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Teacher Attendance in Arkansas Public Schools: Trends and Workforce Differences

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I. Abstract

The post-pandemic increase in student absenteeism rates is well-documented across all student groups and grade levels in all 50 states. Teacher absenteeism and its impact on student learning are less documented. This paper investigates how teacher attendance has changed over time, namely in relation to the Covid-19 pandemic. We also provide new evidence on the extent to which teacher and school characteristics are associated with teacher attendance. We find evidence of increases in teacher total absences as well as sick days, professional development, and school business days, over time, especially after Covid-19. There is also evidence of variation in individuals' absences based on teacher and school characteristics. Career and technical education (CTE) teachers have the highest rates of absenteeism, driven by increased absences for school business and professional development, whereas female teachers and special education teachers also have higher absenteeism rates, more driven by sick and personal leave. We recommend targeted interventions for teachers with high absenteeism rates, as well as consideration of dosage and the impact of school-related absences against the loss of classroom instruction time.

II. Introduction

Teacher quality is recognized as an important school-based determinant of student success, influencing both short-term academic achievement and long-term life outcomes (Chetty et al., 2011; Jackson, 2018). A substantial body of research demonstrates that students taught by more effective teachers achieve higher test scores, are more likely to attend college, and experience improved earnings and life trajectories in adulthood. However, the benefits of teacher quality are contingent on teacher presence in the classroom. When teachers are absent, instructional continuity is disrupted, and students may not fully realize the benefits of high-quality teaching.

Teacher absenteeism, therefore, represents a critical yet often underexamined factor in educational effectiveness. Existing research shows that teacher absences are associated with measurable declines in student achievement, with even moderate increases in absence days producing meaningful negative effects (Miller et al., 2008). These impacts are compounded by the fact that substitute teachers are often less familiar with instructional content, classroom routines, and student needs. As a result, absences can generate both immediate learning disruptions and longer-term instructional setbacks.

At the same time, teacher absences will occur. Teachers, like other professionals, require time away from work due to illness, family responsibilities, and professional development. The teaching profession may, in fact, present unique challenges that contribute to absence patterns, including higher exposure to illness, elevated levels of job-related stress, and gendered caregiving responsibilities within a predominantly female workforce. Prior research presents mixed evidence on whether teachers are absent more frequently than comparable professionals,

suggesting that absenteeism reflects a complex interplay of individual, institutional, and contextual factors (Clotfelter et al., 2009; Roza, 2007; Wang, 2025).

Recent developments further underscore the importance of understanding teacher absenteeism. The Covid-19 pandemic appears to have altered attendance patterns across the broader labor force, with emerging evidence indicating sustained increases in worker absences (Dennett et al., 2025). Schools have similarly reported higher levels of teacher absenteeism alongside ongoing shortages of substitute teachers, creating additional strain on educational systems (Hansen et al., 2025). Despite these shifts, much of the existing literature relies on pre-pandemic data or offers inconclusive findings regarding how absenteeism varies across different school and teacher characteristics.

This study seeks to address these gaps by providing updated evidence on teacher absenteeism in Arkansas public schools over the pre- and post-pandemic period, 2018-19 through 2023-24. Specifically, we examine how teacher attendance has changed over time and how absenteeism varies across teacher demographics, instructional roles, and school contexts. By offering a comprehensive, up-to-date analysis, this study aims to inform more targeted and effective policy responses that balance the necessity of teacher absences with the goal of minimizing disruptions to student learning.

Key findings include increased yearly rates of teacher absenteeism overall and across all absenteeism categories, which first rose during the Covid-19 pandemic and, to date, have not returned to pre-pandemic levels. There is also evidence of variation in teacher absenteeism rates across individual and school-level characteristics. Teachers who teach career and technical education (CTE) classes have significantly more absences for both school business and

professional development than our comparison group, elementary school teachers. Special education teachers also have more total absences overall, as well as sick and personal, compared to elementary school teachers. Similarly, female teachers have more total absences, including sick and personal absences, than male teachers. Teachers in charter schools, on average, have fewer absences compared to teachers in traditional public schools. In light of these findings, we recommend that schools consider more targeted interventions for teachers with high absenteeism rates. School districts should also consider the dosage and potential gains associated with school-related teacher absenteeism against the loss of instructional time in the classroom.

III. Literature Review

A quality teacher can positively impact student outcomes both in the short term and in the long term (Chetty et al., 2011; Darling-Hammond, 2000; Jackson, 2018). Within a single school year, students taught by licensed and more qualified teachers tend to achieve higher reading and math scores than those taught by non-licensed teachers. In addition, Chetty et al. (2011) find that students assigned to higher value-added teachers are more likely to attend college, earn higher incomes as adults, and have improved long-term outcomes.

If a teacher is not present in the classroom, they are unavailable to their students, regardless of their quality or expertise. Prior research shows evidence that teacher absenteeism reduces student achievement (Clotfelter et al., 2009; Miller et al., 2008). One study estimates that every additional 10 days of teacher absences reduces fourth-grade students' math achievement by 3.2% of a standard deviation (Miller et al., 2008). Another study compares the negative effect of having a teacher absent for 10 additional days to a similar effect size as being taught by a first-year teacher rather than a teacher with one to two years of experience (Clotfelter et al., 2009).

Of course, teachers will have absences. Working with a large number of children and other adults increases teachers' exposure to contagious illnesses (Wang, 2025). Also, a growing body of research indicates that the teaching labor force experiences higher rates of work-related stress and burnout (McCarthy, 2019). Moreover, the teacher labor force is predominantly women, who are more likely to be the primary caregiver within their family, also leading to more absences (Goldin et al., 2024). Women are both more likely to take off work to support children and dependents who are ill or need medical attention, as well as elderly family members. On top of short-term illness, women are also more likely to take longer-term family medical leave absences (FMLA) for the birth or adoption of a child and to support other family members.

There are mixed findings on how frequently teachers are absent compared to other workforces. Some research finds that teachers average more absences than comparable college-educated professionals (Roza, 2007). In contrast, other studies suggest that teachers are not more likely to be absent than other college-educated workers and may attend work despite needing to be absent (Wang, 2025). Wang suggests that teachers' altruistic motivations and strong sense of responsibility toward students may lead them to attend work even when sick or facing personal emergencies. However, other researchers find that teachers are more likely to take sick days on days adjacent to weekends and holidays, such as Mondays and Fridays, than on midweek days (Clotfelter et al., 2009; Gershenson, 2012; Miller et al., 2008; Strauss & Strauss, 2003). This pattern could be interpreted as teachers often use sick days for non-illness-related absences and personal use. Taken together, this body of evidence suggests that teacher absence behavior reflects a combination of professional norms and strategic use of leave, and points to the importance of attendance policies that both support necessary sick leave and discourage misuse.

Substitute Teachers Make Poor Substitutes

When a teacher is absent, schools typically rely on substitute teachers to fill in. However, substitute teachers generally make imperfect replacements for the primary teacher (Clotfelter et al., 2009; Gershenson, 2012; Miller et al., 2008; Strauss & Strauss, 2003). They are often less qualified and are less familiar with the instructional content, classroom routines, and students, which can disrupt the class's trajectory, both academically and socially. When absences are frequent, there is likely a cumulative negative impact on student academic learning. Even a single teacher's absence can delay instructional pace due to interruptions in curriculum sequencing, further compounding the loss of learning time (Gershenson, 2012; Miller et al., 2008). In addition to these instructional consequences, teacher absences also impose financial costs on school districts (Joseph et al., 2014). For example, one estimate from the National Council on Teacher Quality found that, in the 2012-13 school year, districts spent an average of $1,800 per teacher to cover the costs associated with teacher absences.

In addition to being less effective, substitutes are in short supply everywhere, but the shortage is particularly pronounced in communities with high levels of low-socioeconomic-status households (Kraft et al., 2022). There is evidence that substitutes are more likely to accept job offers from schools located closer to them (Gershenson, 2012). Thus, communities without a nearby pool of potential substitute teachers are also less likely to find individuals willing to travel farther for substitute teaching jobs. Schools that are more remote or lack sufficient substitute teachers will struggle to find enough people to fill substitute positions, adding extra burdens on schools and their staff.

