.29) | (0.42) | (0.04) | (0.03) | (0.03) | (0.06) |
| | -10.61 | 5.25 | 3.40 | 3.45 | -2.14 | -0.23 | 2.74 | -0.89 |
| English Language Learner | 0.11* | -0.25* | -2.44*** | -2.70** | 0.38*** | 0.06 | 0.10 | 0.10 |
| | (0.05) | (0.12) | (0.64) | (0.87) | (0.07) | (0.06) | (0.08) | (0.08) |
| | 2.38 | -2.13 | -3.83 | -3.12 | 5.58 | 0.89 | 1.30 | 1.40 |
| Student with Disability | -0.17* | 0.11 | 0.74 | 2.62 | -0.01 | -0.12 | 0.10 | -0.13 |
| | (0.07) | (0.14) | (0.46) | (1.35) | (0.13) | (0.11) | (0.11) | (0.13) |
| | -2.41 | 0.81 | 1.61 | 1.94 | -0.07 | -1.11 | 0.86 | -1.01 |
| Prior Year Achievement | 0.65*** | -0.62*** | -1.20** | -1.38* | 0.16** | 0.08 | -0.01 | 0.14* |
| | (0.04) | (0.10) | (0.40) | (0.62) | (0.05) | (0.06) | (0.05) | (0.06) |
| | 15.94 | -6.02 | -3.02 | -2.21 | 3.03 | 1.29 | -0.29 | 2.24 |
| Pre-Intervention Measure | | | 9.53*** | 3.96*** | 0.35*** | 0.41*** | 0.41*** | 0.34*** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | (1.63) | (0.37) | (0.03) | (0.02) | (0.04) | (0.03) |
| | | | 5.84 | 10.82 | 13.53 | 16.99 | 11.73 | 13.04 |
| School Fixed Effects | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Constant | 0.14 | 2.84*** | 6.26*** | 9.38** | -0.89** | -0.39 | -0.06 | -0.53 |
| | (0.20) | (0.44) | (1.82) | (3.14) | (0.28) | (0.30) | (0.28) | (0.36) |
| | 0.69 | 6.44 | 3.44 | 2.99 | -3.21 | -1.30 | -0.22 | -1.49 |
| Observations | 1,304 | 1,304 | 1,304 | 1,304 | 1,304 | 1,304 | 1,304 | 1,304 |

Note: HU = student is a member of a historically underserved racial/ethnic minority group (African American, Latino, Native American or multiracial). The first row for each independent variable is the estimate. Second row is the robust standard error. Third row is the test statistic (z-score). Experimental group, gender, and HU indicators are contrast coded. Pre-Intervention Measure is the prior measure of the corresponding outcome variable (e.g., prior absences for the absence outcome model). Prior Year Achievement is measured with state standardized tests. Standard errors are clustered in schools. *** p<0.001, ** p<0.01, * p<0.05.

Table S3. Pre-Intervention Attitude Scale Scores by Historically Underserved Minority Group Membership and Gender

| | Racial/Ethnic Group | | | Gender | | |
|---|---|---|---|---|---|---|
| | Non-HU (N=739) | HU (N=565) | Difference (SD) | Male (N=664) | Female (N=640) | Difference (SD) |
| School trust (T1) | 4.25 | 4.19 | 0.10 | 4.21 | 4.24 | -0.05 |
| | (0.58) | (0.66) | | (0.65) | (0.58) | |
| Social belonging (T1) | 4.07 | 4.05 | 0.03 | 4.09 | 4.04 | 0.08 |
| | (0.64) | (0.66) | | (0.64) | (0.66) | |
| Evaluation anxiety (T1) | 2.68 | 2.87* | -0.23 | 2.79 | 2.74 | 0.06 |
| | (0.77) | (0.89) | | (0.83) | (0.82) | |
| Identification with school (T1) | 4.72 | 4.72 | 0.00 | 4.68 | 4.76* | -0.17 |
| | (0.48) | (0.49) | | (0.52) | (0.45) | |

Note: HU = student is a member of a historically underserved racial/ethnic minority group (African American, Latino, Native American or multiracial). Asterisk indicates a statistically significant between-group difference ($p<.05$)

