

## RESEARCH BRIEF



### Missing School in Middle School: The Signal Absences Send

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## Madison Education Partnership

The [Madison Education Partnership](#) (MEP) is a research-practice partnership between the University of Wisconsin (UW) – Madison School of Education’s Wisconsin Center for Education Research and the Madison Metropolitan School District (MMSD). MEP provides a context for collaborative problem identification, jointly designed empirical research to address problems of practice, development of educational interventions, and the creation of mutually beneficial lasting relationships across the UW and MMSD. The partnership serves as a conduit to establish new research within the district, enhances research use for the district, and creates mechanisms for the dissemination of new knowledge in Madison and beyond.

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## Executive Summary

In this report we examine patterns in absences, both over time and throughout school levels, for middle school students in MMSD. We also investigate how absences are related to school climate and academic achievement. We highlight not only the number of excused and unexcused absences for students in Grade 6-8, but also explore any inequality among MMSD students.

### This report addresses the following questions:

1. How prevalent are excused and unexcused absences among middle school students?
2. How are student and family background characteristics related to the number and types of absences that students experience?
3. How are student perceptions of school climate related to student attendance?
4. To what extent do attendance patterns in grades 6-8 reflect attendance patterns in elementary school? Do attendance patterns in middle school predict attendance patterns in high school?

### We report the following key findings:

1. Almost all students have at least one excused absence in each year between Grades 6 and 8; in contrast, almost two-thirds of students (63%) in each grade experience an unexcused absence. Student absences not only increase as students get older but they have consistently increased in number each academic year since 2012-13.
2. Unexcused absences are negatively associated with achievement, but most of that association is accounted for by student demographics, health conditions, and prior student achievement. Excused absences have little association with student performance as measured by either grades or test scores. Eliminating disparities in absenteeism would produce very modest reductions in achievement gaps by race/ethnicity and family income.
3. Student perceptions of school climate are more positive for students who have fewer absences and climate is inversely related to absences. As student belonging, safety, and respect increase, the number of absences a student accrues (excused or unexcused) declines.
4. Individual students' attendance patterns are consistent across the transition from elementary to middle school (from Grades 5 to 6). Students who had moderate to high rates of unexcused absences in Grade 6 had similar, if not worse, attendance patterns in Grade 9.

### Key Recommendations:

- Systematically review and adjust data collection practices
- Investigate why students are not coming to school
- Explore future research on school climate

## What Do We Know About National and Local Trends in Student Attendance?

Student absenteeism has risen to national importance in recent years. One in seven students in K-12 schools within the United States is chronically absent from school (defined as missing more than 1 out of 10 days of school over the course of the academic year). During the 2016-17 school year, 16.9% of students in Wisconsin and 20% of students in MMSD were chronically absent from school (US Department of Education, Office of Civil Rights, 2017).

Previous research has associated chronic absenteeism with poorer school performance and dropout. Students who are chronically absent in preschool or kindergarten demonstrate lower math and reading performance scores in later elementary grades (Chang & Romero, 2008; Ehrlich, Gwynne, Pareja, & Allensworth, 2013), and chronic absenteeism in elementary and middle school is an early predictor of dropping out of high school (Alexander, Entwisle, & Hornsey, 1997; Ginsburg, Jordan, & Chang, 2014; MacIver & MacIver, 2010; Utah Education Policy Center, 2012). Students who miss school have higher rates of substance abuse, delinquency, and externalizing behaviors (Henry, 2010; Maynard, Salas-Wright, Vaughn & Peters, 2012; Vaughn et al., 2013).

Absenteeism can also negatively impact schools and society. When students are absent at higher rates, schools may be at risk for failure to meet state and federal standards for school attendance rates, incurring a potential loss of funds (Maynard et al., 2012). At the community level, student absenteeism can lead to diminished outcomes in adulthood. This includes higher rates of poverty, diminished physical health, and increased involvement with the criminal justice system (US Department of Education, 2016). Given the impact of attendance on student and school-related outcomes, it is important to examine what factors may be contributing to absenteeism within MMSD.

Students miss school for a variety of reasons, including transportation difficulties, unstable housing conditions, and health detriments (Gottfried & Hutt, 2019; Hughes & Ng, 2003; Rafferty, 1995; Ramirez, Wu, Kataoka, et al., 2011). In addition, youth may be called on to care for sick family members or stay home with younger siblings when a parent or primary caregiver is sick or cannot take time off work (Utah Education Policy Studies, 2012). Bullying, including electronic bullying via online social media networks, also contributes to absenteeism (Grinshteyn & Yang, 2017). It is also important to examine if and how absences might be a concern for different groups of students (e.g., race/ethnicity, gender, free or reduced lunch status). While schools may not be able to identify one reason or a simple solution for improving student absenteeism, the aforementioned reasons point to potential interventions when students are absent from school.

The most recent MMSD Strategic Framework highlights that the district and each school strive to be places where children, staff, and family thrive (Goal 2). One of the associated metrics for this goal is that all schools have 90% attendance rates or higher. Last year, the Madison Education Partnership released a report highlighting attendance patterns for students in

grades kindergarten through third grade (Pyne, Grodsky, Vaade, Camburn, & Bradley, 2018). Results revealed that not only do the number of absences vary widely among students as a function of family income and race/ethnicity, but that unexcused absences appear to be a particularly important signal of other challenges that students may face. These challenges may include student physical, behavioral, or mental health concerns, as well as experiences at school and at home that impact a student's ability to come to school and a parent's desire to send them there. As a result, that report concluded that simply improving attendance without addressing these root causes of student absenteeism would do little to produce improvements in academic achievement. Results suggested that when adjusting for prior differences among students, attendance had little bearing on student growth in reading and literacy between kindergarten and third grade and a modest association with growth in mathematics. Based on these findings, we did not recommend focusing on increasing attendance as a way to increase equity in achievement by race/ethnicity and income.

The current report extends this work to later grades to examine if these same patterns hold true for middle school students in MMSD. We examine the district's administrative data from the past six years and explore a number of student and family characteristics that predict school attendance and could be associated with academic outcomes, including student perceptions of belongingness, school safety, and respect. Given the multiple transitions students experience from elementary to middle school and again into high school, we also examine student attendance trajectories to understand when and how we might best intervene with students who are chronically absent. We conclude with a summary of key findings and review of concrete strategies that may lead to potential changes in district policies and practices.

## How Did We Conduct the Analyses?

### What Data Do We Use?

We use data from MMSD administrative records and include all students in middle school (grades 6-8) who were enrolled in MMSD for 175 or more days of the school year (about 90% of students) from 2012-13 to 2017-18 school years. Although we focus primarily on middle school students, we also examine the transition from elementary to middle school and middle to high school. The final research question examines attendance patterns from grades 5 through 9.

Table 1 shows the number of students we observed in each grade and year. The current report includes data for 28,718 students. Sample sizes for analyses differ based on availability of data and methodological considerations, which are described in more detail below.