Prior Research on Teacher Absenteeism Rates

Historical estimates vary for teacher absenteeism rates. One study from 2014 estimates that teacher daily absenteeism rates were at 6% (Joseph et al., 2014). This study also found that chronic teacher absenteeism, defined as a teacher missing 10% or more of a school year, was estimated at 16% in the 2012-13 school year in ten large urban school districts. This same study found that school attendance and chronic absenteeism rates did not differ by the percentage of students eligible for free and reduced-priced lunch (FRPL), a commonly used proxy for low socioeconomic level. Another study using national data estimated the chronic absenteeism rate among teachers in the 2015-16 school year at about 29%, that is, almost one-third of teachers nationwide missed at least 10% of the school year (Hansen et al., 2025). This study also found only a slight positive correlation between teacher absenteeism rates and the percentage of students eligible for FRPL. In contrast to Joseph et al. (2014) and Hansen et al. (2025), another study finds that teacher absenteeism rates do increase as the percentage of students eligible for FRPL increases (McCarthy, 2019). By comparison, student chronic absenteeism rates are more strongly correlated with the percentage of students receiving free or reduced-price lunch (Balfanz & Byrnes, 2019; Malkus, 2025). Thus, research shows mixed evidence on whether teacher absenteeism is correlated with higher percentages of students eligible for FRPL.

States and specific school districts have tried a variety of strategies to deter teacher absences. Some initiatives offer incentives to improve teacher attendance rates, including bonuses for excellent attendance, buybacks of unused paid time off days, or extra personal days for low absenteeism (Joseph et al., 2014). This same study also examines other strategies to discourage high rates of absenteeism by implementing stricter policies on taking time off. One strategy requires teachers to call in absences rather than submit them through an online portal,

and to provide medical certificates after absences. Another strategy is to impose additional restrictions on absences during high-needs school days, such as state testing days or days immediately before or after holidays. Finally, some states and districts include attendance as a measure in their teacher evaluation framework. Overall, the study finds that incentive strategies did not improve teacher attendance but did reduce absences among chronically absent teachers by about 2 days.

Post-Pandemic Increases in Absences

The post-pandemic increase in chronic absenteeism rates among students across all states, grade levels, and student groups is well documented (Dee, 2024; Malkus, 2025). To date, these rates have not returned to pre-pandemic levels, and many hypothesize that sustained high rates of chronic student absenteeism are an influential factor in why students' achievement scores remain low.

There is also evidence of increased sick leave in the general labor force since the Covid-19 pandemic. A national study finds that cross-industry increases in the number of people staying home from work relative to pre-pandemic rates persist today (Dennett et al., 2025). Teacher absenteeism, while receiving less attention, has also risen substantially since the Covid-19 pandemic (Hansen et al., 2025; Mervosh, 2024). States, districts, and substitute agencies have also noticed increases in both teacher absences and the shortage of available substitutes, forcing schools to scramble to operate with fewer personnel (Hansen et al., 2025). Overall, teacher absenteeism rates, like absenteeism rates among students and the general workforce, seemed to increase across multiple states.

Despite a well-established understanding that teacher quality is critical to student outcomes and that teacher absences can meaningfully disrupt learning, important gaps remain in

the current literature. Much of the existing evidence on teacher absenteeism relies on pre-pandemic data or provides mixed findings regarding how absenteeism varies across school and teacher characteristics, such as socioeconomic context. At the same time, emerging evidence suggests that absenteeism patterns have shifted since the Covid-19 pandemic, yet there is limited recent analysis documenting these changes. In particular, there is a need for updated research that examines not only overall absenteeism trends but also how absences vary by individual teacher and school characteristics, as well as by absenteeism type. Addressing these gaps is essential to inform targeted and effective policy responses, as teacher absenteeism results in production loss associated with negative student outcomes. This study addresses these gaps by examining recent patterns in teacher absenteeism in Arkansas public schools.

IV. Research Method

Research Questions

We contribute to the literature by providing a descriptive analysis of teacher absenteeism in Arkansas public schools over a six-year period (2018-19 through 2023-2024). We examine how teacher absenteeism has changed before and after the Covid-19 pandemic. In addition, we analyze how teacher absenteeism varies across teacher characteristics, including experience, educational background, and courses taught, as well as across school characteristics such as charter status, student enrollment, state region, and the percentage of students eligible for free and reduced lunch. Specifically, we ask the following research questions:

1. How has teacher attendance in Arkansas public schools changed over time, namely before and after the Covid-19 pandemic?
2. How do teacher attendance rates vary across individual and school characteristics?

Data & Sample

We use publicly collected data on public school employees from the Arkansas Department of Education (ADE) for the 2018-19 through 2023-24 school years. This administrative employee data is de-identified and includes demographic information such as gender, race, educational level, years of experience, school assignment, course assignment, and absenteeism records. We also use publicly available data from the ADE on school-level characteristics, including geographic density, school type, open-enrollment status, student enrollment, average class size, and percentage of students on free and reduced-price lunch (FRPL).

Employee attendance data from the ADE is collected per absence, and includes the length of the absence, absence type, and the employee's school assignment. We aggregate absenteeism data for all teachers into yearly totals. Within the employee attendance data, we can aggregate total absences related to professional development, school business, and sick and personal leave. We also sum these categorical absences to obtain an overall absence total for each teacher.

To limit our sample to active teachers, we only include employees who have taught courses associated with their employee codes. Employee codes can identify employees as teachers as well as identify courses taught. Additionally, our sample is limited to teachers who have at least one absence in a given year, as the employee attendance data provided by ADE does not include teachers with zero annual absences. We include all teachers without missing data from the 2018-19 school year to the 2023-24 school year. Our total sample is 168,140 teachers. Our ordinary least squares (OLS) model is further limited to teachers with available data on prior-year attendance. The OLS sample size is 102,255.

Table 1: Sample of Arkansas K-12 Public School Teachers

	Overall Sample	Ordinary Least Squares Sample
	%	%
Teacher Demographics		
Female	78.4	79.3
White	87.7	88.3
Black/African American	9.3	8.4
Hispanic	1.6	1.5
Native American	0.5	0.5
Asian	0.5	0.5
Two or More Races	0.3	0.3
Native Hawaiian/Pacific Islander	0.1	0.5
Experience		
0-3 Years	40.2	43.9
4-10 Years	25.4	24.2
11-20 Years	20.7	19.5
21+ Years	13.7	12.4
Courses Taught		
Core Subjects		
Elementary	31.0	31.5
English (ELA)	14.0	13.7
Math	12.0	11.7
Science	11.4	11.2
Social Studies	11.9	11.8
Student Support and Elective Courses		
Special Education	8.8	8.6
Physical Education (PE)	17.4	16.4
Career & Technical (CTE)	6.7	6.9
Fine Art	1.3	7.1
Foreign Language	1.3	1.3
Other	76.6	79.7
Total Sample Size	168,140	102,255

Note: Courses Taught percentages do not add up to 100% because teachers can be assigned to multiple courses.

Table 2: School Characteristics Associated with Arkansas K-12 Public School Teachers

	%/ Mean(SD)
School Characteristics	
Elementary	44.6%
Middle	20.6%
High School	34.9%
Charter	3.0%
Geographical Density	
Rural	38%
Town or Suburb	35%
City	27%
Average Class Size	15.6 (5)
Average Enrollment	654.5 (522.5)
Average FRPL %	64.0% (23.5%)
Total Sample Size	168,140

Note: Percentages for school characteristics represent the percentage of teachers working in these school types. Average class size, enrollment, and percentage of free and reduced-price lunch (FRPL) all represent the average school characteristics, with the standard deviation in parentheses, for which teachers work in the state.

Sample Characteristics

Descriptive statistics for teachers in our sample can be found in Tables 1 and 2. 78.4% of the sample are female, and 87.7% are identity as white. 9.3% of our sample is Black, and 1.6% is Hispanic. All other races listed each make up less than 1% of our sample. We also consider years of experience working as an educator within our sample. Novice teachers, defined as those with zero to three years of experience, make up 40.2% of our sample. Teachers with 4 to 10 years of experience make up 25.4% of our sample, and those with 11 to 20 years make up 20.7%. Teachers with over 20 years of experience make up 13.7% of our sample.

Beyond experience, we also look at the courses taught by teachers. Teachers can teach multiple courses. The most common course category among teachers is “Other” at 76.6%, encompassing options such as English language courses and alternative learning environment

courses. Almost all elementary teachers also have the “Other” course listed. Elementary teachers make up 31.0% of the sample. Within core subjects, outside of elementary, 14.0% of teachers teach English (ELA), 12.0% teach math, 11.4% teach science, and 11.9% teach at least one social studies course. Beyond core courses, 17.4% of teachers teach at least one physical education course, which can include coaching sports. Additionally, 8.8% of the teachers in the sample teach at least one special education course. Finally, 6.7% of teachers in the sample teach a career and technical education (CTE) course, and fine arts and foreign language each account for 1.3% of the teaching sample.