Table S4. Path Analysis Results

| VARIABLES | GPA | Behavior Referrals | Absences | School Trust | Social Belonging | Evaluation Anxiety | Identification with School |
|---|---|---|---|---|---|---|---|
| Behavior Referrals | -0.23*** | | | | | | |
| | (0.04) | | | | | | |
| | -5.46 | | | | | | |
| Absences | -0.19*** | | | | | | |
| | (0.02) | | | | | | |
| | -8.55 | | | | | | |
| School Trust | 0.05* | -0.12* | -0.09* | | | | |
| | (0.02) | (0.05) | (0.04) | | | | |
| | 2.17 | -2.46 | -2.34 | | | | |
| Social Belonging | 0.02 | 0.00 | -0.08 | | | | |
| | (0.02) | (0.02) | (0.05) | | | | |
| | 1.03 | 0.22 | -1.73 | | | | |
| Evaluation Anxiety | 0.01 | -0.01 | -0.01 | | | | |
| | (0.02) | (0.02) | (0.04) | | | | |
| | 0.43 | -0.58 | -0.90 | | | | |
| ID with School | 0.07*** | -0.02 | 0.01 | | | | |
| | (0.02) | (0.04) | (0.04) | | | | |
| | 4.08 | -0.52 | -0.26 | | | | |
| Experimental Group | 0.00 | -0.06*** | -0.05 | 0.12*** | 0.09** | -0.06* | 0.06** |
| | (0.02) | (0.02) | (0.03) | (0.02) | (0.03) | (0.02) | (0.02) |
| | 0.18 | -3.52 | -1.72 | 5.19 | 2.86 | -2.48 | 2.76 |
| HU | -0.06** | 0.14** | 0.05 | -0.01 | 0.03 | 0.02 | 0.10* |
| | (0.02) | (0.04) | (0.05) | (0.04) | (0.03) | (0.04) | (0.04) |
| | -2.85 | 3.62 | 0.95 | -0.22 | 0.90 | 0.36 | 2.40 |
| Gender (Female=1) | 0.13*** | -0.15*** | -0.05 | -0.02 | -0.10*** | 0.02 | 0.12*** |
| | (0.02) | (0.02) | (0.03) | (0.03) | (0.02) | (0.02) | (0.03) |
| | 6.32 | -8.13 | -1.59 | -0.6 | -5.19 | 1.47 | 4.67 |
| Exper Group X HU | 0.00 | -0.03 | -0.04 | 0.06 | 0.03 | 0.02 | 0.02 |
| | (0.01) | (0.02) | (0.02) | (0.03) | (0.03) | (0.02) | (0.03) |
| | 0.31 | -1.24 | -1.75 | 1.91 | 1.05 | 0.97 | 0.76 |
| Exper Group X Female | 0.01 | 0.05** | 0.07** | 0.05* | 0.04 | -0.02 | -0.02 |
| | (0.01) | (0.02) | (0.02) | (0.02) | (0.02) | (0.03) | (0.02) |
| | 0.85 | 2.23 | 3.14 | 2.17 | 1.55 | -0.65 | -0.71 |
| HU X Female | -0.01 | -0.09*** | -0.02 | -0.02 | -0.01 | -0.03 | -0.06* |
| | (0.02) | (0.02) | (0.02) | (0.03) | (0.03) | (0.03) | (0.03) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | -0.70 | -4.42 | -1.11 | -0.44 | -0.26 | -1.11 | -2.18 |
| Exper Group X HU X Female | 0.02 | 0.03 | 0.04 | -0.03 | 0.03 | -0.01 | -0.00 |
| | (0.02) | (0.04) | (0.03) | (0.03) | (0.03) | (0.03) | (0.02) |
| | 0.91 | 0.90 | 1.27 | -0.92 | 1.00 | -0.22 | -0.23 |
| Free/Reduced Lunch | -0.20*** | 0.21*** | 0.19*** | -0.11* | -0.04 | 0.08** | -0.08 |
| | (0.03) | (0.04) | (0.04) | (0.04) | (0.04) | (0.03) | (0.06) |
| | -7.38 | 5.12 | 5.15 | -2.43 | -1.07 | 3.10 | -1.38 |
| English Language Learner | -0.04* | -0.20 | -0.13*** | 0.14*** | 0.00 | 0.03 | 0.05 |
| | (0.02) | (0.04) | (0.04) | (0.02) | (0.02) | (0.03) | (0.03) |
| | -2.19 | -4.76 | -3.72 | 6.43 | 0.84 | 1.00 | 1.58 |
| Student with Disability | -0.03 | 0.07** | 0.11* | -0.01 | -0.06* | 0.03 | -0.05 |
| | (0.03) | (0.02) | (0.05) | (0.04) | (0.03) | (0.04) | (0.04) |
| | -1.10 | 3.07 | 2.14 | -0.25 | -2.30 | 0.61 | -1.09 |
| Prior Year Achievement | 0.41*** | -0.14*** | -0.11* | 0.10*** | 0.10* | -0.04 | 0.10* |
| | (0.03) | (0.03) | (0.04) | (0.02) | (0.04) | (0.04) | (0.04) |
| | 16.13 | -4.84 | -2.56 | 4.51 | 2.46 | -1.23 | 2.57 |
| School Fixed Effects | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Intercept | 1.02*** | 1.46 | 1.65 | -0.95*** | -0.91* | 0.29 | -0.81* |
| | (0.25) | (0.24) | (0.40) | (0.22) | (0.36) | (0.37) | (0.04) |
| | 4.04 | 6.03 | 4.13 | -4.33 | -2.52 | 0.79 | -2.01 |
| Observations | 1,304 | 1,304 | 1,304 | 1,304 | 1,304 | 1,304 | 1,304 |

Note: HU = student is a member of a historically underserved racial/ethnic minority group (African American, Latino, Native American or multiracial). The first row for each independent variable is the standardized estimate. Second row is the robust standard error. Third row is the test statistic (z-score). Experimental group, gender, and HU indicators are contrast coded. Prior Year Achievement is measured with state standardized tests. Standard errors are clustered in schools. *** p<0.001, ** p<0.01, * p<0.05.

Table S5. Regression Results for Manipulation Checks

| | Exercise 1 | | Exercise 2 | |
|---|---|---|---|---|
| | Worry Before | Worry Now | Worry Before | Worry Now |
| Experimental Group | 0.07* | -0.22*** | 0.23*** | -0.07* |
| | (0.03) | (0.03) | (0.03) | (0.03) |
| | 2.16 | -8.62 | 8.86 | -2.10 |
| HU | 0.05 | 0.05 | 0.05 | 0.06 |
| | (0.04) | (0.05) | (0.05) | (0.05) |
| | 1.23 | 1.11 | 1.09 | 1.20 |
| Gender (Female=1) | 0.04 | 0.01 | 0.12*** | 0.06 |
| | (0.02) | (0.03) | (0.03) | (0.05) |
| | 1.72 | 0.39 | 4.25 | 1.29 |
| Exper Group X HU | -0.02 | -0.01 | -0.02 | -0.04 |
| | (0.03) | (0.04) | (0.02) | (0.03) |
| | -0.75 | -0.28 | -1.09 | -1.26 |
| Exper Group X Female | 0.02 | -0.03 | 0.01 | -0.00 |
| | (0.04) | (0.03) | (0.04) | (0.03) |
| | 0.43 | -1.06 | 0.18 | -0.04 |
| HU X Female | 0.01 | -0.01 | -0.00 | 0.00 |
| | (0.02) | (0.03) | (0.02) | (0.03) |
| | 0.56 | -0.44 | -0.19 | 0.13 |
| Exper Group X HU X Female | -0.02 | -0.03 | 0.01 | -0.01 |
| | (0.03) | (0.03) | (0.02) | (0.04) |
| | -0.78 | -1.04 | 0.32 | -0.25 |
| Free/Reduced Lunch | -0.01 | 0.02 | -0.09 | 0.03 |
| | (0.03) | (0.05) | (0.05) | (0.05) |
| | -0.49 | 0.38 | -1.58 | 0.69 |
| English Language Learner | 0.06 | 0.34*** | -0.03 | 0.14 |
| | (0.06) | (0.08) | (0.09) | (0.11) |
| | 1.05 | 4.31 | -0.40 | 1.27 |
| Student with Disability | -0.04 | 0.17 | -0.07 | 0.20* |
| | (0.10) | (0.15) | (0.14) | (0.09) |
| | -0.40 | 1.17 | -0.47 | 2.09 |
| Prior Year Achievement | 0.00** | -0.00 | 0.00 | -0.00* |
| | (0.00) | (0.00) | (0.00) | (0.00) |
| | 3.07 | -1.47 | 0.75 | -2.07 |
| School Fixed Effects | ✓ | ✓ | ✓ | ✓ |
| Constant | -1.98*** | 0.43 | -0.04 | 0.84* |
| | (0.49) | (0.40) | (0.46) | (0.42) |
| | -4.08 | 1.06 | -0.08 | 2.03 |
| Observations | 1,304 | 1,304 | 1,304 | 1,304 |

Note: HU = student is a member of a historically underserved racial/ethnic minority group (African American, Latino, Native American or multiracial). Intervention, HU status, and gender are centered contrasts. Robust standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05