**Table 1. Student Observations by Year**

Year	Grades 6-8	Grade 6	Grade 7	Grade 8
2012-13	4,609	1,676	1,468	1,465
2013-14	4,695	1,598	1,613	1,484
2014-15	4,783	1,579	1,584	1,620
2015-16	4,851	1,719	1,568	1,564
2016-17	4,939	1,723	1,683	1,533
2017-18	4,841	1,627	1,649	1,565
<b>Total</b>	<b>28,718</b>	<b>9,922</b>	<b>9,565</b>	<b>9,231</b>

In an effort to better understand how MMSD middle schools collect, track, and manage attendance data, we conducted several individual, small group, and committee meetings with building and district leaders. Meeting participants provided information that was essential to the formulation of the current report. An attendance design team made up of district administrators from various departments also met throughout the year to provide guidance and direction for the report, including conceptualizing initial research questions, examining study results, and considering how results could lead to actionable policy and practice changes within MMSD.

### How Does MMSD Measure Absences?

MMSD staff measure absences differently across grade levels. Elementary school teachers take attendance at the beginning of the day and report students as "present," "absent," or "tardy." Middle and high school teachers take attendance at the beginning of each class period and report students as "present," "absent," or "tardy." For the purposes of this report, we tallied absences for each period, weighted by the total number of minutes in the period and day, to produce total counts of days absent for each student. We do not count tardies as a student absence. We also do not include any days a student missed school due to a suspension.

We provide analyses of total absences throughout the report, but also differentiate between excused and unexcused absences. A school staff member (usually a school administrative assistant) codes absences as “excused” if a family member leaves a message on the attendance line or has spoken directly with school staff excusing the student from school. A staff member from the school will call the family of each absent student from which the school has not received notification and assigns a code indicating that the absence is either “excused” or “unexcused.” Families may schedule 10 pre-planned absence days and an additional 15 days for extracurricular activities (e.g., school-sanctioned sports or activities) each year; these are coded as excused absences regardless of the reason provided, if any. There is no limit to absences due to illness with a doctor’s note. If a parent cannot be reached, a student receives an “unexcused” absence by default.

## How Did We Measure Academic Outcomes?

Our analyses explore the relationship between student absences and academic performance as measured by Grade Point Average (GPA) and student performance on the Measures of Academic Progress (MAP) assessment in sixth through eighth grade. MAP measures reading and mathematics skills in the fall and spring of each school year; we examine the spring assessments in math and reading as outcomes and standardize students’ scores by grade level so the typical student in each grade has a score of zero and the average distance from a typical score is one. This standardization allows us to assess students’ outcome measures relative to other students in the same grade, while providing a constant metric across grade levels. MAP test score results from each grade level are presented from 2012-13 through 2017-18.

Middle school teachers assign students a summary letter grade in seven courses each quarter of the academic year, including required courses in English, Mathematics, Science, Social Studies, Computer Technology, and Physical Education, as well as elective courses that vary among middle schools. Students’ letter grades are converted to number where A = 4, B = 3, C = 2, D = 1, and F = 0. Grades are then averaged to create a grade point average (GPA) on a 4-point scale. We present fourth quarter GPA from each grade level from 2012-13 through 2017-18.

## What Student Demographic Characteristics Did We Consider?

There are a number of student and family characteristics that may be associated with both student attendance and academic outcomes. Student demographic attributes include students’ English language proficiency, special education status, race/ethnicity, gender, and participation in the free or reduced-price lunch (FRL) program. We also adjust models for students’ reported health conditions as reported by a parent or guardian and later confirmed by a school nurse in MMSD for each year they appear in these data.

## How Does MMSD Measure Student Perceptions?

The MMSD Research and Program Evaluation Office administers a district-developed climate survey each winter to students in grades 3-12, parents and guardians with children currently

enrolled in MMSD, and full-time staff. For the purposes of the current report, we provide outcomes related to student data. The district has recently identified three “power questions” from this survey, which school leaders build into existing school improvement plans and district leaders use to evaluate progress on the Strategic Framework. The three power questions are: “I feel I belong in this school,” “I feel safe at this school,” and “The adults at my school respect the students.” Students may respond to each item with response categories of “Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, and Strongly Agree.” See [Appendix A](#) for the distribution of responses for these three items.

We examine the relationship between both excused and unexcused absences and student perceptions of school climate. Adjusting for a number of differences among students (including race, FRL, special education status, English language proficiency, and the average attendance rates of the school in which they are enrolled) results in even greater similarities in associations by type of absence and across power item response categories. Even so, we include these results by excused and unexcused absences in [Appendix B](#).

## What Methods Did We Use to Analyze Data?

### *Question 1: How prevalent are excused and unexcused absences?*

We document median levels and variation in excused and unexcused absences by grade level and school year. We present descriptive absence information quantitatively for the full sample as well as by grade level and school year.

It is important to note that based on data collection through interviews, school visits, and feedback from our design team, the fidelity by which staff collect student attendance data in each classroom, grade, and building is unclear. Multiple sources indicated that there may be inconsistencies in data collection, including the various demands on teacher and administrator time and relatively few policies highlighting how and when teachers should be inputting student attendance data into the district’s student information system (Infinite Campus). These inconsistencies could impact analyses included herein.

### *Question 2: How are student and family background characteristics related to the number and types of absences students experience and student academic outcomes?*

We provide descriptive data on the number of excused and unexcused absences among racial and ethnic groups, as well as among FRL-eligible and non-FRL-eligible students. To evaluate the effect of this variation on academic achievement gaps, we then compare observed inequalities in GPA and MAP test scores for grades 6-8 to the inequalities we would expect to see if all students had the same rate of excused and unexcused absences.

We model end-of-year academic measures (Spring MAP math and reading scores, and fourth quarter GPA) as a function of excused and unexcused absences, prior academic achievement (Fall MAP scores and first quarter GPA, respectively), health conditions, and demographic characteristics. We compare predicted outcomes from this model with predicted outcome from the same model with all students assigned to zero excused and unexcused absences. Differences between the estimates from the model of observed data and simulated zero-

absence data indicate the achievement-gap reduction which we would expect if all students had the same number of absences. We caution that this comparison may overstate the effect of absences on student achievement gaps if other factors which we do not include in the model are related to both attendance and achievement.

***Question 3: How are student perceptions of school climate related to student attendance?***

To determine the degree to which student perceptions of school are associated with attendance patterns, we draw together students' responses to MMSD power questions on the annual climate survey and those students' excused and unexcused absences for the year. Preliminary analyses suggest that the association between students' perceptions of school and their absenteeism varies across response categories of the power items. To account for these differences, we model the association between both types of absences by each response category, with "Strongly disagree" as the reference category. We model the association between student perceptions and the median number of excused and unexcused absences we would expect students to have who responded each item category from "Strongly disagree" to "Strongly agree." These models account for the grade level of the student, the year the student responded to the survey, and student responses over multiple years.

