Teacher Turnover in North Carolina During the Covid-19 Pandemic: The Role of Increases in Student Learning Loss, Chronic Absenteeism and Disciplinary Issues

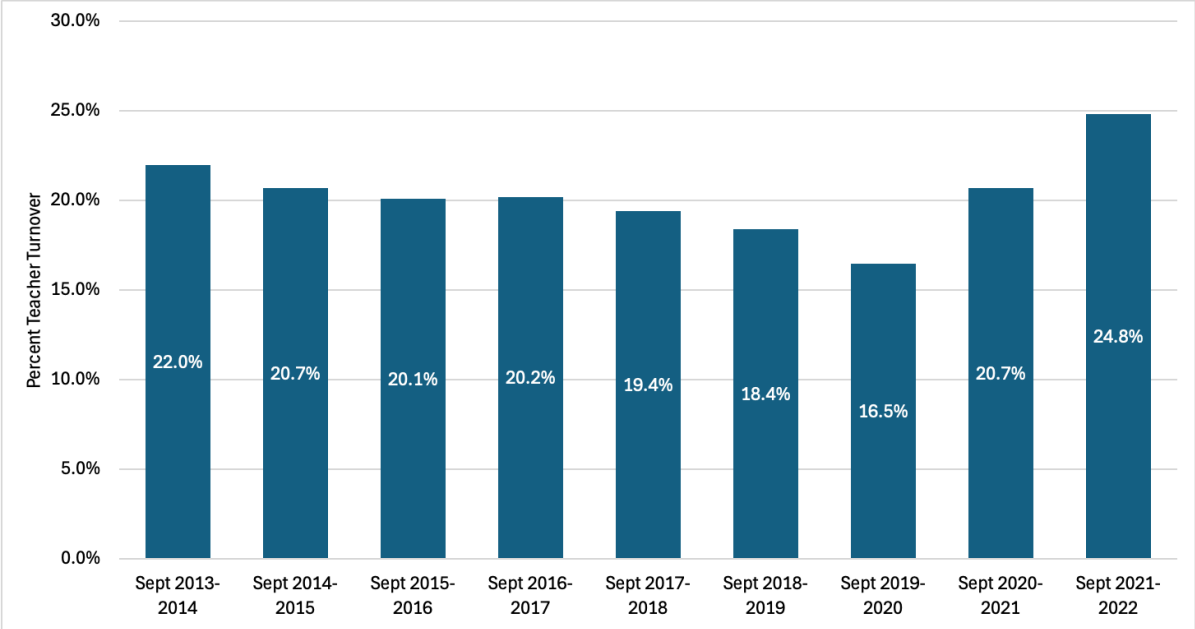
Public schools in North Carolina experienced significant increases in teacher turnover during the pandemic. Turnover rose from 24% in September 2018-September 2019 to 30% in September 2021-September 2022.[1] Teacher turnover is costly. It is associated with significant student learning loss.[2] Costs of recruiting and training new teachers are estimated at upward of $20,000 per teacher.[3]

Previous research finds that student learning and behavioral challenges are associated with teacher burnout and turnover.[4,5] During the pandemic, the percentage of students scoring below proficiency in math or reading increased from 47% in 2018/19 to 56% in the 2021/22 school year; chronic absenteeism rose dramatically from 10% to 26% over the same period. Suspension rates also rose slightly. We analyze how these factors contributed to heightened teacher turnover in North Carolina Public schools during the pandemic. We find that student learning loss and behaviors were significant factors, explaining about 1 out of 6 additional teacher departures from their schools during the pandemic.

TEACHER TURNOVER DURING THE PANDEMIC

Figure 1 shows rates of teacher turnover in North Carolina public schools across years.[i] Teacher turnover is measured based on administrative records and defined as the percentage of teachers who were teaching in a given school in September of the given school year but were no longer teaching at that school the following September. Thus, turnover includes teachers who left teaching in North Carolina public schools, as well as teachers who changed schools or moved to administrative positions. In the years leading up to the pandemic (2013/14 to 2018/19), between 18 and 22% of teachers left teaching at their school in a given year. This dipped slightly in the school year that was interrupted by the pandemic (2019/20) and then returned to 20.7% during the 2020/21 school year when school districts offered a mix of virtual, hybrid, and online instruction. Teacher turnover then rose to 24.8% during the 2021/22 school year when schools returned to mostly normal operations and in-person instruction.