S6. Causal Mediation Estimates of Intervention Effects

| Outcome | Tested Mediator | ACME | p | ADE | p | % Mediated |
|---|---|---|---|---|---|---|
| **GPA** | | | | | | |
| | School Trust | 0.009 | <.01 | 0.014 | 0.28 | 37% |
| | Social Belonging | 0.005 | <.01 | 0.020 | 0.14 | 18% |
| | ID with School | 0.004 | 0.02 | 0.019 | 0.16 | 18% |
| | Evaluation Anxiety | -0.001 | 0.18 | 0.026 | 0.04 | -5% |
| | Behavioral Referrals | 0.012 | 0.03 | 0.014 | 0.23 | 46% |
| | Absence | 0.010 | 0.05 | 0.017 | 0.18 | 36% |
| **Behavioral Referrals** | | | | | | |
| | School Trust | -0.056 | <.01 | -0.015 | 0.92 | 24% |
| | Social Belonging | -0.042 | 0.01 | -0.011 | 0.99 | 16% |
| | ID with School | -0.006 | 0.57 | -0.063 | 0.71 | 1% |
| | Evaluation Anxiety | 0.015 | 0.19 | -0.073 | 0.59 | -4% |
| **Absences** | | | | | | |
| | School Trust | -0.096 | <.01 | -0.294 | 0.16 | 23% |
| | Social Belonging | -0.071 | <.01 | -0.303 | 0.12 | 18% |
| | ID with School | -0.029 | 0.08 | -0.367 | 0.08 | 6% |
| | Evaluation Anxiety | -0.004 | 0.82 | -0.378 | 0.06 | 1% |

ACME = Average Causal Mediation Effect; ADE = Average Direct Effect; % Mediated = percentage of total causal effect (not shown) accounted for by the ACME

Note: Each row reports results from a separate mediation analysis. All analyses condition on pre-intervention measures of achievement, behavior, social-psychological variables, and demographics.

Table S7. Heterogeneous Intervention Effects by SES

| | GPA | D/F | Behavior | Absent | School Trust | Social Belonging | Evaluation Anxiety | Identification with school |
|---|---|---|---|---|---|---|---|---|
| Exper Group | 0.04* | -0.07* | -0.35** | -0.46* | 0.08*** | 0.07** | -0.04** | 0.02 |
| | (0.02) | (0.03) | (0.13) | (0.19) | (0.02) | (0.03) | (0.02) | (0.01) |
| FRL | -0.15*** | 0.20*** | 0.70*** | 0.98*** | -0.06* | -0.02 | 0.06*** | -0.03 |
| | (0.02) | (0.04) | (0.19) | (0.27) | (0.02) | (0.02) | (0.01) | (0.02) |
| Exper Group x FRL | -0.01 | 0.02 | -0.15 | -0.11 | 0.02 | -0.02 | -0.01 | 0.01 |
| | (0.01) | (0.01) | (0.09) | (0.16) | (0.02) | (0.02) | (0.02) | (0.01) |
| HU | -0.07*** | 0.09* | 0.79*** | 0.40 | -0.02 | 0.01 | 0.02 | 0.05* |
| | (0.02) | (0.04) | (0.22) | (0.40) | (0.03) | (0.02) | (0.04) | (0.02) |
| Female | -0.13*** | 0.13*** | -0.89*** | -0.38 | -0.02 | -0.08*** | 0.02 | 0.06*** |
| | (0.01) | (0.03) | (0.20) | (0.30) | (0.02) | (0.01) | (0.01) | (0.01) |
| Exper Group x HU | 0.03* | -0.06* | -0.05 | -0.30 | 0.03 | 0.03 | 0.02 | 0.00 |
| | (0.01) | (0.03) | (0.16) | (0.30) | (0.03) | (0.03) | (0.01) | (0.02) |
| Exper Group x female | -0.01 | 0.03 | 0.38* | 0.55** | 0.03 | 0.03 | -0.02 | -0.01 |
| | (0.01) | (0.03) | (0.19) | (0.18) | (0.02) | (0.02) | (0.03) | (0.01) |
| HU x female | 0.01 | -0.06*** | -0.47** | -0.17 | -0.02 | -0.01 | -0.03 | -0.03* |
| | (0.01) | (0.01) | (0.16) | (0.14) | (0.03) | (0.02) | (0.02) | (0.01) |
| Exper Group x HU x female | 0.00 | 0.02 | 0.25 | 0.39 | -0.02 | 0.03 | -0.02 | -0.00 |
| | (0.02) | (0.04) | (0.22) | (0.29) | (0.02) | (0.02) | (0.02) | (0.01) |
| ELP | 0.12* | -0.34** | -3.56*** | -3.31*** | 0.33*** | 0.02 | 0.07 | 0.07 |
| | (0.05) | (0.12) | (0.94) | (0.88) | (0.05) | (0.05) | (0.08) | (0.05) |
| Special Education Designation | -0.19** | 0.10 | 1.10** | 2.72* | -0.01 | -0.13* | 0.08 | -0.07 |
| | (0.07) | (0.13) | (0.36) | (1.25) | (0.10) | (0.06) | (0.11) | (0.06) |
| Prior achievement | 0.63*** | 0.64*** | -1.73*** | -1.97** | 0.19*** | 0.15** | -0.06 | 0.09** |
| | (0.04) | (0.09) | (0.52) | (0.65) | (0.04) | (0.05) | (0.06) | (0.03) |
| Constant | 0.03 | 3.72*** | 10.79*** | 16.74*** | 2.88*** | 3.23*** | 2.95*** | 4.23*** |
| | (0.21) | (0.50) | (3.06) | (3.43) | (0.24) | (0.26) | (0.34) | (0.18) |
| Observations | 1,304 | 1,304 | 1,304 | 1,304 | 1,304 | 1,304 | 1,304 | 1,304 |

Note: HU = student is a member of a historically underserved racial/ethnic minority group (African American, Latino, Native American or multiracial). Robust standard errors in parentheses. Experimental group, free/reduced price lunch participation, HU status, and gender are all contrast coded.
*** p<0.001, ** p<0.01, * p<0.05

Table S8. Heterogeneous Intervention Effects by SES and Historically Underserved Minority Group Membership