***Question 4: To what extent do attendance patterns in grades 6-8 reflect attendance patterns in elementary school? Do attendance patterns in middle school predict attendance patterns in high school?***

We examine student data over a six year period to determine whether individuals' patterns of absenteeism change as they progress through Grades 6 through 8. To simplify this analysis, we first divide students into three categories of low, medium, and high based on the student's total number of absences within a given school year. Students in the low category had fewer than 10 total absences during each academic year, the medium range included 10-17 absences, and the high range included 18 or more absences (the threshold for 'chronically absent'). Second, we evaluate both excused and unexcused absences by dividing students into three categories of low (<2 absences), medium (2-5 absences), or high (>5 absences). We then evaluate the proportion of students whose absence categories changed from elementary school (based on Grade 5 absences) to middle school (based on Grade 6 and Grade 8 absences). A final evaluation compared whether student absence categories changed from middle school (based on Grade 6 absences) to high school (based on Grade 9 absences).

## Findings

**Question 1: How prevalent are excused and unexcused absences in middle school?**

Almost all students (98%) in Grade 6 through Grade 8 have at least one excused absence in a given year, with a median of 5 days of excused absences. Approximately two-thirds (63%) of students have at least one unexcused absence in a given year, with a median of 1 unexcused absence for those who have any unexcused absences (see Table 2). A review of total absences suggest that **absences increase as students get older and the median number of absences that each student receives increased each year over the period of 2012-2018**, regardless of student grade level (see Table 3).

**Table 2. Absences by Grade Level and School Year**

	N	Excused Absences		Unexcused Absences		
		Any (Percent)	Median	Any (Percent)	Median	Median given any
All	28,718	98%	4.80	63%	.15	1.00
<b>By Grade</b>						
Grade 6	9,922	98%	4.52	60%	0.14	1.00
Grade 7	9,565	98%	4.79	63%	0.15	1.00
Grade 8	9,231	98%	5.05	66%	0.24	1.00
<b>By School year</b>						
2012-2013	4,609	98%	4.31	59%	0.13	0.80
2013-2014	4,695	98%	4.45	55%	0.11	0.98
2014-2015	4,783	98%	5.00	60%	0.14	1.00
2015-2016	4,851	98%	4.54	65%	0.23	1.05
2016-2017	4,939	98%	4.99	69%	0.28	1.13
2017-2018	4,841	98%	5.46	72%	0.31	1.00

**Table 3. Absences by Academic Year Across Grades 6-8**

Year	Grade 6 Median	Grade 7 Median	Grade 8 Median
2012-13	6.02	6.09	7.00
2013-14	6.36	6.29	6.57
2014-15	6.65	7.59	7.6
2015-16	6.46	7.07	7.63
2016-17	7.18	7.58	7.91
2017-18	7.76	8.33	8.42

## Question 2: How are student and family background characteristics related to the number and type of absences students experience and student academic outcomes?

We find wide variation in the rates of unexcused absences among students. These rates differ substantially across racial, ethnic, and socioeconomic groups. The median number of unexcused absences for students who participated in FRL and had any unexcused absences was 1.9. In comparison, students who did not qualify for free or reduced lunch had less than half of one day of unexcused absence if they had any (0.4) each year. Black students who had any unexcused absences had almost 3.5 unexcused absences per year, eight times the rate of White students. Table 4 shows median numbers of absences per-year for students in each racial, ethnic, and FRL group among those students with any absence. In contrast with these wide gaps in rates of unexcused absence, rates for *excused* absences are relatively similar across demographic groups.

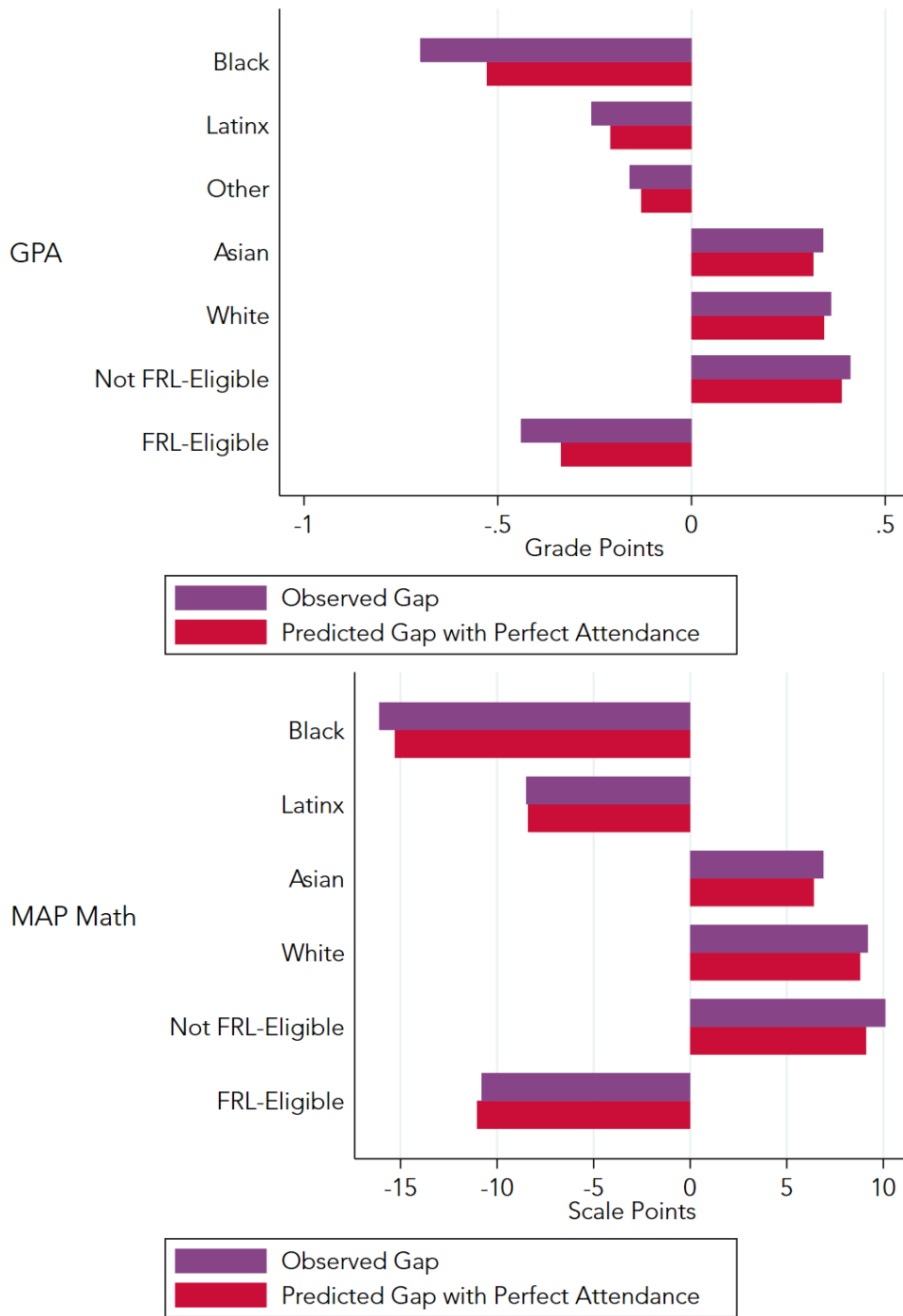
**Table 4. Median Number of Student Absences Per Academic Year**