Within our sample, we also consider the school characteristics in which the teachers work. The most common school level is elementary with 44.6% of our teacher sample employed in an elementary school. This is followed by high school, with 34.9% of teachers, and middle school, 20.6%. Only 3.0% of our teacher sample works in charter schools. When considering the geographic density of the schools where these teachers work, 37.8% work in rural schools. 34.5% of teachers work in schools in towns or suburbs, and 26.7% work in schools in cities.

Measures

Variable of Interest

Our variable of interest is teacher yearly absenteeism totals, both overall and by absenteeism category. Absenteeism categories considered include total absences, sick and personal, school business, and professional development. Absenteeism information is collected and categorized at the school level and reported to the state department of education. Variations in data collection and reporting may exist. Conceptually, yearly attendance totals reflect both individual behavior and broader working conditions, making them a useful proxy for

understanding how teacher presence varies across different contexts. By centering this variable as the key predictor, the study aims to isolate how differences in teacher attendance are associated with variation in individual and school-level covariates.

Covariates

In examining variation in teacher absenteeism rates, this study incorporates both individual and school-level covariates to account for factors that may influence absence patterns and to reduce omitted variable bias. At the teacher level, variables such as course assignment, years of experience, educational attainment, and gender are included because prior research suggests that job demands, professional stability, and personal characteristics can shape attendance behavior. For example, more experienced teachers may have different absence patterns due to greater job familiarity or accumulated leave, while course assignments may reflect differing workloads or stress levels. At the school level, environmental factors including geographic density, the proportion of students eligible for free or reduced-price lunch, school type (elementary, middle, or high), open enrollment charter status, and logged student enrollment, are incorporated to capture differences in working conditions, resource availability, and student population needs that may affect teacher attendance. Finally, the inclusion of prior-year attendance serves as an important control for baseline absence behavior, helping to account for persistent individual tendencies and improving the precision of estimated relationships. Past research indicates that attendance behavior is persistent, and past attendance behavior is predictive of future attendance rates. Together, these covariates allow for a more rigorous and nuanced analysis of the factors associated with teacher absenteeism.

V. Methods

Our first question (RQ1) relies on descriptive statistics and data visuals, which will illustrate whether teacher absenteeism rates have changed over time. Teacher yearly absenteeism totals are split into quartiles, as well as the teachers at the highest and lowest 10% rates. This percentile division illustrates how absenteeism rates vary over time, both overall and within the teacher population. Descriptive data visuals are illustrated for total teacher absence as well as categorical absences, including sick and personal, school business, and professional development.

To answer our second research question, we present multiple models that estimate how absenteeism rates vary by courses taught, teacher, and school characteristics.

We estimate models using Ordinary Least Squares (OLS) regression. OLS regression is appropriate given that our primary outcome variables are continuous, and its results are easily interpretable for a broad audience. We assessed robustness by estimating alternative specifications using nonlinear models, including Tobit and Poisson regressions where appropriate for the given outcome. Results from these models were substantively similar to those obtained from the OLS specification.

We estimate a series of regression models to examine variation in teacher absenteeism and its relationship with student outcomes. We answer RQ2 with Models 1 through 4, and estimate the following specification:

$$Y_{it} = \beta_0 + \beta_1(Teacher\ Demographics_{it}) + \lambda_s(School\ Characteristics_{it}) + \varepsilon_{it},$$

where Y_{it} represents teacher *i*'s yearly accumulated absences in year *t*. Our regression includes all available and complete data from the 2018-19 to 2023-24 school years. In Model 1, the

outcome variable is total teacher annual absences. In Models 2 through 4, we disaggregate teacher absences by type and examine school business absences, professional development, and sick and personal absences, respectively. All four models include a consistent set of teacher- and school-level controls. Teacher characteristics include gender, having earned a master's degree or higher, years of experience, course assignment, previous year's attendance, and school location. School characteristics include geographic density, open-enrollment charter school status, the percentage of students eligible for free and reduced-price lunch, school enrollment (logged), and average class size. Standard errors are clustered at the teacher level.

VI. Results

Changes in Teacher Absences Over Time

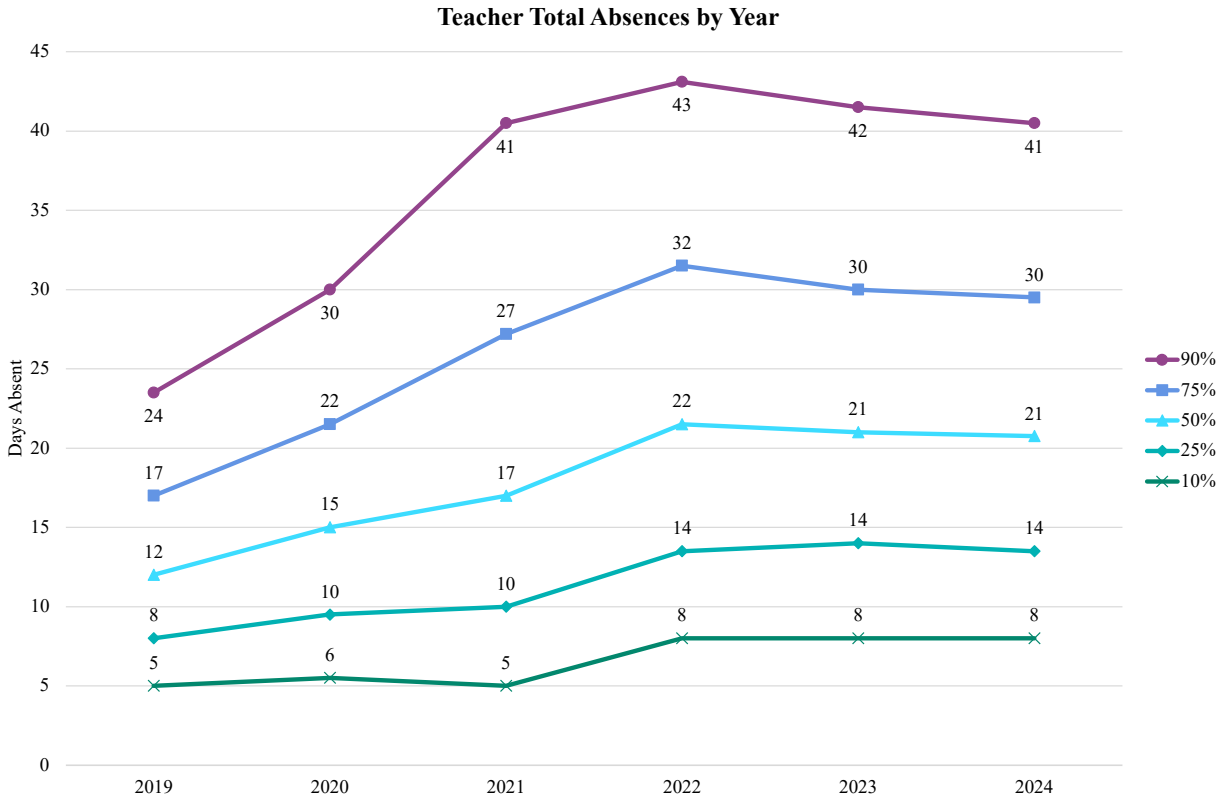
To answer research question one, how has teacher attendance in Arkansas public schools changed over time, we present *Figures 1 – 4*, graphs that illustrate changes in teacher absenteeism over time, marked by benchmark percentiles. Teacher absenteeism is considered aggregated into total absences in *Figure 1*, and then disaggregated by absenteeism type, including sick and personal, school business, and professional development, in *Figures 2 – 4.*

Teacher Total Absences

Figure 1 illustrates how total teacher absences per school year have changed over time. Figure 1 shows that teacher absenteeism totals increased during school years that coincided with the Covid-19 pandemic, at all levels. The largest jumps in absenteeism rates are observed among teachers at the 90th and 75th percentiles, i.e., those with the most absences in our sample. The lowest rates across all percentiles were during the 2018-19 school year, with increases in the 2019-20, 2020-21, and 2021-22 school years. Slight decreases were observed in the most recent

years, 2022-23 and 2023-24. Although teacher absenteeism rates are decreasing slightly, they remain elevated across all percentiles compared to pre-pandemic years.