| | GPA | D/F | Behavior | Absent | School Trust | Social Belonging | Evaluation Anxiety | Identification with school |
|---|---|---|---|---|---|---|---|---|
| Experimental group | 0.05** | -0.07** | -0.39* | -0.46+ | 0.09*** | 0.07** | -0.04* | 0.03 |
| | (0.02) | (0.03) | (0.17) | (0.25) | (0.02) | (0.02) | (0.02) | (0.02) |
| HU | -0.06*** | 0.06 | 0.59** | 0.30 | -0.00 | 0.01 | 0.01 | 0.05* |
| | (0.02) | (0.04) | (0.20) | (0.33) | (0.03) | (0.03) | (0.04) | (0.02) |
| Free/Reduced Lunch | -0.15*** | 0.20*** | 0.71*** | 0.98*** | -0.05** | -0.02 | 0.06*** | -0.02 |
| | (0.02) | (0.04) | (0.18) | (0.26) | (0.02) | (0.02) | (0.01) | (0.02) |
| Exper Group x FRL | -0.01 | 0.01 | -0.18 | -0.12 | 0.03 | -0.02 | -0.01 | 0.01 |
| | (0.01) | (0.01) | (0.10) | (0.16) | (0.02) | (0.02) | (0.02) | (0.01) |
| Exper Group x HU | 0.03*** | -0.06* | -0.03 | -0.29 | 0.03 | 0.03 | 0.03 | 0.01 |
| | (0.01) | (0.03) | (0.16) | (0.26) | (0.03) | (0.03) | (0.02) | (0.02) |
| HU X FRL | -0.02 | 0.07* | 0.43*** | 0.21 | -0.04* | -0.01 | 0.00 | 0.00 |
| | (0.02) | (0.03) | (0.13) | (0.23) | (0.02) | (0.01) | (0.02) | (0.02) |
| Exper Group x HU x FRL | -0.01 | 0.01 | 0.05 | 0.01 | -0.01 | -0.00 | -0.00 | -0.01 |
| | (0.01) | (0.03) | (0.10) | (0.16) | (0.02) | (0.02) | (0.03) | (0.01) |
| Female | 0.13*** | -0.13*** | -0.89*** | -0.38 | -0.02 | -0.08*** | 0.02 | 0.06*** |
| | (0.01) | (0.03) | (0.20) | (0.30) | (0.02) | (0.01) | (0.01) | (0.01) |
| Exper Group x Female | -0.01 | 0.03 | 0.37* | 0.54** | 0.03 | 0.03 | -0.02 | -0.01 |
| | (0.01) | (0.03) | (0.18) | (0.19) | (0.02) | (0.02) | (0.03) | (0.01) |
| HU x Female | 0.01 | -0.06*** | -0.48** | -0.18 | -0.01 | -0.01 | -0.03 | -0.03* |
| | (0.01) | (0.01) | (0.15) | (0.13) | (0.03) | (0.02) | (0.02) | (0.01) |
| Exper Group x HU x Female | 0.00 | 0.02 | 0.23 | 0.38 | -0.02 | 0.03 | -0.02 | -0.00 |
| | (0.02) | (0.04) | (0.21) | (0.29) | (0.02) | (0.02) | (0.02) | (0.01) |
| English Language Learner | 0.12** | -0.34** | -3.57*** | -3.32*** | 0.33*** | 0.02 | 0.07 | 0.07 |
| | (0.05) | (0.12) | (0.92) | (0.88) | (0.06) | (0.05) | (0.08) | (0.05) |
| Special Education Designation | -0.19* | 0.09 | 1.04** | 2.69* | -0.00 | -0.13* | 0.08 | -0.07 |
| | (0.07) | (0.14) | (0.36) | (1.26) | (0.09) | (0.05) | (0.11) | (0.06) |
| Prior achievement | 0.63*** | -0.66*** | -1.80*** | -2.00** | 0.20*** | 0.15** | -0.06 | 0.09** |
| | (0.04) | (0.09) | (0.52) | (0.63) | (0.04) | (0.05) | (0.06) | (0.03) |
| Constant | 0.03 | 3.71*** | 10.74*** | 16.73*** | 2.88*** | 3.24*** | 2.96*** | 4.24*** |
| | (0.21) | (0.49) | (2.98) | (3.45) | (0.24) | (0.25) | (0.35) | (0.18) |
| Observations | 1,304 | 1,304 | 1,304 | 1,304 | 1,304 | 1,304 | 1,304 | 1,304 |

Note: HU = student is a member of a historically underserved racial/ethnic minority group (African American, Latino, Native American or multiracial). Robust standard errors in parentheses. Experimental group, free/reduced price lunch participation, HU status, and gender are all centered contrasts.

*** p<0.001, ** p<0.01, * p<0.05, + p<.10

Table S9. Heterogeneous Intervention Effects by Race/Ethnicity

| | GPA | D/F | Behavior | Absent | School Trust | Social Belonging | Evaluation Anxiety | Identification with school |
|---|---|---|---|---|---|---|---|---|
| Experimental Group (dummy coded) | 0.24* | -0.69* | -5.12+ | -5.15** | 0.35* | 0.08 | 0.05 | 0.13 |
| | (0.10) | (0.31) | (2.79) | (1.95) | (0.17) | (0.14) | (0.17) | (0.11) |
| Race = White | 0.36*** | -1.03*** | -7.91*** | -2.74 | 0.20 | -0.01 | -0.10 | -0.09 |
| | (0.08) | (0.21) | (2.31) | (1.84) | (0.19) | (0.13) | (0.17) | (0.13) |
| Race = Latino | 0.37** | -1.00*** | -8.18*** | -0.92 | 0.08 | 0.03 | -0.00 | 0.03 |
| | (0.12) | (0.26) | (2.41) | (1.52) | (0.18) | (0.18) | (0.18) | (0.11) |
| Race = Asian | 0.45*** | -1.03*** | -7.71*** | -4.91** | 0.30* | 0.10 | 0.02 | 0.09 |
| | (0.11) | (0.24) | (2.08) | (1.68) | (0.15) | (0.11) | (0.18) | (0.16) |
| Female | 0.30*** | -0.72** | -7.60** | -1.90 | -0.09 | -0.11 | -0.00 | 0.19 |
| | (0.08) | (0.25) | (2.34) | (2.19) | (0.25) | (0.08) | (0.21) | (0.10) |
| Exper Group x White | -0.18 | 0.63* | 4.25 | 4.56 | -0.35 | 0.02 | -0.12 | -0.05 |
| | (0.11) | (0.32) | (3.05) | (2.55) | (0.21) | (0.15) | (0.17) | (0.13) |
| Exper Group x Latino | -0.30* | 0.76* | 5.82 | 2.35 | -0.12 | -0.01 | -0.10 | 0.00 |
| | (0.13) | (0.32) | (3.25) | (2.19) | (0.17) | (0.21) | (0.19) | (0.12) |
| Exper Group x Asian | -0.16 | 0.64 | 5.54 | 4.42 | -0.50** | -0.16 | -0.19 | -0.40 |
| | (0.16) | (0.37) | (2.91) | (2.42) | (0.19) | (0.17) | (0.24) | (0.22) |
| Exper Group x female | -0.07 | 0.45 | 6.20 | 3.69 | -0.01 | 0.16 | -0.29 | -0.05 |
| | (0.16) | (0.41) | (3.94) | (3.30) | (0.27) | (0.13) | (0.26) | (0.10) |
| White x female | -0.02 | 0.58* | 6.49** | 1.29 | -0.03 | -0.06 | 0.17 | 0.02 |
| | (0.10) | (0.25) | (2.48) | (2.17) | (0.25) | (0.10) | (0.22) | (0.10) |
| Latino x female | -0.10 | 0.47 | 7.13* | -1.59 | 0.05 | -0.20 | 0.09 | -0.11 |
| | (0.13) | (0.29) | (2.86) | (2.20) | (0.27) | (0.18) | (0.24) | (0.12) |
| Asian x female | -0.06 | 0.43 | 6.44** | 0.38 | 0.03 | -0.06 | -0.11 | -0.19 |
| | (0.15) | (0.30) | (2.45) | (2.29) | (0.28) | (0.21) | (0.28) | (0.21) |
| Exper Group x white x female | 0.01 | -0.39 | -5.47 | -3.03 | 0.23 | -0.13 | 0.15 | -0.01 |
| | (0.18) | (0.44) | (4.26) | (3.91) | (0.30) | (0.13) | (0.27) | (0.12) |
| Exper Group x Latino x female | 0.14 | -0.50 | -7.25 | 0.40 | 0.01 | 0.03 | 0.27 | -0.06 |
| | (0.19) | (0.40) | (4.57) | (3.59) | (0.25) | (0.30) | (0.28) | (0.07) |
| Exper Group x Asian x female | -0.03 | -0.45 | -6.96 | -2.60 | 0.10 | -0.05 | 0.67* | 0.43* |
| | (0.27) | (0.47) | (4.02) | (4.09) | (0.47) | (0.32) | (0.31) | (0.22) |
| FRL | -0.23*** | 0.29*** | 0.88** | 1.58*** | -0.08* | -0.04 | 0.09*** | -0.04 |
| | (0.03) | (0.06) | (0.28) | (0.41) | (0.03) | (0.03) | (0.02) | (0.04) |
| ELP | 0.04 | -0.16 | -2.35** | -2.67** | 0.31*** | 0.03 | 0.04 | 0.08 |
| | (0.06) | (0.13) | (0.81) | (0.90) | (0.05) | (0.05) | (0.09) | (0.06) |
| Special Education Designation | -0.20** | 0.15 | 1.30*** | 2.78* | -0.03 | -0.14* | 0.10 | -0.08 |
| | (0.07) | (0.13) | (0.38) | (1.24) | (0.10) | (0.06) | (0.10) | (0.06) |
| Prior achievement | 0.61*** | -0.58*** | -1.34** | -1.89** | 0.18*** | 0.15** | -0.05 | 0.09** |
| | (0.04) | (0.07) | (0.46) | (0.64) | (0.05) | (0.05) | (0.06) | (0.03) |
| Constant | -0.14 | 4.20*** | 15.93*** | 18.39*** | 2.79*** | 3.29*** | 2.91*** | 4.21*** |
| | (0.24) | (0.53) | (3.83) | (3.41) | (0.31) | (0.29) | (0.40) | (0.25) |
| Observations | 1,286 | 1,286 | 1,286 | 1,286 | 1,286 | 1,286 | 1,286 | 1,286 |