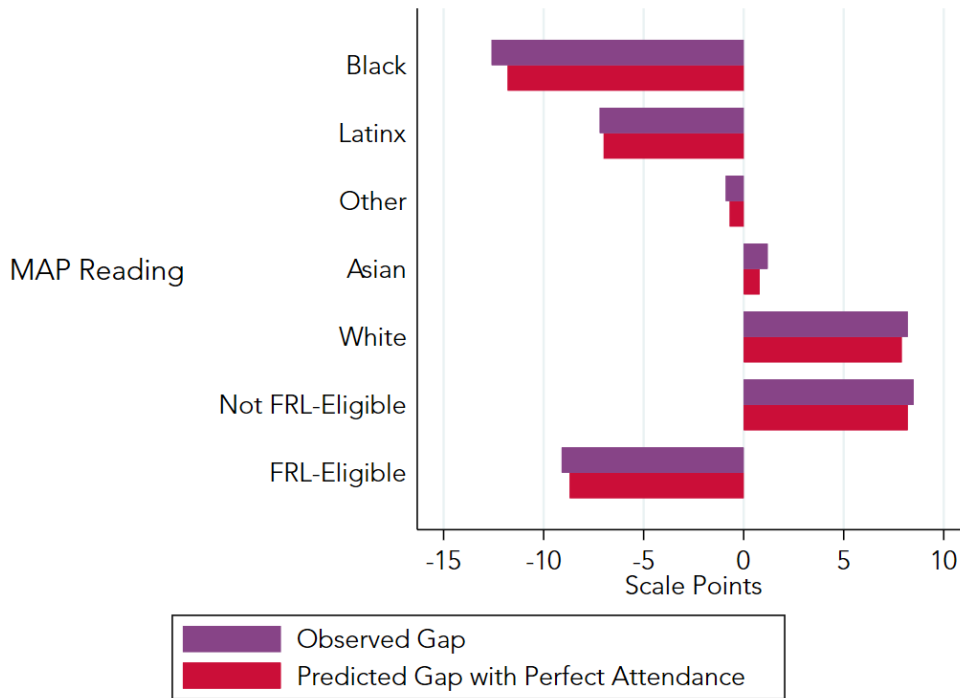
	Median Unexcused Absences (Given >0)	Median Excused Absences (Given >0)
Not Eligible for Free or Reduced Lunch	0.4	5.9
Eligible for Free or Reduced Lunch	1.9	5.8
White	0.4	6.4
Black	3.5	5.5
Hispanic/Latinx	1.2	5.4
Asian	0.6	3.7
Other	1.3	7.1

Next, using our models that relate absences to academic achievement, controlling for student demographics, health, and prior achievement, **we find that eliminating disparities in absences would produce very modest reductions in achievement gaps by race/ethnicity and income.** These results are shown in Figure 1, where the difference in the lengths of the purple (observed) and red (predicted) bars indicates the achievement gap reduction we expect would be achieved if all students had perfect school attendance.

The largest predicted reduction is found in the GPA achievement gap, where equalizing absenteeism rates for all students is predicted to reduce the achievement gap between Black students and the overall average by 0.17 points (on a 4.0 scale) – equivalent to a 24% reduction in the existing gap. The gap for Latinx students is predicted to close by 0.05 GPA scale points (a 19% reduction), and the GPA gap for FRL-eligible students is predicted to close by 0.1 points (from just over four-tenths of a point, 23%). MAP score gaps are each predicted to close by less than 1 MAP-score scale point (roughly 4%-5%).

Figure 1. Achievement Gaps in MAP Test Scores and GPA by Race/Ethnicity and Family Income





### Question 3: How are student perceptions of school climate related to student attendance?

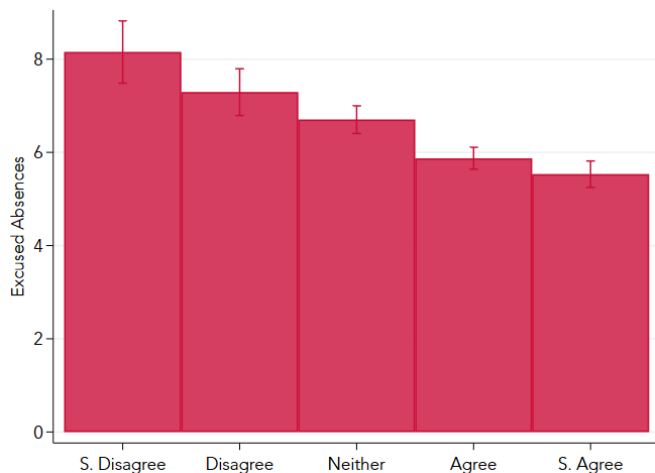
Results suggest that **student perceptions of school climate are more positive for students who have fewer absences across both excused and unexcused absences.** [Appendix A](#) displays the distribution of responses for the three items measuring student perceptions of their school. The three climate survey questions include “I feel I belong at this school,” “I feel safe at this school,” and “The adults at my school respect the students.” We refer to these items as *belonging*, *safety*, and *respect*. Full model results are shown in [Appendix B](#).

Figure 2 displays the median number of excused absences by response category based on student responses to the belonging, safety, and respect items, each conditional on grade level and school year. Panel A shows the median number of excused absences for each response category to the prompt, “I feel I belong at this school.” Students who strongly disagreed with this statement had a median of approximately 7.5 excused absences for the year, whereas students who strongly agreed with this statement had 5.5 excused absences per year. Panel B shows that students who disagreed or strongly disagreed with the statement, “I feel safe at this school” had a median of 6.5-7.5 excused absences, while those who agreed or strongly agreed had a median of 5.5 excused absences for the year accounting for grade level and school year. Panel C shows median excused absences by student responses to the prompt, “The adults at this school respect the students.” Those students who strongly disagreed with the statement had approximately 6.5 excused absences for the year, and those students who strongly agreed with the statement had approximately 5.5 excused absences for the year, with median absenteeism slightly decreasing as student perceptions of respect increased.