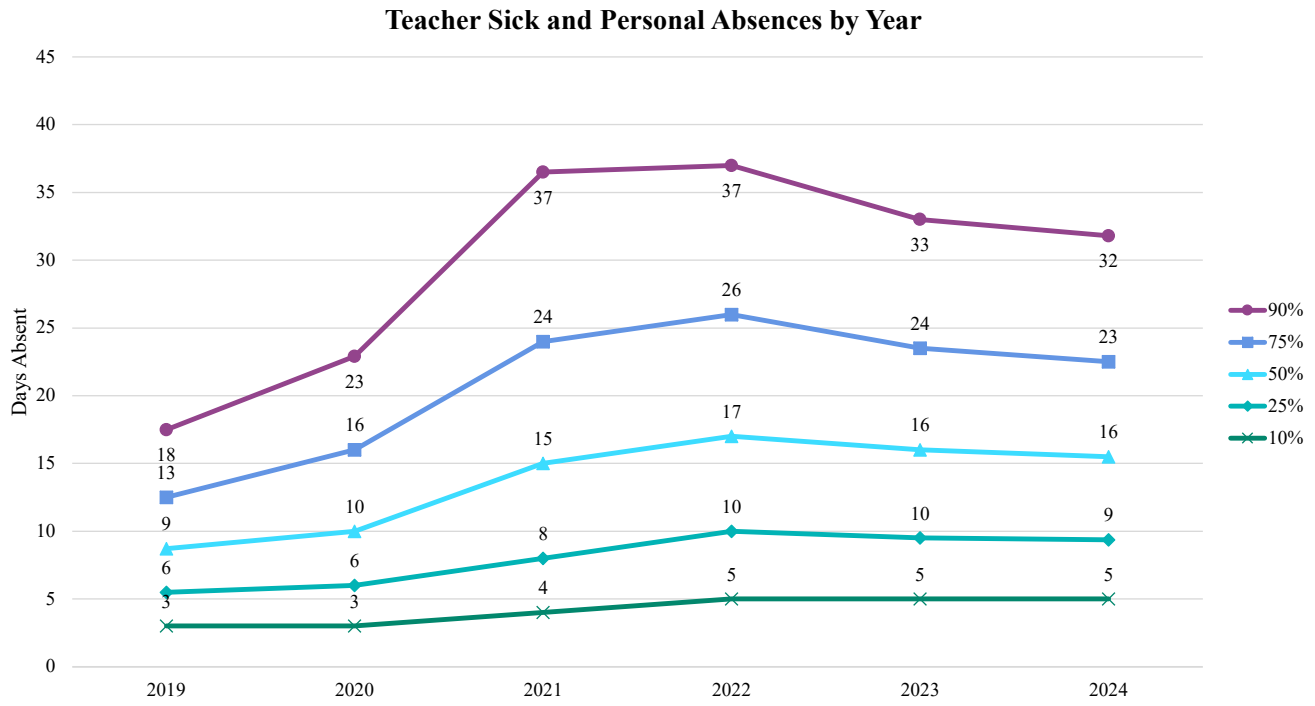
Figure 1: Teacher Total Absences Divided in Percentiles from School Years 2018-19 through 2023-24



Teacher Sick and Personal Absences Over Time

Figure 2 displays trends in teachers' sick and personal absences over time, disaggregated by percentile. Similar to results for total absences, teacher absences related to sick and personal leave were lowest in the pre-pandemic 2018-19 school year. Sick and personal absences increased during the pandemic years (2019-20 and 2020-21), and afterward, peaking in 2021-22. In 2022-23, absence rates declined among teachers in the highest percentiles, while remaining relatively stable at the 10th and 25th percentiles.

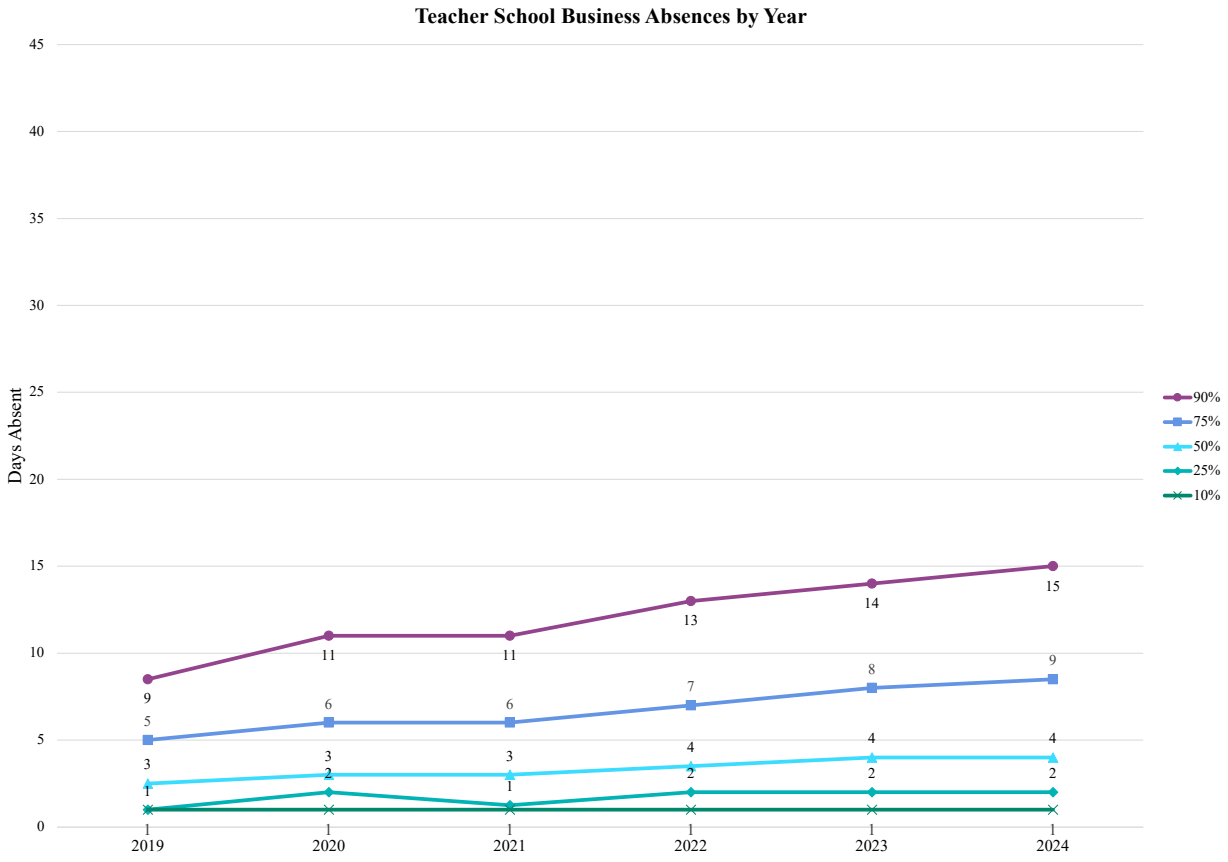
Figure 2: Teacher Sick and Personal Absences Divided in Percentiles from School Years 2018-19 through 2023-24



Teacher Absences Due to School Business

We categorize teacher total absences into three main categories: school business, professional development, and sick or personal leave. *Figure 3* illustrates the change in teacher absences related to school business over time. While increases over time are less extreme than total absences, school business absences are increasing in the higher percentiles (75th and 90th), especially in post-pandemic years. The lowest three percentiles (i.e., 10th, 25th, and 50th) see no or minimal increases.

Figure 3: Teacher School Business Absences Divided in Percentiles from School Years 2018-19 through 2023-24



Teacher Absences Due to Professional Development

Figure 4 includes findings on teacher absences due to professional development, disaggregated by percentile. Professional development absences are, again, at their lowest in the 2018-19 school year. In 2019-20, absences increased modestly among teachers in the upper percentiles (75th and 90th), before declining in the 2020-21 school year and rising again the following year. In contrast, absence rates in the lowest three quartiles remain relatively consistent over the panel.