Figure 1. Teacher Turnover in North Carolina Public Schools

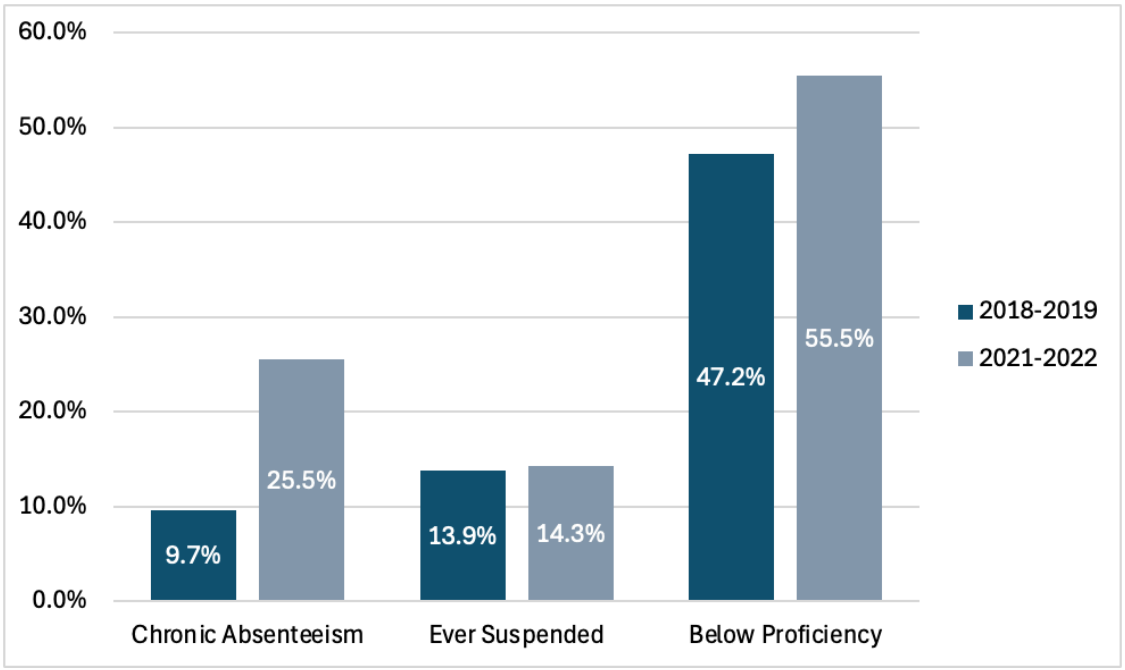


INCREASES IN ACADEMIC AND BEHAVIORAL CHALLENGES DURING THE PANDEMIC

When teachers and students returned to mostly normal in-person instruction in the 2021/22 academic year, they were faced with significant challenges from the pandemic. Figure 2 shows that chronic absenteeism rose dramatically from 10% to 26% from 2018/19 to 2021/22 school year, the percent ever suspended rose by almost 0.5 percentage point, and the percent scoring below proficiency in math or reading rose from 47% to 56% over the same period.[ii]

Figure 2. Chronic Absenteeism, Suspensions and Proficiency Rates from Before to During the Covid-19 Pandemic

[a]