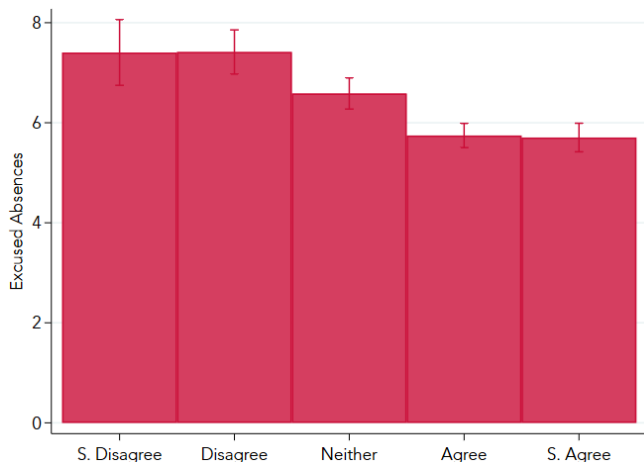
Figure 3 displays the median number of unexcused absences by response category for the belonging, safety, and respect items, conditional on grade level and school year. Across all three items, **students who strongly disagree with the statements about belonging, safety, and respect have a substantively higher median number of unexcused absences compared to their peers who responded more favorably to the items.**

In Panel A, those who strongly disagreed with the statement, “I feel I belong at this school,” had a median of nearly 2 unexcused absences for the year. Students in all other categories had median unexcused absences ranging from about 0.66 to 0.25 of an absence for the year. In Panel B, those who strongly disagreed with the statement, “I feel safe at this school” had a median of one unexcused absence for the year, while median students in other categories ranged from 0.5 to 0.25 of an unexcused absence for the year. Finally, in Panel C, those who strongly disagreed with the statement, “The teachers in this school respect the students” had a median of nearly 1.5 unexcused absences for the year, while others had between 0.25 to 0.5 of an unexcused absence for the school year, conditional on grade level and school year.

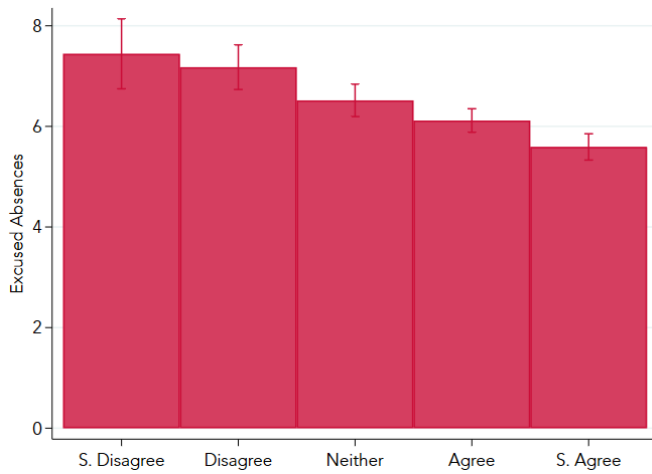
**Figure 2. Student Perceptions of Their School and Median Number of Excused Absences**  
**Panel A: “I feel I belong in this school”**



**Panel B: “I feel safe at this school”**



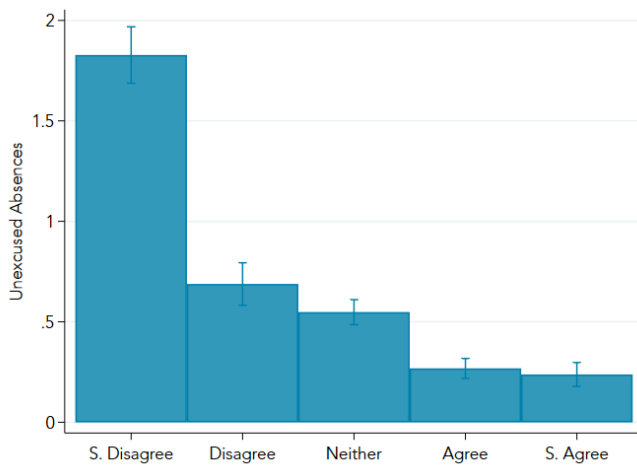
Panel C: "The adults at my school respect the students"



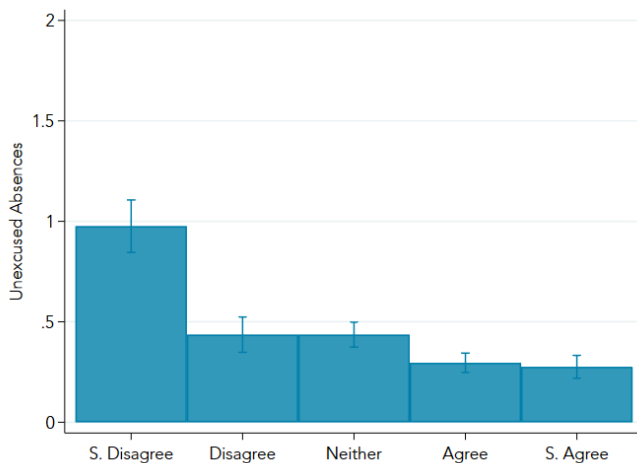
*Note.* Marginal estimates derived from quantile median regression models accounting for grade level and school year. Standard errors are clustered within students.

Figure 3. Student Perceptions of Their School and Median Number of Unexcused Absences

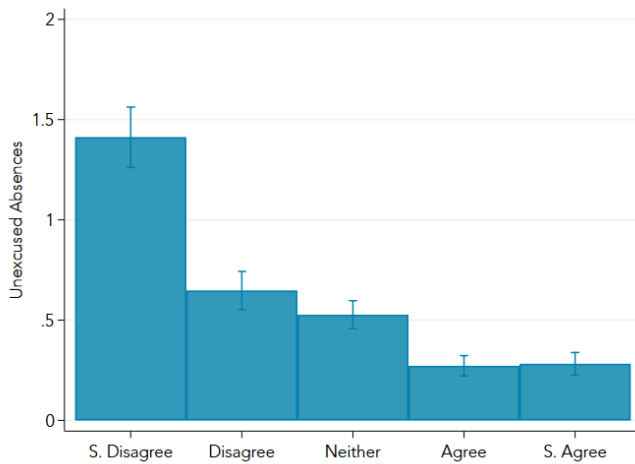
Panel A: "I feel I belong in this school"



Panel B: "I feel safe at this school"



Panel C: "The adults at my school respect the students"



*Note.* Marginal estimates derived from quantile median regression models accounting for grade level and school year. Standard errors are clustered within students.