Robust standard errors in parentheses. Observations designated into the "Other" race/ethnicity category are not included in these analyses (N=18). African-American students are the reference group for the race dummy-coded predictors.
*** p<0.001, ** p<0.01, * p<0.05

S10. Means by Demographic Group and Experimental Condition

By Historically Underserved Minority Group Membership

| | Non-HU Students | | | | HU Students | | | |
|---|---|---|---|---|---|---|---|---|
| | Control | | Intervention | | Control | | Intervention | |
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| GPA | 3.41 | 0.57 | 3.46 | 0.53 | 2.66 | 0.75 | 2.74 | 0.74 |
| Ds and Fs | 0.20 | 0.62 | 0.15 | 0.61 | 1.09 | 1.45 | 0.90 | 1.41 |
| Office disciplinary referrals | 0.88 | 3.95 | 0.30 | 1.49 | 4.12 | 7.98 | 3.02 | 6.79 |
| Absences | 5.91 | 6.41 | 5.53 | 6.63 | 9.60 | 9.98 | 7.78 | 7.55 |
| School trust | 3.90 | 0.73 | 3.98 | 0.67 | 3.64 | 0.88 | 3.92 | 0.76 |
| Social belonging | 3.97 | 0.76 | 4.07 | 0.66 | 3.81 | 0.76 | 4.00 | 0.70 |
| Evaluation anxiety | 2.69 | 0.81 | 2.55 | 0.74 | 2.84 | 0.87 | 2.78 | 0.84 |
| Identification with school | 4.65 | 0.55 | 4.69 | 0.48 | 4.66 | 0.51 | 4.73 | 0.43 |

By Gender

| | Male | | | | Female | | | |
|---|---|---|---|---|---|---|---|---|
| | Control | | Intervention | | Control | | Intervention | |
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| GPA | 2.96 | 0.78 | 3.05 | 0.73 | 3.21 | 0.70 | 3.25 | 0.71 |
| Ds and Fs | 0.71 | 1.30 | 0.54 | 1.11 | 0.45 | 0.96 | 0.41 | 1.09 |
| Office disciplinary referrals | 3.39 | 7.68 | 1.87 | 5.40 | 1.16 | 4.06 | 1.07 | 4.07 |
| Absences | 8.34 | 9.96 | 6.34 | 7.60 | 6.65 | 6.23 | 6.71 | 6.59 |
| School trust | 3.86 | 0.78 | 3.96 | 0.72 | 3.73 | 0.82 | 3.96 | 0.69 |
| Social belonging | 4.02 | 0.71 | 4.09 | 0.67 | 3.81 | 0.79 | 3.99 | 0.69 |
| Evaluation anxiety | 2.69 | 0.83 | 2.64 | 0.75 | 2.80 | 0.84 | 2.66 | 0.85 |
| Identification with school | 4.57 | 0.59 | 4.66 | 0.50 | 4.73 | 0.46 | 4.76 | 0.40 |

Note: HU = student is a member of a historically underserved racial/ethnic minority group (African American, Latino, Native American or multiracial).

## Appendix A. Teacher Instructions

Exercise 1

**[redacted]: Information for Teachers, Exercise 1**

1. An [redacted] staffer will bring you a stack of packets, sorted by period. Each packet will contain exercises with a student's name and a study ID number. S/he will also leave a set of blank packets in case you have new students or transfer students in your classes. Please make sure the new students write their names on the cover page.

2. When introducing our writing activity we would like you to refer to it as "creative writing" or "free writing activity". If you post a schedule for the day's activities, please use these terms to refer to this writing activity. This will help students to connect the activity to the regular class day rather than to participation in a research study.

3. Please open the envelope and pass out the packets. Tell students not to open packets until after receiving your directions. Once you have passed out the exercises, please follow the script below to instruct students on how to complete the exercise. Please use it as a guide but give the instructions in accordance with your instructional style:

   > "Today you are going to write about yourselves and your experiences coming into middle school. In this exercise you will be given results of a survey taken by last year's seventh graders. Please take your time and read these carefully. Then you will be asked some questions about *your* experiences coming to our school. Please read these questions carefully, and then write quietly and independently. I want you to write down your own ideas and opinions, and don't worry about spelling or grammar. Remember that your answers can help other students coming to middle school in the future, so be honest and write what you feel. If you have any questions, please raise your hand and I will come explain the directions to you. When you are finished, bring your packet to my desk, and place it in the envelope."