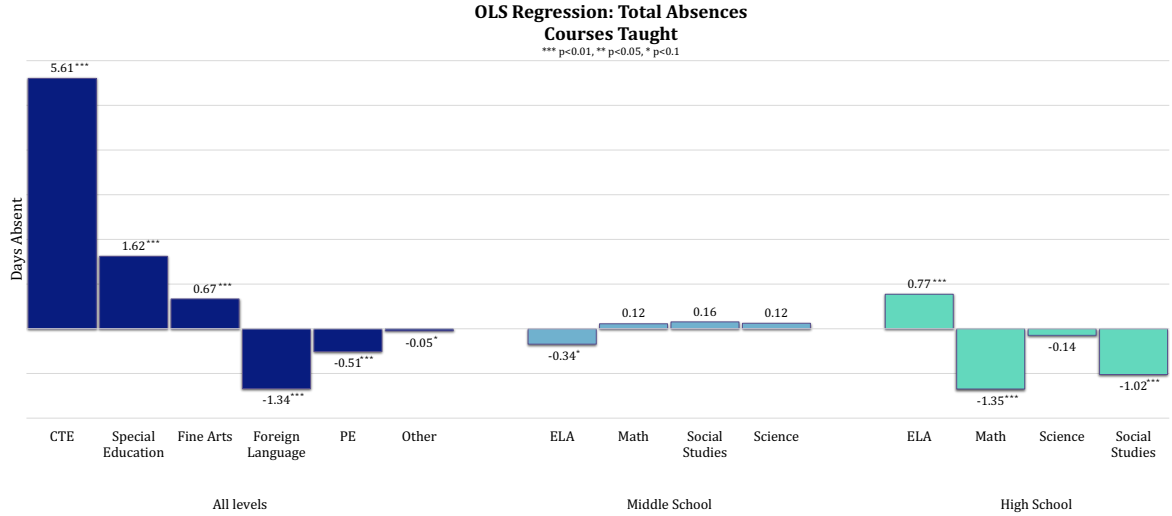
Figure 4: Teacher Professional Development Absences Divided in Percentiles from School Years 2018-19 through 2023-24

Variation in Teacher Absenteeism by Teacher and School Characteristics

Now we investigate the results to our second research question: How do teacher attendance rates vary across different course assignments, individual characteristics, and school characteristics? Models 1- 4 examine variation in teacher absenteeism across teacher- and school-level characteristics and are shown in *Figures 5-8*. The full set of regression estimates for Models 1 through 4 is available in *Table A.1* in the Appendix.

Model 1: Teacher Total Absences

Figure 5a: Variation in Total Teacher Absenteeism by Courses Taught



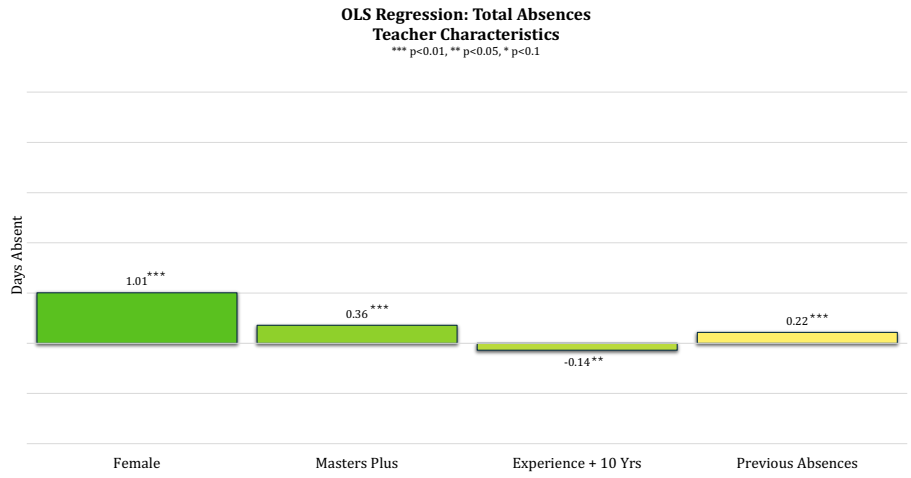
Note: Results include data from the 2018-19 through 2023-24 school years.

The results from our OLS regression measuring variation in teachers' total absenteeism are shown in *Figure 5a.* Elementary teachers serve as the reference group, as they are the largest group and most generalist compared to other, more specialized teaching roles. Teachers who teach a career and technical (CTE) course have the highest levels of absenteeism, with 5.61 more days absent on average than elementary teachers ($p < 0.01$). Special education teachers also have relatively high absence rates, averaging 1.62 more days absent compared to elementary teachers ($p < 0.01$). In contrast, foreign language teachers are absent for 1.34 fewer days on average than elementary school teachers ($p < 0.01$).

Middle school teacher absences are not statistically significantly different from those of elementary school teachers. However, patterns differ at the high school level. High school ELA teachers are absent an average of 0.77 more days than elementary teachers ($p < 0.01$), while high school math and social studies teachers are absent an average of 1.35 and 1.02 fewer days than

elementary teachers, respectively ($p < 0.01$). Absences among high school science teachers were not statistically significantly different from those of elementary teachers.

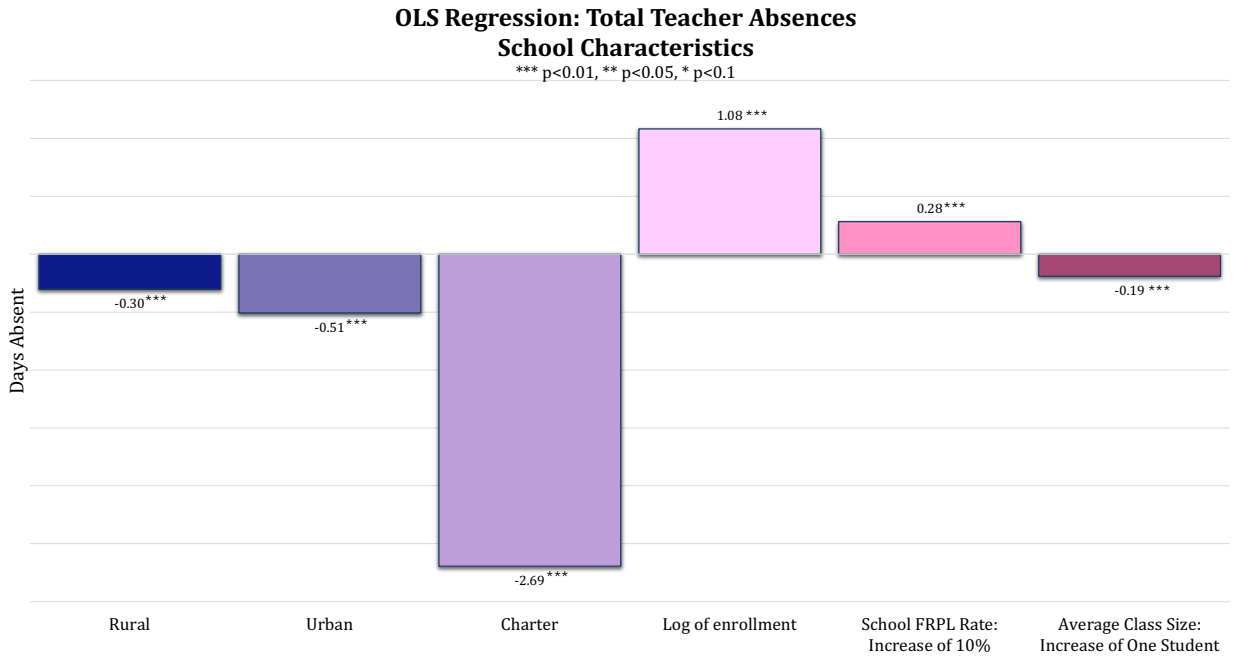
Figure 5b: Variation in Teacher Total Absenteeism by Individual Characteristics



Note: Results include data from the 2018-19 through 2023-24 school years.

Results for additional teacher characteristics can be found in *Figure 5b*, female teachers are absent, on average, 1.01 more days than male teachers ($p < 0.01$). Teachers who hold a master's degree or higher were absent on average 0.36 days more than teachers without a master's degree ($p < 0.01$). Each additional ten years of teaching experience was associated with an average decrease of 0.14 days absent ($p < 0.01$). Absenteeism also appears to be persistent year to year. Specifically, each additional day of absence in the previous year is associated with an average of 0.22 additional days of absence in the current year ($p < 0.01$).

Figure 5c: Variation between Teacher Total Absences and School-level



Note: Results include data from the 2018-19 through 2023-24 school years.

In addition to teacher-level characteristics, we examine variation in absences by school-level characteristics. Results for these characteristics are presented in *Figure 5c* and in the Appendix *Table A.1*. All estimates are statistically significant at the 1% level. Teachers in both rural and urban schools are absent on average 0.30 and 0.51 days fewer, respectively, compared to those in the reference group, towns or suburban areas ($p < 0.01$). Teachers in charter schools are absent an average of 2.69 fewer days than those in traditional public schools ($p < 0.01$). We also find that teacher absences increase with school enrollment: teachers are absent an average 1.08 more days for every 1% increase in student enrollment. Absenteeism is also higher in schools serving larger shares of students from low-income backgrounds: a 10 percentage point increase in the proportion of students eligible for FRPL is associated with an average increase of 0.28 absence days ($p < 0.01$). In contrast, teachers have, on average, 0.19 fewer absent days as the average class size increases for every one student ($p < 0.01$).