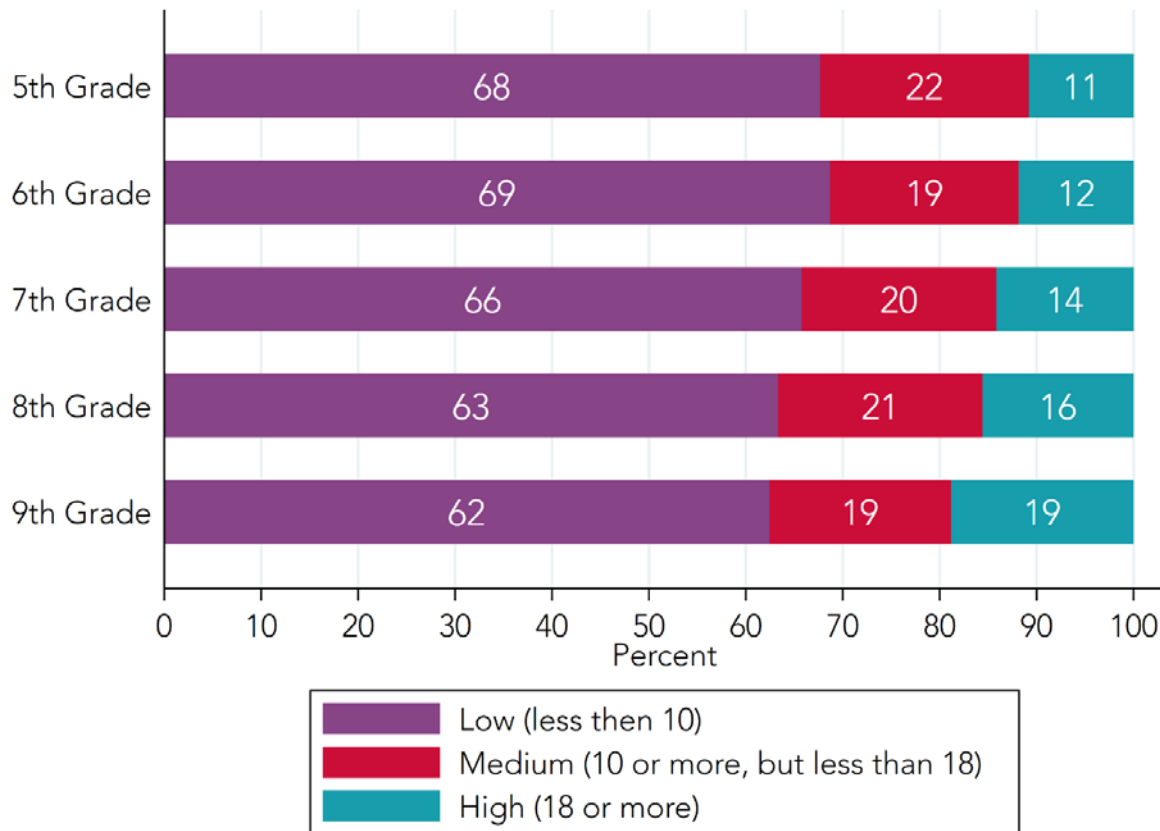
**Question 4: To what extent do attendance patterns in Grades 6-8 reflect attendance patterns in elementary school? Do attendance patterns in middle school predict attendance patterns in high school?**

Student absence patterns do not shift significantly from Grade 5 to Grade 6. However, student absenteeism does increase from middle to high school, described in more detail below. In Grade 5, 68% of students have less than 10 absences (the Low category). That proportion slowly declines through middle school and by Grade 9, 62% have fewer than ten absences. Approximately one in ten Grade 5 students have 18 or more absences (the High category) in a school year. By Grade 9, the proportion of students in the High group nearly doubles to 19%. The percentage of students in the Medium category (10-18 absences) remains relatively stable from Grade 5 through Grade 9 – at between 19% and 22% of students in each grade level.

**Table 5. Proportional Change in Excused and Unexcused Absences from Grades 5 to 9, by Low, Medium, and High Absence Categories**

Grade	Low Absences (<10)		Medium Absences (10 – 17 absences)		High Absences (18 or more)	
	Excused	Unexcused	Excused	Unexcused	Excused	Unexcused
5	88%	12%	82%	18%	66%	34%
6	88%	12%	83%	17%	66%	34%
7	88%	12%	84%	16%	63%	37%
8	88%	12%	83%	17%	61%	39%
9	82%	18%	75%	25%	42%	58%

**Figure 4. Percentage of Students in Low, Medium, and High Categories of Total Absences (Grades 5-9)**

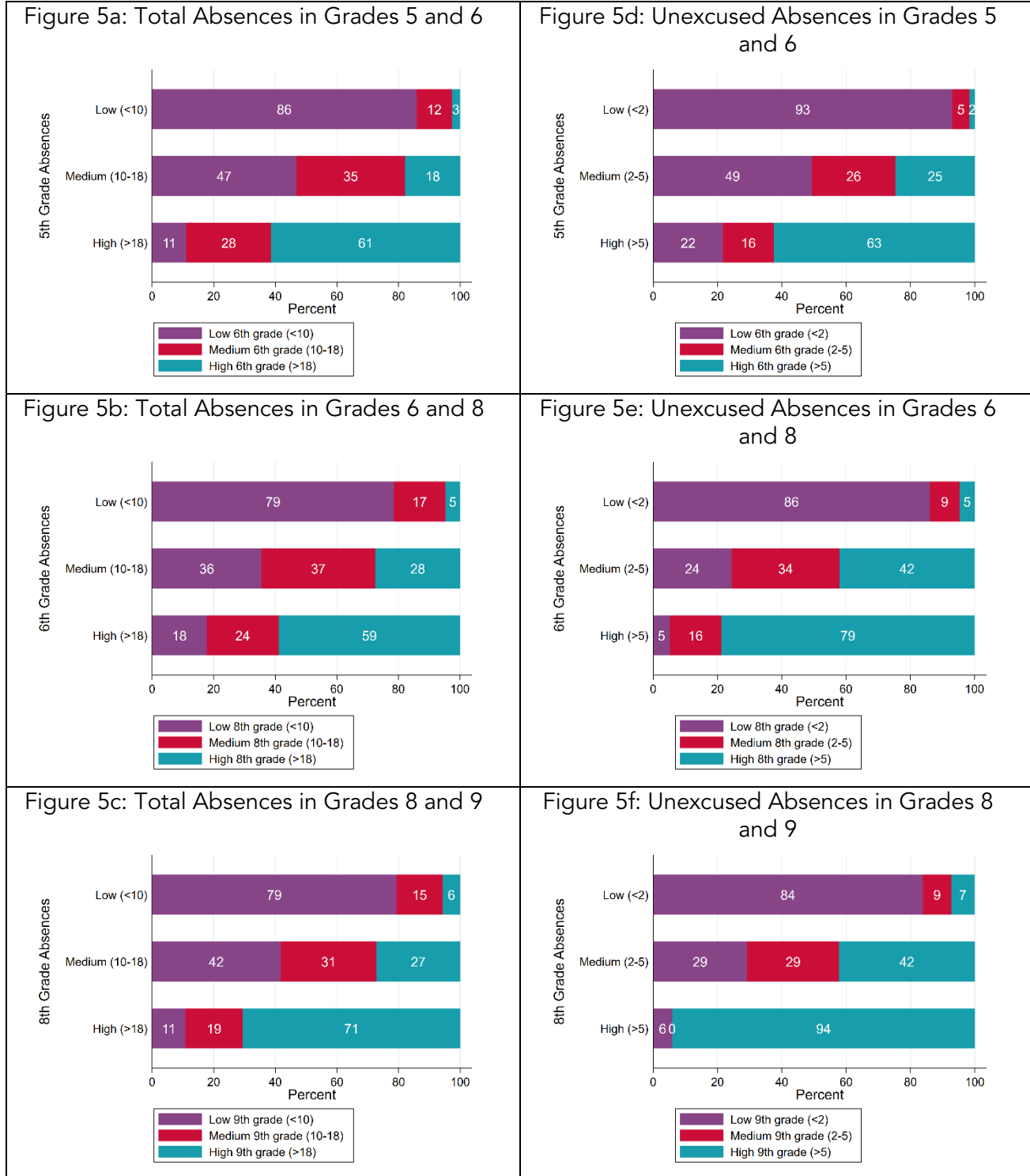


**Student attendance patterns are consistent from Grade 5 to Grade 6.** As Figure 5a indicates, 86% of students who had low absenteeism (<10 total absences) in their last year of elementary school (i.e., Grade 5) also had low absenteeism in their first year of middle school. Similarly, 61% of students with high absenteeism (>18 total absences) in Grade 5 also had high absenteeism in Grade 6. Student rates of total absences in Grade 5 appear to be consistent with Grade 8 absenteeism, although this pattern is less pronounced than in Grade 6. Results indicate that few students with low absenteeism in Grade 5 become chronically absent in middle school. Of students with moderate rates of absenteeism in Grade 5, a larger percentage of students moved into the “low” range than into the high range of absences.