4. Suggested responses to potential student questions are on the reverse side of this sheet.

5. Please try not to refer to the exercises as tests and not to mention words like research or study. Emphasize that your school and [redacted] want to learn about students' experiences moving from elementary to middle school, and their honest answers will help.

6. Please monitor students carefully to make sure that they are not reading one another's exercises or switching exercises.

7. Allow the students 15-20 minutes to complete the exercise, and provide them with a 5 minute warning before you collect their work. Some students may take longer to complete the exercises; please allow them as much time as they need and record how much actual time was needed on the classroom debrief form.

8. After each class period, **please complete the classroom debrief form**. This form helps us track absences and gives us a feel of the classroom context. Then put the form and the completed exercises in the envelope and turn the envelopes in to your learning coordinator or keep them until the end of the day when an [redacted] staffer will come by to pick them up.

We are sincerely grateful for your participation in this project and optimistic about the potential of these writing exercises to help [redacted] students. We look forward to sharing our results with you. Once again, thank you for granting us some of your class time and best of luck in the new school year.

[redacted]: **Answering Student Questions**

1. **Why are we doing this?** If students ask why they are completing this activity, explain that we want to understand their attitudes and ideas about middle school when they are new to the school.

2. **Is this for the whole school?** *No, only the 6th grade Language arts or homeroom teachers are doing this assignment today because we are interested in students who are new to middle school, just like you.*

3. **Do I have to do this?** *Your opinions and ideas are important. So I would like you to complete this assignment.* If the student repeats the question, please offer to give the student a different writing assignment, but assure them that they have to write and handle the situation in accordance with your normal classroom rules and procedures.

4. **Why are we doing this?** *We are interested in your opinion about these topics: what you think. The only way for us to know what you think is for you to share your opinions with us*. Remember, your responses will help other students coming into middle school in the future.

5. **Will this count towards my grade?** *No, so please don't worry about spelling or grammar, just answer as best you can.*

6. **What is this number (on the corner of the cover page)?** *This is a special number that tells the district who you are without anyone knowing your name.*

7. **Why does s/he have a different exercise from me?** *We want to know students' ideas and opinions on many topics so we ask different questions so nobody has to answer them all.*

8. **Why is my name on this assignment?** *To make sure that every student gets the right exercise.*

9. **How long will this take?** *Not very long, but please take your time reading the responses and answering the questions. People will finish at different times.*

10. **What if I don't know the answer?** *There are no right or wrong answers, just answer the best you can.*

11. **What if I disagree with what other people have said (in the survey)?** *Just do your best to respond to the questions based on your experiences as a middle schooler.* Those are listed as examples. Do your best to respond to the questions based on *your* experiences.

    When answering student questions and giving instructions, please emphasize that we simply want to learn about them and that their ideas are important. Try **not** to refer to the exercises as tests and **not** to mention words like research. We want to buffer students with positive ideas and to avoid inducing any anxiety for them.

Exercise 2

**[redacted]: Information for Teachers, Exercise 2**

*The second exercise similar to the first, and should be conducted similarly. Students may wonder why they are being asked to complete these exercises again. If so, please explain that we want to understand more about the transition to middle school and so we are asking them different questions this time.*

1. An [redacted] staffer will bring you a stack of packets, sorted by period. Each packet will contain exercises with a student's name and a study ID number. S/he will also leave a set of blank packets in case you have new students or transfer students in your classes. Please make sure the new students write their names on the cover page.

2. When introducing our writing activity we would like you to refer to it as "creative writing" or "free writing activity". If you post a schedule for the day's activities, please use these terms to refer to this writing activity. This will help students to connect the activity to the regular class day rather than to participation in a research study.

3. Please open the envelope and pass out the packets. Tell students not to open packets until after receiving your directions. Once you have passed out the exercises, please follow the script below to instruct students on how to complete the exercise. Please use it as a guide but give the instructions in accordance with your instructional style:

   "Today you are going to write about yourselves and your experiences coming into middle school. In this exercise you will be given results of a survey taken by last year's seventh graders. Please take your time and read these carefully. Then you will be asked some questions about *your* experiences coming to our school. Please read these questions carefully, and then write quietly and independently. I want you to write down your own ideas and opinions, and don't worry about spelling or grammar. Remember that your answers can help other students coming to middle school in the future, so be honest and write what you feel. If you have any questions, please raise your hand and I will come explain the directions to you. When you are finished, bring your packet to my desk, and place it in the envelope."

4. Suggested responses to potential student questions are on the reverse side of this sheet.

5. Please try not to refer to the exercises as tests and not to mention words like research or study. Emphasize that your school and [redacted] want to learn about students' experiences moving from elementary to middle school, and their honest answers will help.

6. Please monitor students carefully to make sure that they are not reading one another's exercises or switching exercises.

7. Allow the students 15-20 minutes to complete the exercise, and provide them with a 5 minute warning before you collect their work. Some students may take longer to complete the exercises; please allow them as much time as they need and record how much actual time was needed on the classroom debrief form.

8. After each class period, **please complete the classroom debrief form**. This form helps us track absences and gives us a feel of the classroom context. Then put the form and the completed exercises in the envelope and turn the envelopes in to your learning coordinator or keep them until the end of the day when an [redacted] staffer will come by to pick them up.

[redacted]: **Answering Student Questions**

1. **Why are we doing this again?** If students ask why they are completing this activity a second time, explain that we have a lot of different things we want to ask them so these questions are different from the last time.

2. **Is this for the whole school?** *No, only the 6th grade Language arts or homeroom teachers are doing this assignment today because we are interested in students who are new to middle school, just like you.*

3. **Do I have to do this?** *Your opinions and ideas are important. So I would like you to complete this assignment.* If the student repeats the question, please offer to give the student a different writing assignment, but assure them that they have to write and handle the situation in accordance with your normal classroom rules and procedures.

4. **Why are we doing this?** *We are interested in your opinion about these topics: what you think. The only way for us to know what you think is for you to share your opinions with us*. Remember, your responses will help other students coming into middle school in the future.

5. **Will this count towards my grade?** *No, so please don't worry about spelling or grammar, just answer as best you can.*

6. **What is this number (on the corner of the cover page)?** *This is a special number that tells the district who you are without anyone knowing your name.*

7. **Why does s/he have a different exercise from me?** *We want to know students' ideas and opinions on many topics so we ask different questions so nobody has to answer them all.*

8. **Why is my name on this assignment?** *To make sure that every student gets the right exercise.*

9. **How long will this take?** *Not very long, but please take your time reading the responses and answering the questions. People will finish at different times.*

10. **What if I don't know the answer?** *There are no right or wrong answers, just answer the best you can.*

11. **What if I disagree with what other people have said (in the survey)?** *Just do your best to respond to the questions based on your experiences as a middle schooler.* Those are listed as examples. Do your best to respond to the questions based on *your* experiences.