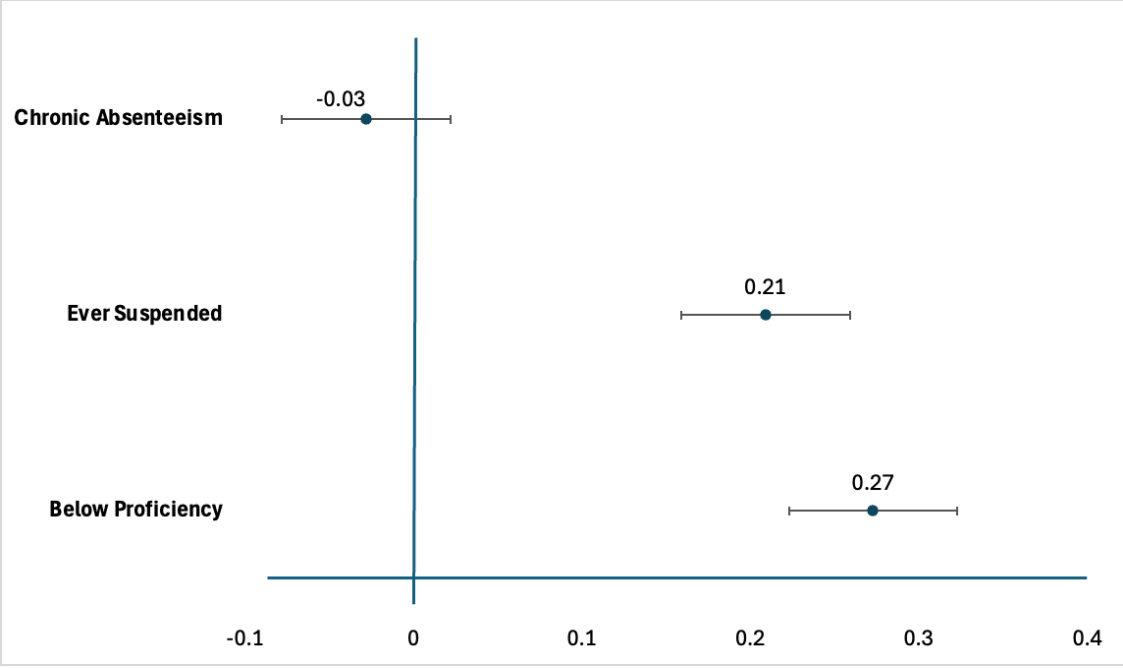


EFFECT OF LEARNING LOSS, BEHAVIORS, AND CHRONIC ABSENTEEISM ON TEACHER TURNOVER

Existing research suggests that teacher satisfaction and burnout may be associated with absenteeism[6] and disciplinary infractions.[4] Other research suggests that proficiency rates and disciplinary infractions are associated with teacher turnover.[5,7] We consider how student academic and behavioral challenges (absenteeism, disciplinary infractions, and performance below proficiency) contributed to teacher turnover during the pandemic. Because we are concerned that there may be difficult-to-measure confounding factors, like teacher quality, which may lead us to overstate the effect of student academic and behavioral challenges, we use a teacher fixed effects approach that focuses on changes within teachers over time in proficiency rates, disciplinary infractions and chronic absenteeism of their students. We also allow for the effects of academic and behavioral challenges to differ during the pandemic compared to pre-pandemic to capture the changing job market conditions teachers faced following the pandemic.[iii]

Figure 3 shows marginal effects of chronic absenteeism, ever suspended and below proficiency on turnover in the 2021/22 school year. Brackets indicate 95% confidence intervals. Chronic absenteeism has a small negative marginal effect, but it is not statistically significantly different from 0. Suspensions have a significant and positive marginal effect, with higher suspension rates associated with increased turnover. Percent of students scoring below proficiency also has a positive marginal effect, which implies that as students fall behind academically, teacher turnover increases. These estimates suggest that a 10-percentage point increase in below proficiency rates would raise turnover by about 2.7 percentage points, while a 10 percentage point increase in suspension rates would raise turnover by about 2.1 percentage points. Considering the magnitude of changes in academic and behavioral challenges over this period, increases in ever suspended and below proficiency explain 1 out of 6 additional teacher moves.[iv]

Figure 3. The Effect of Academic and Behavioral Challenges on Teacher Turnover (Sept 2021- Sept 2022)



TEACHER PERSPECTIVES ON COVID-19 PANDEMIC IMPACTS ON STUDENT ACADEMIC AND BEHAVIORAL NEEDS

We now turn to the Spring 2022 biennial Teacher Working Conditions Survey in North Carolina to better understand teacher perceptions of learning loss and behavioral needs during the pandemic. We show differences in perceptions by high and low turnover schools; high turnover schools were defined as those falling in the top tercile of teacher turnover for the 2021/22 academic school year, while low turnover schools were those in the bottom tercile.[v]

Figure 4 shows teacher's perceptions of academic progress during the pandemic by high and low turnover schools. In Spring 2022, most teachers (around 70%) at both high and low turnover schools reported that students were behind by 3 months or more compared to the typical school year. In high turnover schools, 42% of teachers reported that students were behind by 1 year, compared to 31% in low turnover schools.