Analysis of unexcused absences reveals more alarming trends. **Middle school and the transition to high school (Grade 9) appear to be an important periods of change in unexcused absenteeism.** As shown in Figure 5e, a majority (76%) of students who had a moderate range of unexcused absenteeism in Grade 6 later had moderate-to-high rates of unexcused absences (>2) in Grade 8. We also see that 42% of students who had a moderate range of unexcused absences in Grade 8 went on to have a high number of unexcused absences (>5) in Grade 9. Of students with low unexcused absenteeism in Grade 8, more than one-in-ten (16%) had moderate or high levels of unexcused absence in Grade 9. Most students with high rates of unexcused absence in Grade 6 (79%) had high rates of unexcused absence in Grade 8. Similarly, students with high eighth-grade unexcused absences also had high rates

of unexcused absences in Grade 9 (94%). Conversely, few students who had high unexcused absences in middle school later had low absenteeism in Grade 9.

**Figure 5. Changes in Students' Total and Unexcused Absences Over Time**



## What Did We Learn?

***Student absences not only increase as students get older but they have consistently increased in number each academic year since 2012-13***

In this report, we find that student absences have increased in MMSD over the last six years. Not only do students miss more school as they move into older grades, but the number of students missing school during each grade suggests that **middle school students in MMSD are missing more school now than they did six years ago**. This trajectory is stable across Grade 6 through Grade 8 with results demonstrating students miss, on average, one to two days more each year since 2012-13. These results are contradictory to national data demonstrating attendance rates have remained relatively stable since 2002 (Maynard et al., 2017). It is unclear what led to these changes over time in MMSD; however, the current report begins to explore differences in excused versus unexcused absences, differences based on race/ethnicity and income, how school climate might be connected to absences, as well as rates of absences between elementary, middle, and high school transitions.

Through our interviews, multiple educators expressed their **desire to improve district procedures** to ensure more clear and consistent messaging to families around the importance of attendance, working with teachers and school staff to set definitive policies and procedures for tracking and monitoring student absences, connecting with parents early-on when absences (especially unexcused absences) become a concern, and working with various community resources to develop support plans to get students to school (e.g., transportation considerations, family childcare needs, parental expectations around student independence in getting to school). An investment in these types of interventions may help to support a diverse range of student needs.

***Eliminating disparities in absenteeism would produce very modest reductions in achievement gaps by race/ethnicity and income***

Descriptive examinations of excused and unexcused absences indicate **modest differences in excused absences among student groups, but more sizeable difference in unexcused absences**. Black students have the highest rates of unexcused absences (3.5 median absences per year, conditional on having any unexcused absences) whereas White and Asian students who have any unexcused absence have 0.4 and 0.6 absences, respectively, at the median. Students with free or reduced priced lunch have a significantly greater number of unexcused absences than those who do not participate in the FRL program. These results suggest further examination of factors leading to potential differences between student groups in attendance rates.

Although previous research suggests that improving attendance rates should increase academic achievement and, to the extent that students of color and students from low-income families are more likely to miss school, reduce inequalities (Gottfried & Hutt, 2019), we find little support for this claim in our data. Most of the association between race, ethnicity, socioeconomic status, and student learning is accounted for by factors other than

absenteeism, such as health disparities and prior academic achievement. These results are consistent with our earlier work on attendance in elementary school: **absences likely function more as a signal of other factors in a child's life that negatively affect learning, rather than a cause of diminished academic achievement.** We acknowledge that there may be school-based factors that could contribute to reasons why students aren't coming to school (e.g., access to equal learning opportunities, conflict with peers or adults). Future research should examine potential underlying causes to determine what signal absences are sending, whether that be about what happens inside schools or at other points in a student's life.

These results suggest that **it may not be a wise investment to include a standalone attendance metric in school accountability efforts.** A sole focus on rates of total absences may do little to directly improve academic outcomes. Instead, our findings suggest that schools should consider attendance as one metric within a larger dashboard for identifying potential barriers to student learning. Other sources of data (e.g., behavior events, behavior screening data, student perceptions of school climate) may provide more relevant contextual data for better understanding student's academic and behavioral functioning at school. MMSD has already taken steps in this direction, with the inclusion of attendance as one of multiple indicators within its early warning systems and the Grade 9 on-track data dashboard.

***Middle school student perceptions of belonging, safety, and respect are inversely related to student absences***

Student perceptions of belongingness, school safety, and respect demonstrated a modest relationship with attendance, meaning that **students who are more likely to feel safe, respected, and belong at school also have fewer absences.** While we cannot draw definitive conclusions as to why, these data suggest student climate perceptions are an important consideration in school improvement efforts. Future studies should continue to explore how student perceptions of belonging, school safety, and respect might be connected with academic performance (e.g., test scores, GPA) and other important student behavioral outcomes (e.g., behavior incidents, social emotional functioning). Based on extant research, we might expect to see a more positive connection between academic test scores and student attendance for students who actually report increased positive connections with adults and peers at school.

***Student attendance patterns are consistent from Grades 5 to 6. Students who had moderate to high rates of unexcused absences in Grade 6 had similar, if not worse, attendance patterns in Grade 9.***

Student attendance patterns in elementary school are broadly consistent with attendance in middle school. An analysis of the total number of student absences revealed slight variations in rates of absences but overall demonstrated consistencies in student rates of absences from Grades 5 to 6 and again from Grades 6 to 8. Unexcused absences appear to tell a different story. One in four students who had moderate unexcused absenteeism in fifth grade had a high number (>5) of unexcused absences in sixth grade. **As students' progress through middle school, many who previously had moderate rates of unexcused absence begin to**

show troubling signs of missing school: 42 percent of students who had moderate absenteeism in grade 6 have high rates of absenteeism in their final year of middle school. It is important to note that our data suggest that **96% of students who had high rates of unexcused absences in grade 8 repeated that high rate in their freshman year of high school.** These results suggest that schools may wish to invest resources in helping to support middle school students with moderate to high rates of unexcused absences in order to potentially change the trajectory of absences that occur throughout middle school and into high school.