    When answering student questions and giving instructions, please emphasize that we simply want to learn about them and that their ideas are important. Try **not** to refer to the exercises as tests and **not** to mention words like research. We want to buffer students with positive ideas and to avoid inducing any anxiety for them.

*We are sincerely grateful for your participation in this project and optimistic about the potential of these writing exercises to help Madison students. We look forward to sharing our results with you. Once again, thank you for granting us some of your class time and best of luck in the new school year.*

**Appendix B. Writing Exercises**

Exercise 1 - Treatment

## THE 7th GRADE *SCHOOL NAME* SURVEY

*Directions*

1. Read about the results from the 7th Grade *SCHOOL NAME* Survey below and on the next page.
2. Answer the questions on the following pages.

## RESULTS OF THE 7th GRADE SURVEY

Last year, the 7th grade students at *SCHOOL NAME* answered questions about *how they felt about taking tests when they were in the 6th grade like you.*

**Almost all** 7th graders said they had ***worried a lot about taking middle-school tests at the beginning of 6th grade.***

**But almost all** 7th graders say that ***now they worry <u>much less</u> about taking tests.***

## Three Quotes from Typical 7th Graders

*Please take your time and read these carefully*

1. "When I first came to *SCHOOL NAME*, I was a little scared of taking big tests. Everyone else seemed to know what they were doing. I thought I was the only one who was scared. But then I found out that it is normal to be a little scared. Everyone worries at first about looking bad in hard classes and on big tests. It doesn't mean that you won't do well or that you don't belong. You just do your best and everything is fine. I feel really good here now."

2. "I didn't like taking tests at the beginning of 6th grade, especially the WKCE - the state test. I thought I wasn't prepared, and that my teachers and other people would think I wasn't smart. Sometimes when I had to take a test my stomach hurt. But the teachers were really nice. They helped me get better even if I didn't do well at first. Now I know I can trust people here. Teachers are on your side at SCHOOL NAME, and you make friends who help you out."

3. "At first in 6th grade I worried a lot about taking tests. My new teachers didn't know me, and I thought they would think I was stupid. But after a little while I learned that people wanted to help me do well even when I didn't know the answers. They treated me and my friends with respect. That made me feel a lot better. Now I feel like I fit in."

Now please write your answers to these questions. **When you answer these questions, think about yourself, and how you feel about taking tests**. Focus on your thoughts and feelings, and don't worry about spelling, grammar, or how well written it is.

1. Name ***1 or 2*** reasons <u>why a 6th grader *like you* might worry about taking tests</u>.

   For example: *Because you are in a new school.*

   1. _____

   _____

   2. _____

   _____

2. Name ***1 or 2*** reasons <u>why a 6th grader *like you* might worry less about taking tests after a little bit of time.</u>

   For example: *Because you get to know your teachers and find out the teachers are there to help.*

   1. _____

   _____

   2. _____

   _____

3. Name ***1 or 2*** reasons <u>why a 6th grader *like you* might do well on tests even if you worry about taking tests</u>.

   For example: *Because everybody worries about taking tests but students who worry still end up doing well.*

   1. _____

   _____

   2. _____

   _____

## Questions

Please mark the box that comes closest to the way you feel for each question.

1. How much do you think 6th graders last year worried about taking big tests in middle school? They worried:

| NOT AT ALL | A LITTLE BIT | SOMEWHAT | A FAIR AMOUNT | A LOT |
|---|---|---|---|---|
| [ ] | [ ] | [ ] | [ ] | [ ] |

2. How much do you think those same students worry now about taking important tests as 7th graders? They worry:

| NOT AT ALL | A LITTLE BIT | SOMEWHAT | A FAIR AMOUNT | A LOT |
|---|---|---|---|---|
| [ ] | [ ] | [ ] | [ ] | [ ] |

## THE 7TH GRADE *SCHOOL NAME* SURVEY

*Directions*

1. Read about the results from the 7th Grade *SCHOOL NAME* Survey below and on the next page.
2. Answer the questions on the following pages.

## RESULTS OF THE 7TH GRADE SURVEY

Last year, the 7th grade students at *SCHOOL NAME* answered questions about ***how they felt about national politics when they were in the 6th grade like you***.

- **Almost all** 7th graders said they had ***not cared much about politics at the beginning of 6th grade***.
- **But almost all** 7th graders said that ***now they understand <u>much more</u> that what happens in national politics is important***.

## Three Quotes from Typical 7th Graders

*Please take your time and read these carefully*

1. "It was hard for me to think about politics in 6th grade. Every time I thought about it, I would get a headache. I guess I didn't see what the point was or why people liked talking about it. But I learned more about it at school and from my parents, and now I see why it can be important sometimes. What the government does can matter in lots of different ways. It's good to know about these things and to find out more when you can."

2. "At first in 6th grade I thought politics was boring. But it can be interesting and it's sort of important. If you think about it, the government runs lots of programs in the state. Now I think about local events more than I used to. Sometimes I even watch the local news. I know more about what's going on in Wisconsin. Sometimes we talk about these things in class too."

3. "I remember in 6th grade I didn't know much about government. It didn't really matter to me, and I didn't know anything about it. But my teacher had us watch the news for homework. It wasn't that bad, and I kind of started to like finding out about what's going on. Now I pay attention to the news more, so I know more about what is happening in the world."

Now please write your answers to these questions. **When you answer these questions, think about yourself, and how you feel about national politics**. Focus on your thoughts and feelings, and don't worry about spelling, grammar, or how well written it is.

1. Name ***1 or 2*** reasons why a 6th grader *like you* might *not* be interested in national politics.

   For example: *Because it doesn't affect your life.*

   1. _____

   _____

   2. _____

   _____

2. Name ***1 or 2*** reasons why a 6th grader *like you* might start to learn more about national politics in middle school.

   For example: *Because you discuss current events.*

   1. _____

   _____

   2. _____

   _____

3. Name ***1 or 2*** reasons why a 6th grader *like you* might start to think more about national politics in the future.

   For example: *Because you learn more about it.*

   1. _____

   _____

   2. _____

   _____

## Questions

Please mark the box that comes closest to the way you feel for each question.

1. How much do you think 6th graders *last year* worried about taking big tests in middle school? They worried:

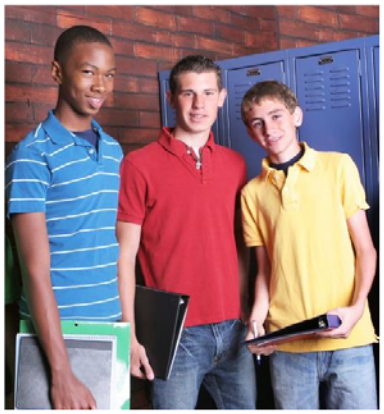
| NOT AT ALL | A LITTLE BIT | SOMEWHAT | A FAIR AMOUNT | A LOT |
|---|---|---|---|---|
| [ ] | [ ] | [ ] | [ ] | [ ] |

2. How much do you think those same students worry now about taking important tests as 7th graders? They worry:

| NOT AT ALL | A LITTLE BIT | SOMEWHAT | A FAIR AMOUNT | A LOT |
|---|---|---|---|---|
| [ ] | [ ] | [ ] | [ ] | [ ] |

---

Exercise 2 – Treatment



## MORE FROM THE 7TH GRADE *SCHOOL NAME* SURVEY

*Directions*

1. Read about the results from the 7th Grade SCHOOL NAME Survey below and on the next page.
2. Answer the questions on the third page.