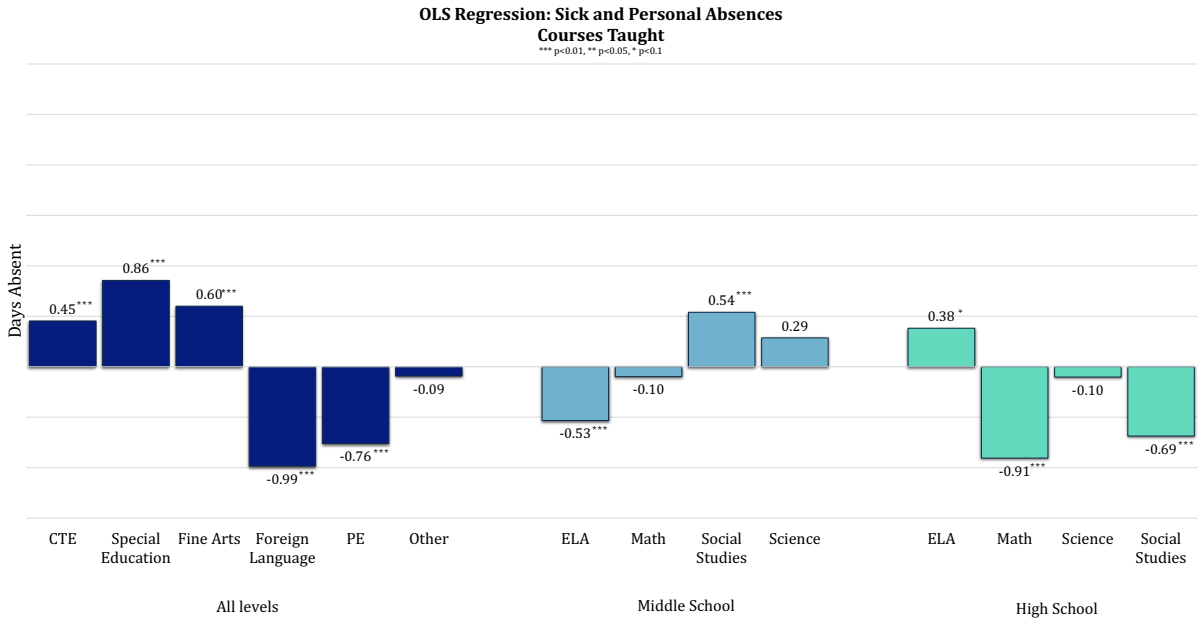
Variation in Teacher Absence Category and Teacher- and School- Characteristics

In Models 2 through 4, we disaggregate total teacher absences into categories, including absences related to school business, professional development, and sick or personal leave.

Model 2: Sick and Personal Absences

In Model 2, teachers' sick and personal absences serve as the outcome variable and, consistent with Models 1, consider the associations with course assignments, teacher characteristics, and school characteristics. Compared to other absence categories, sick and personal absences exhibit greater variability amongst different courses taught and individual teacher characteristics. Results are presented in *Figure* 6a, *Figure* 6b, and full regression results are in the Appendix on *Table A.1.*

Figure 6a: Sick and Personal Teacher Absenteeism Variation with Courses Taught



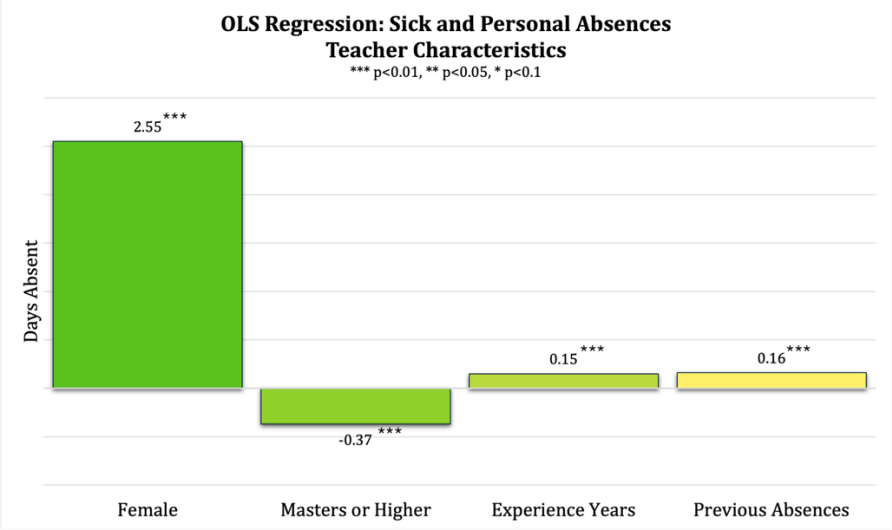
Note: Results include data from the 2018-19 through 2023-24 school years.

There is considerable variability amongst sick and personal absenteeism rates and course assignments. CTE teachers are absent 0.45 more sick and personal days compared to elementary school teachers, while special education teachers are absent 0.86 more days, on average (both $p <$

0.01). Conversely, foreign language and PE teachers have fewer sick and personal absences than elementary teachers, by 0.99 and 0.76 days, respectively (both $p < 0.01$).

Among high school teachers, ELA teachers have, on average, 0.38 more sick and personal days than elementary school teachers, but this is only marginally significant ($p < 0.10$). High school math and social studies teachers have fewer sick and personal absences, by 0.91 and 0.69 days, respectively (both $p < 0.01$), while differences for high school science teachers are not statistically significant.

Figure 6b: Sick and Personal Teacher Absenteeism Variation with Individual Characteristics



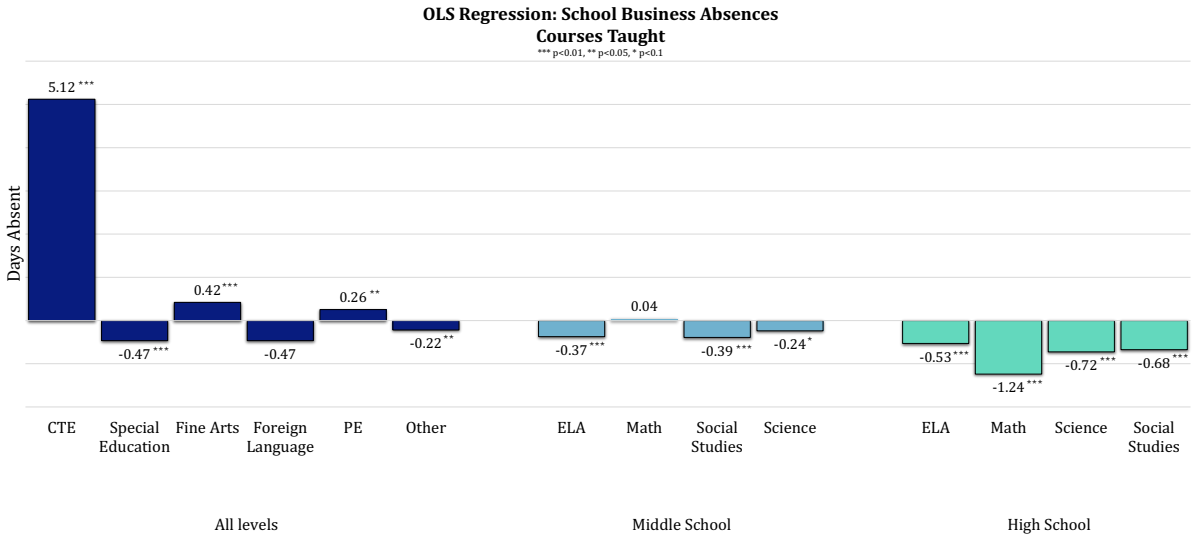
Note: Results include data from the 2018-19 through 2023-24 school years.

Differences by teacher characteristics are presented in *Figure 5b* and are also notable. Female teachers have 2.55 more sick and personal absences than male teachers ($p < 0.01$). Teachers with a master's degree or higher have an average of 0.37 fewer days of absence than those without a master's degree ($p < 0.10$). An additional 10 years of teaching experience is also associated with an average increase of 0.15 days of absence ($p < 0.10$). Previous absences from the prior year are associated with more absences in the current year with an increase of 0.36 days absent for every absence the prior year ($p < 0.01$).

Model 3: School Business Absences

Figure 7a and *7b* present regression results from Model 3 for school business absences by teacher courses taught and individual characteristics.