Figure 4. Teacher perceptions of academic progress in 2022 compared to the typical (pre-covid) school year

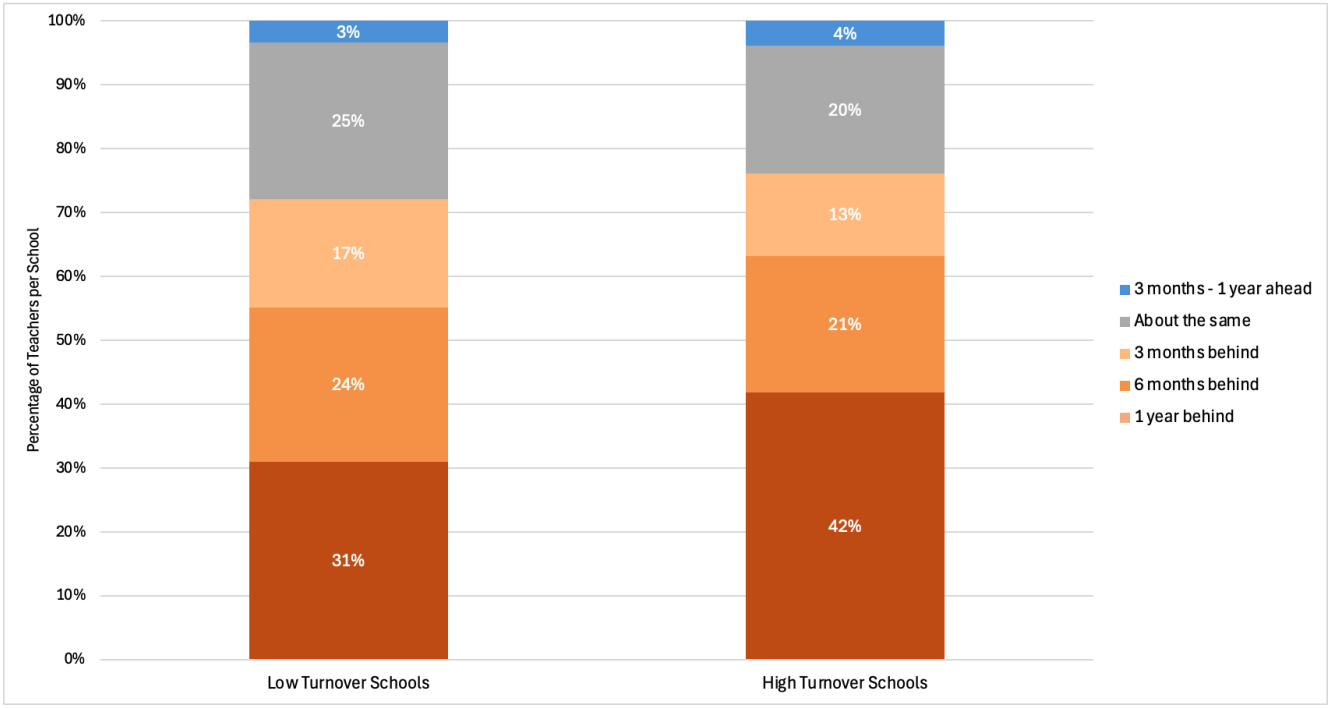


Figure 5 shows that a majority of teachers reported needing to spend half or more of the 2021/22 academic year reteaching prior academic year grade standards. This number is higher in high turnover schools (69%) compared to low turnover schools (58%).

Figure 5. Time spent reteaching prior grade academic standards in high and low turnover schools