## RESULTS OF THE 7TH GRADE SURVEY

As you may know, last year the 7th grade students at SCHOOL NAME answered questions about ***how they felt about SCHOOL NAME when they were in the 6th grade like you***. Here's what they said.

**Almost all** 7th graders said they had ***worried at first that they did not "fit in" or "belong" at SCHOOL NAME in 6th grade***.

**But almost all** 7th graders say that ***now they know that they "fit in" and "belong" at SCHOOL NAME.***

## Three Quotes from Typical 7th Graders

*Please take your time and read these carefully*

1. "When I started 6th grade, at first I didn't feel like I fit in. I was shy, and I didn't know a lot of people. But then I saw that all the 6th graders were nervous. You just have to be brave and talk to the people around you. It took time, but I ended up making some close friends. They look out for me. Now I feel really good at SCHOOL NAME. People here accept you for who you are."

2. "I felt like I had a knot in my stomach in my first few months at SCHOOL NAME. I was afraid to talk to my teachers. I didn't know them, and the classes are harder. I worried that they thought I was dumb. But they believe in you even when you get bad grades. They want to help you get better, and they helped me do better in the second quarter. Teachers are there for you at SCHOOL NAME."

3. "Middle school is scary at first but it gets better. SCHOOL NAME seems big. You have to do more things on your own and change classes. I worried I wouldn't find my classes, and that I'd forget my locker combination. But SCHOOL NAME teachers and staff care about you. Once I got lost but the people I asked showed me the way. Even when I got in trouble or didn't do well in class the teachers showed me respect. They are easy to talk to and they listen to what you have to say. I have good friends now at SCHOOL NAME, I get along well with my teachers, and I feel at home here."

Now please write your answers to these questions. **When you answer these questions, think about yourself, and how you feel about SCHOOL NAME**. Focus on your thoughts and feelings, and don't worry about spelling, grammar, or how well written it is.

1. Name ***1 or 2*** reasons <u>why a 6th grader *like you* might worry at first about whether you "fit in" or "belong" at SCHOOL NAME.</u>

   For example: *Because middle school is so different from elementary school.*

   1. _____

   _____

   2. _____

   _____

2. Name ***1 or 2*** reasons <u>why a 6th grader *like you* might feel that you "fit in" or "belong" at SCHOOL NAME after a while.</u>

   For example: *Because you make new friends.*

   1. _____

   _____

   2. _____

   _____

## Questions

Please mark the box that comes closest to the way you feel for each question.

1. How much do you think <u>6th graders last year worried about whether they "fit in" or "belonged" at SCHOOL NAME?</u> They worried:

| NOT AT ALL | A LITTLE BIT | SOMEWHAT | A FAIR AMOUNT | A LOT |
|---|---|---|---|---|
| [ ] | [ ] | [ ] | [ ] | [ ] |

2. How much do you think those <u>same students worry now as 7th graders about whether they "fit in" or "belong" at SCHOOL NAME?</u> They worry:

| NOT AT ALL | A LITTLE BIT | SOMEWHAT | A FAIR AMOUNT | A LOT |
|---|---|---|---|---|
| [ ] | [ ] | [ ] | [ ] | [ ] |

Exercise 2 – Control

## MORE FROM THE 7TH GRADE *SCHOOL NAME* SURVEY

*Directions*

1. Read about the results from the 7th Grade *SCHOOL NAME* Survey below and on the next page.
2. Answer the questions on the third page.

## RESULTS OF THE 7TH GRADE SURVEY

As you may know, last year the 7th grade students at *SCHOOL NAME* answered questions about ***how they felt about eating in the SCHOOL NAME lunch room when they were in the 6th grade like you***. Here's what they said.

- **Almost all** 7th graders said they had some ***trouble getting used to eating in the lunch room at first in 6th grade***.
- **But almost all** 7th graders say that ***now they are used to eating in the lunch room.***

## Three Quotes from Typical 7th Graders

*Please take your time and read these carefully*

1. "When I first came to *SCHOOL NAME* I thought the lunch room was really noisy. With all of the noise and talking, I could hardly hear what anyone said. But after a little while I got used to it. I learned how to tune out the background noise. Now sometimes I don't even think it is loud at lunch. I can hear better what people are saying. But, if I pay attention, it can still be really loud."

2. "The food at lunch at *SCHOOL NAME* is different from what I was used to in elementary school. Sometimes it's better, sometimes it's worse. And some of us had to eat earlier than we were used to. I wasn't hungry that early because I had eaten breakfast just a few hours before. So I didn't eat so much at lunch. But then I would get hungry again later in the day. I learned that I had to eat more at lunch, even if I wasn't hungry that early. Now I eat more at lunch and I don't get hungry later in the day."

3. "The lunch room at *SCHOOL NAME* seems a lot bigger than the lunch room in my old elementary school. It is really noisy too, because more people have lunch at the same time. The food is different too, and we had to eat so early that I got hungry again before school ended. I guess I just had to make some changes. I ate more at lunch and that way I didn't get hungry later. Now it's just normal to me."

Now please write your answers to these questions. **When you answer these questions, think about yourself, and how you feel about eating in the lunch room**. Focus on your thoughts and feelings, and don't worry about spelling, grammar, or how well written it is.

1. Name ***1 or 2*** reasons why a 6th grader *like you* might have trouble getting used to eating in the *SCHOOL NAME* lunch room.

   For example: *Because it is loud.*

   1. _____

   _____

   2. _____

   _____

2. Name ***1 or 2*** reasons why a 6th grader *like you* might get used to the *SCHOOL NAME* lunch room after a little bit of time.

   For example: *Because you spend more time in the lunch room.*

   1. _____

   _____

   2. _____

   _____

## Questions

Please mark the box that comes closest to the way you feel for each question.

1. How much do you think 6th graders last year worried about whether they "fit in" or "belonged" at *SCHOOL NAME*? They worried:

| NOT AT ALL | A LITTLE BIT | SOMEWHAT | A FAIR AMOUNT | A LOT |
|---|---|---|---|---|
| [ ] | [ ] | [ ] | [ ] | [ ] |

2. How much do you think those same students worry now as 7th graders about whether they "fit in" or "belong" at *SCHOOL NAME*? They worry:

| NOT AT ALL | A LITTLE BIT | SOMEWHAT | A FAIR AMOUNT | A LOT |
|---|---|---|---|---|
| [ ] | [ ] | [ ] | [ ] | [ ] |