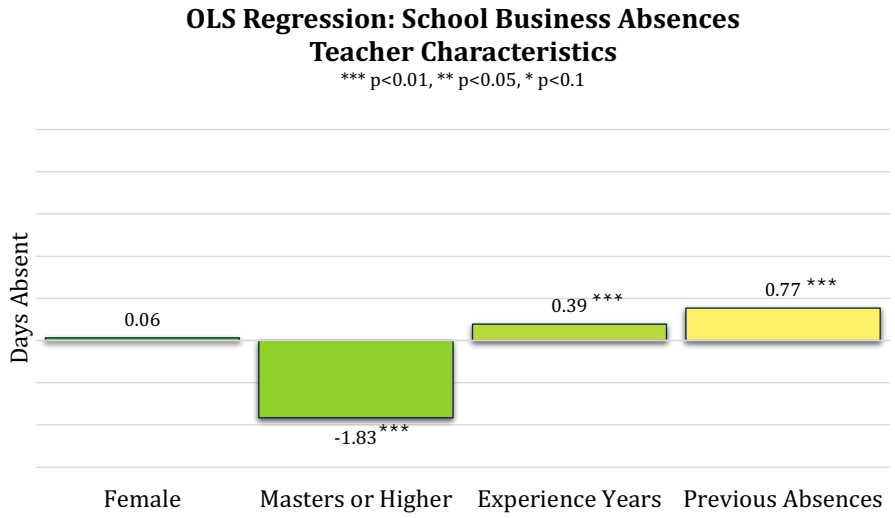
Figure 7a: Variation in School Business Absences with Courses Taught



Note: Results include data from the 2018-19 through 2023-24 school years.

For courses taught, elementary still remains the comparison group. Similar to the patterns observed for total absences, CTE teachers have the highest rates of school business absences, averaging 5.12 more days than elementary school teachers ($p < 0.01$). Most other teachers, including almost all those teaching middle- and high-school core subjects, have fewer school business absences than elementary teachers. This pattern may reflect differences in instructional expectations across grade levels, such as greater participation in field trips among elementary school teachers. High school math teachers have the lowest rates of school business absences, averaging 1.24 fewer days than elementary teachers ($p < 0.01$).

Figure 7b: Variation in School Business Absences with Individual Characteristics

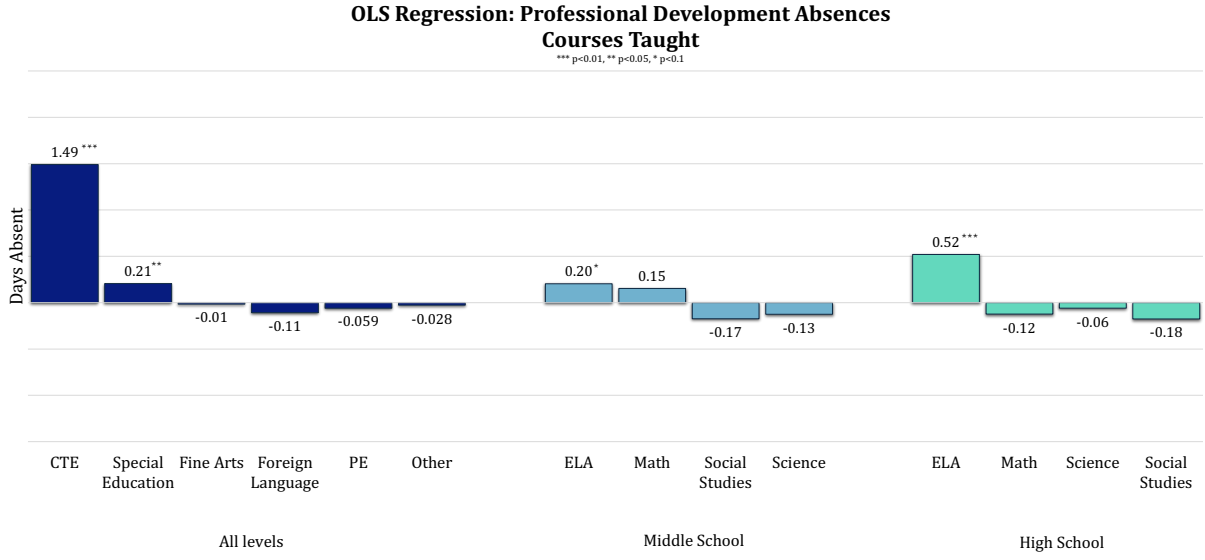


Note: Results include data from the 2018-19 through 2023-24 school years.

Model 4: Professional Development Absences

Model 4 examines variation in teacher absences due to professional development by teacher and school characteristics. Results are presented in *Figure 8a* and *8b*, with full estimates available in the Appendix *Table A.1*.

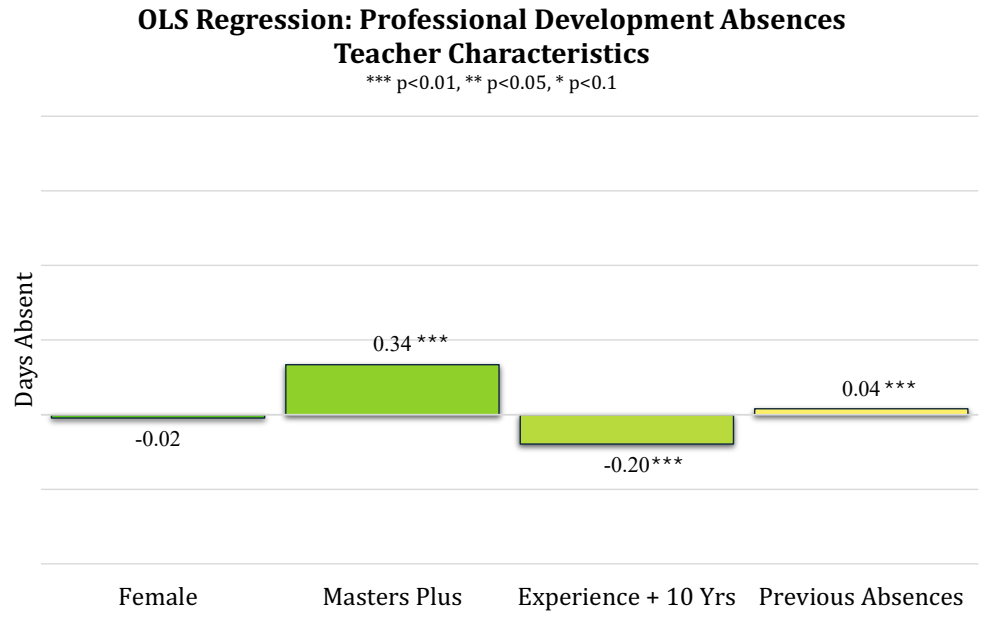
Figure 8a: Variation in Professional Development Teacher Absences by Courses Taught



Note: Results include data from the 2018-19 through 2023-24 school years.

Figure 8a shows that, on average, CTE teachers are absent 1.49 more days for professional development compared to elementary teachers ($p < 0.01$). Special education teachers are also absent more often for professional development, averaging 0.21 more days than elementary teachers ($p < 0.05$). Patterns also vary by core subject taught. ELA teachers at both the middle and high school levels are absent for professional development more than elementary school teachers, at 0.20 days ($p < 0.01$) and 0.52 days ($p < 0.01$), respectively. However, teachers in other subjects, including math, do not differ significantly from elementary teachers in professional development absences.

Figure 8b: Variation in Professional Development Teacher Absences by Individual Characteristics



Note: Results include data from the 2018-19 through 2023-24 school years.

In *Figure 8b, the* results related to professional development and teacher characteristics are available. There are no statistically significant differences between female and male teachers. Teachers who hold a master's degree or higher are absent on average 0.34 more days for

professional development compared to teachers without a master's degree ($p < 0.01$). For every 10 years of teaching experience gained, teachers are absent for professional development 0.20 less ($p < 0.01$).

VII. Conclusion

Results indicate that teacher total absenteeism rates have changed since the pandemic. Similar to student absences, teacher absences are substantially higher since the Covid-19 pandemic. Unlike student absences, which remain high, teacher absences rose substantially during the pandemic and decreased somewhat afterward, but not to pre-pandemic levels. Variation in patterns of student and teacher absence may be related to discrepancies in how absences are recorded. Students were often counted present during the pandemic, even if they were home-quarantined or sick. If a teacher needed to stay home because they were sick or quarantined, a substitute would need to be found, and thus the absence would be recorded. This may explain why teacher total absenteeism rates rose during the pandemic and in the years afterward, whereas student absenteeism rates rose substantially in the post-pandemic years.