## What Do We Recommend?

Based on the results in this report and feedback from stakeholders within MMSD, we recommend MMSD evaluate data collection practices, conduct additional qualitative research to investigate the reasons students miss school (especially with regard to unexcused absences), and further explore school practices pertaining to climate and their potential relationship to student attendance. We outline each of these three steps below, including specific examples schools and the district might consider for addressing factors related to attendance concerns.

1. **Systematically review and adjust data collection practices:** Schools and district leaders benefit from attendance data that are accurate, accessible, and regularly reported in an understandable format. Numerous educators and administrators in MMSD identified difficulties with accurate attendance data and engagement in systematic procedures for how to help support students who have attendance concerns. In visits to schools, educators described different procedures for tracking and monitoring student attendance, suggesting not all educators and teachers may be consistently entering data or responding to attendance concerns in the same way. MMSD may want to consider how to implement consistent and clear data collection procedures and response strategies for all staff. This recommendation aligns with our previous report, where we also advocated for district efforts to examine school-based practices for recording absences and communicating with families of absent students.
2. **Investigate why students are not coming to school:** We need to know more about why students are missing school in Madison. Despite national trends, MMSD has seen increases in student absences over the past six years, and student absences increase between Grades 5 and 9. These trends are particularly salient for unexcused absences. What we do not know is *why* – why students do not make it to school, why that is happening more often now than in years past, and why, in some cases, communication is not taking place to excuse absences. Qualitative research excels at digging into these types of questions, so we recommend district staff and university researchers join together to address these concerns. Staff in schools and at MMSD central office are well positioned to talk with students and families about why they are missing school; potentially gleaning insights about how the lived experience of students shapes their capacity and willingness to attend school. University researchers can use qualitative design to structure research studies to further deepen that learning. We recommend pursuing this line of work to ensure that any potential interventions or actions by schools and the district are designed with an understanding of the reality students encounter in their homes, schools, and communities.
3. **Explore future research on school climate:** We recommend more research examining the relationship between school climate measures and outcomes such as student attendance. This report provides a preliminary sense of how climate may relate to attendance in MMSD, and suggests that it may be possible to increase attendance by paying attention to climate (or vice versa). Future research should examine differences in school climate data between various student groups, including aspects of student voice, race/ethnicity, and teacher, staff, and administrative efforts to promote a positive school climate.

## Appendix A. Descriptive Statistics of Student Perceptions of School

	"I feel I belong at this school"		"I feel safe at this school"		"The adults... respect the students"	
	<i>N</i>	Proportion	<i>N</i>	Proportion	<i>N</i>	Proportion
Strongly disagree	414	0.05	440	0.05	368	0.04
Disagree	733	0.08	967	0.11	911	0.10
Neither agree nor disagree	2121	0.24	1964	0.22	1727	0.19
Agree	3325	0.37	3222	0.36	3266	0.36
Strongly agree	2363	0.26	2363	0.26	2684	0.30

## Appendix B. Full Models Results for Student Perceptions of Their School and Median Number of Excused and Unexcused Absences

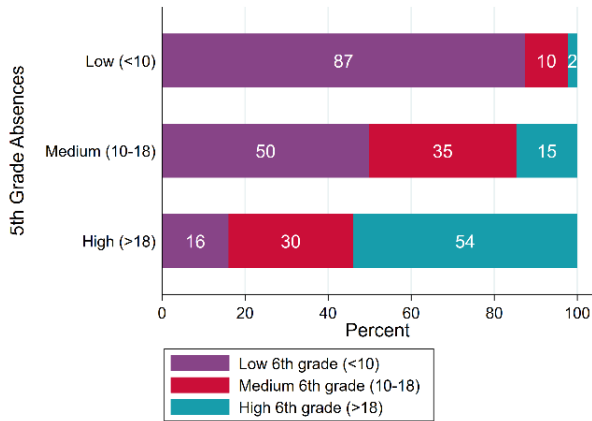
Item response (reference = Strongly disagree)	"I feel I belong at this school"		"I feel safe at this school"		"The adults...respect the students"	
	Excused Absences	Unexcused Absences	Excused Absences	Unexcused Absences	Excused Absences	Unexcused Absences
Disagree	-0.350 (0.410)	-1.140*** -0.09	0.630 (0.381)	-0.540*** (0.080)	0.630 (0.381)	-0.765*** (0.091)
Neither agree nor disagree	-0.960** (0.358)	-1.280*** -0.078	-0.150 (0.350)	-0.540*** (0.074)	-0.150 (0.350)	-0.885*** (0.084)
Agree	1.630*** (0.348)	-1.560*** -0.076	-1.040** (0.337)	-0.680*** (0.071)	1.040** (0.337)	-1.140*** (0.081)
Strongly agree	2.000*** (0.357)	-1.590*** -0.078	-1.070** (0.346)	-0.700*** (0.073)	1.070** (0.346)	-1.130*** (0.082)
School Year (reference = 2016-2017)		0.420**				
2017-2018	0.420** (0.141)	0.030 (0.031)	0.430** (0.140)	0.060* (0.030)	0.390** (0.140)	0.025 (0.031)
Grade level (reference = Grade 6)		(0.172)		0.110		
Grade 7	0.020 (0.172)	0.020 (0.038)	0.110 (0.171)	0.060 (0.036)	0.030 (0.171)	0.030 (0.038)
Grade 8	0.350* (0.176)	0.050 (0.038)	0.490** (0.174)	0.080* (0.037)	0.440* (0.175)	0.045 (0.039)
Constant	7.000*** (0.354)	1.790*** (0.077)	6.140*** (0.342)	0.900*** (0.072)	6.220** *	1.375*** (0.083)
Observations	8,985	8,985	8,985	8,985	8,985	8,985

Note: Estimates are from quantile median regression models. Robust standard errors in parentheses.

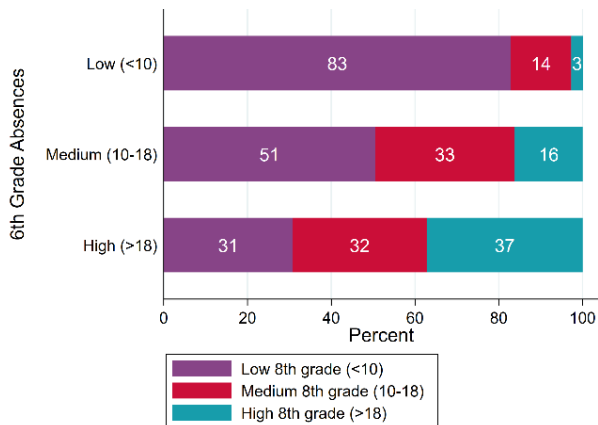
\*\*\* p<0.001, \*\*  
p<0.01, \* p<0.05

## Appendix C. Excused Absences

### Appendix C.1. Excused Absences in Grades 5 and 6



### Appendix C.2. Excused Absences in Grades 6 and 8



### Appendix C.3. Excused Absences in Grades 8 and 9