We see that teacher absenteeism rates, similar to student absenteeism rates, have increased for everyone, those with low and high absenteeism, but have a more pronounced impact for those at higher absenteeism percentiles. There are thoughts that after the Covid-19 pandemic, our societal views on regular attendance to work and school have altered. This may be related to changing views on appropriate thresholds for staying home due to minor symptoms of illness. There could also be more societal acceptance for taking absences or days off related to mental health.

Once teacher absences are parsed out into different groups: sick and personal days, school business, and professional development, we find evidence of increases in all teacher absenteeism categories over time, especially amongst those teachers who have absences in the highest percentiles. Beyond sick and personal days, there is evidence that absences related to school business and professional development are increasing. These increases are more pronounced amongst teachers who fall into higher percentiles of absences. Schools may be promoting more opportunities for teachers to be outside the classroom for school business, such as field trips and school competitions, as well as professional development. Increased instructional initiatives related to the science of reading, high-quality instructional materials, multi-tiered intervention systems, and inclusive practices may be associated with an increase in professional development days. While these opportunities may benefit students and teachers, they must also be weighed against the lost classroom learning time in the classroom. This research indicates that teachers are out of the classroom more for both personal and work reasons than pre-pandemic.

With indications that teacher absences, both personal and work-related, have increased, it is important to consider their implications. Teacher absences have real costs and productivity losses in schools. Student absenteeism has a negative impact, which is well-documented, including associations with lower academic outcomes, a higher likelihood of dropping out, and negative social-emotional outcomes. Teacher absenteeism, although less documented, is also associated with negative outcomes, both in student learning and in the costs to school districts of arranging substitute teachers.

Study Limitations

Our study is not causal and is limited to the relationship between teacher absenteeism and individual and school characteristics. We also have limitations within our data, which only includes attendance information for teachers with at least one absence.

This study also does not consider how teacher absenteeism impacts student outcomes. In future studies, we hope to further study teacher absenteeism and its impact on student academic growth and other outcomes, including student absenteeism rates.

Policy Recommendations

Increased post-pandemic absences are not unique, and there is evidence of a general increase in worker absences. However, teacher absences come at a real cost, both monetary and in lost productivity, that policymakers and practitioners should proactively address.

The findings from this study suggest that teacher absenteeism is not only elevated in the post-pandemic period but also varies meaningfully by teacher role and type of absence. As such, policy responses should adopt targeted, data-informed strategies.

Overall, given the strong evidence of persistence in teacher absenteeism over time, early identification and intervention are critical. Teachers with high absence rates in one year are significantly more likely to have high absence rates in subsequent years. Districts should implement early warning systems that flag teachers approaching key thresholds (e.g., 10 days of absence) and provide targeted supports. These interventions should be framed as supportive rather than punitive, with the goal of maintaining teacher well-being while preserving instructional time.

Furthermore, districts should carefully consider the dosage and delivery of professional development and school business activities. The observed increase in absences in these categories suggests that well-intentioned initiatives may be contributing to lost instructional time, particularly among teachers already at higher absence rates. Policymakers should prioritize more efficient models of professional learning that minimize time out of the classroom while maintaining effectiveness. Similarly, clearer guidelines around school business activities could help ensure that these absences are purposeful and effectively distributed.

More specifically, attention should also be given to career and technical education (CTE) teachers, who exhibit substantially higher absence rates, particularly for school business and professional development. These patterns likely reflect the unique demands of CTE programming, including student competitions, industry partnerships, and off-campus learning experiences. While these activities provide important educational value, policymakers and district leaders should evaluate how to better balance these opportunities with instructional continuity. This may include increasing in-school supports, restructuring schedules, or reevaluating how teacher absences are recorded in these specific content areas.

This study also highlights the need for greater consistency and clarity in how teacher absences are recorded and categorized. Variability in reporting practices across schools may obscure true patterns in absenteeism and limit policymakers' ability to make informed decisions. Establishing standardized definitions and reporting protocols for absence types, particularly for school business and professional development, would improve data quality and allow for more accurate monitoring and cross-district comparisons.

Districts and other stakeholders should also consider promoting more educational positions with more flexibility. There is evidence of not only higher absenteeism rates over time but also variability in absenteeism rates by working conditions, job assignments, and individual characteristics, with the latter more closely associated with external work-condition factors, suggesting that some individuals could benefit from non-full-time employment opportunities. Increasing flexible work options could reduce absenteeism in full-time positions and increase the number of workers who seek employment in the education field.

Taken together, these recommendations emphasize a balanced approach: recognizing that some teacher absences are necessary and beneficial, while also ensuring that they are managed strategically to minimize disruptions to student learning.

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IX. Appendix

Appendix A.1: Full Models of Teacher Absenteeism Association with Teacher Demographics and School Characteristics

	1	2	3	4
Variables	Total Absences	Professional Development Absences	School Business Absences	Sick Personal Absences
Previous Total Absences	0.216***	0.0394***	0.0766***	0.157***
	(-0.026)	(-0.003)	(-0.010)	(-0.019)
Career & Technical Education	5.606***	1.490***	5.120***	0.453*
	(-0.313)	(-0.188)	(-0.254)	(-0.234)
Fine Art	0.669***	-0.015	0.422***	0.599***
	(-0.198)	(-0.142)	(-0.147)	(-0.189)
Foreign Language	-1.340***	-0.108	-0.466	-0.985**
	(-0.418)	(-0.285)	(-0.377)	(-0.392)
Middle School: ELA	-0.341*	0.204*	-0.370***	-0.533***
	(-0.188)	(-0.107)	(-0.126)	(-0.184)
Middle School: Math	0.115	0.153	0.042	-0.097
	(-0.203)	(-0.103)	(-0.152)	(-0.195)
Middle School: Social Studies	0.155	-0.174	-0.391***	0.539***
	(-0.193)	(-0.111)	(-0.129)	(-0.188)
Middle School: Science	0.124	-0.125	-0.236*	0.286
	(-0.205)	(-0.116)	(-0.139)	(-0.201)
Other	-0.046	-0.028	-0.217**	-0.092
	(-0.127)	(-0.084)	(-0.108)	(-0.119)
P.E.	-0.509***	-0.059	0.255**	-0.760***
	(-0.133)	(-0.086)	(-0.111)	(-0.124)
High School: ELA	0.772***	0.520***	-0.530***	0.381*
	(-0.225)	(-0.179)	(-0.148)	(-0.206)
High School: Math	-1.345***	-0.123	-1.238***	-0.905***
	(-0.234)	(-0.163)	(-0.168)	(-0.216)
High School: Science	-0.144	-0.060	-0.723***	-0.101
	(-0.250)	(-0.177)	(-0.199)	(-0.221)
High School Social Studies	-1.023***	-0.175	-0.675***	-0.686***
	(-0.247)	(-0.200)	(-0.184)	(-0.223)
Special Education	1.623***	0.206**	-0.465***	0.855***
	(-0.198)	(-0.098)	(-0.123)	(-0.186)

Variables	1 Total Absences	2 Professional Development Absences	3 School Business Absences	4 Sick Personal Absences
Master's Degree or Higher	0.357***	0.336***	0.388***	-0.367***
	(-0.115)	(-0.069)	(-0.094)	(-0.106)
10 Years Additional Experience	-0.0139**	-0.020***	0.006	0.015***
	(-0.006)	(-0.003)	(-0.005)	(-0.005)
Female	1.005***	-0.021	-1.828***	2.547***
	(-0.150)	(-0.104)	(-0.140)	(-0.128)
Rural	-0.304**	0.206***	-0.110	-0.258**
	(-0.125)	(-0.069)	(-0.103)	(-0.118)
Urban	-0.507***	1.107***	-0.720***	-0.816***
	(-0.136)	(-0.081)	(-0.120)	(-0.129)
Charter	-2.693***	-0.243	0.336	-0.552
	(-0.432)	(-0.454)	(-0.278)	(-0.377)
Log of Student Enrollment	1.080***	0.004	0.393***	0.914***
	(-0.104)	(-0.072)	(-0.091)	(-0.095)
Free and Reduced Lunch Percentage	2.804***	1.144***	-0.341*	3.179***
	(-0.231)	(-0.135)	(-0.199)	(-0.217)
Average Class Size	-0.190***	-0.048***	-0.195***	-0.086***
	(-0.016)	(-0.009)	(-0.012)	(-0.012)
Constant	11.380***	3.900***	5.761***	6.712***
	(-0.821)	(-0.513)	(-0.667)	(-0.723)
Observations	102,255	42,053	37,783	102,255
R-squared	0.101	0.039	0.163	0.059

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1