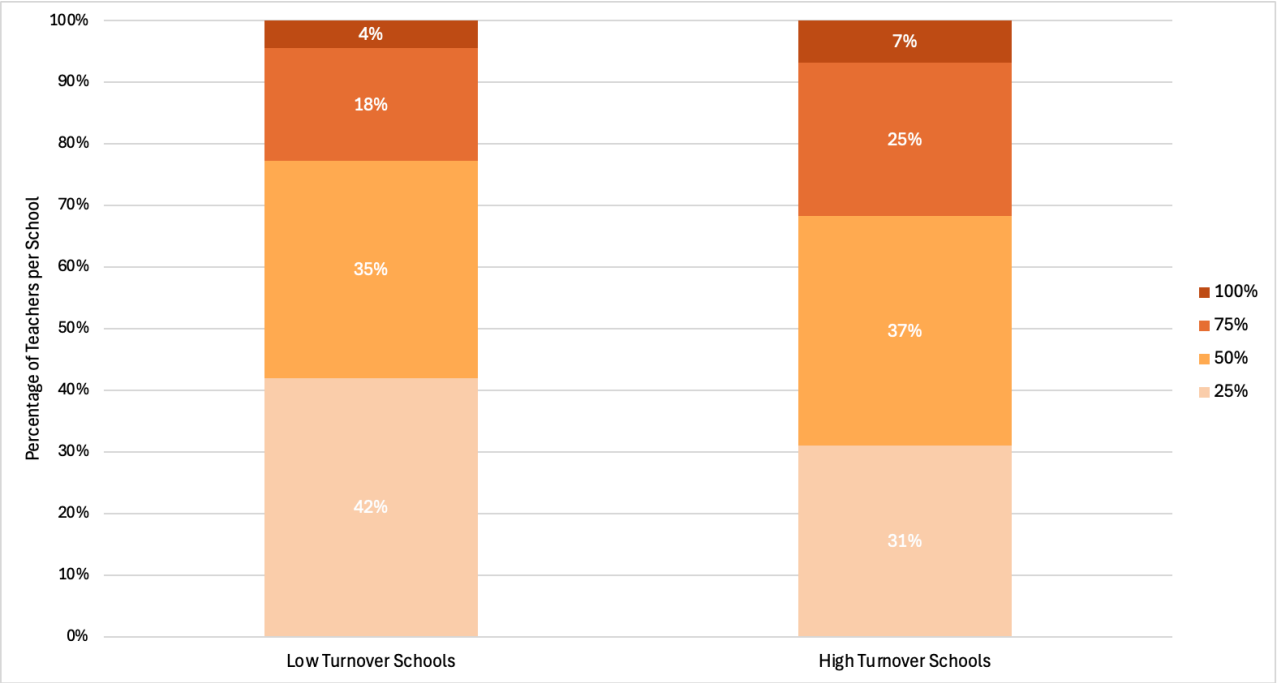
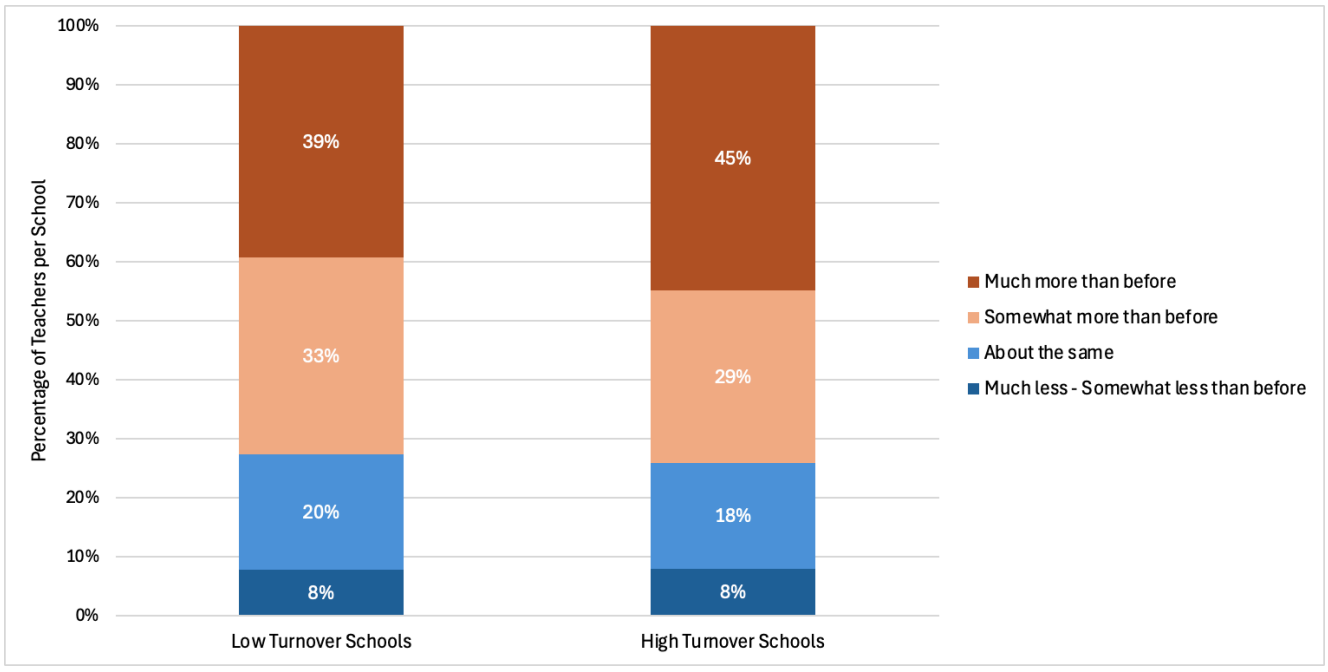


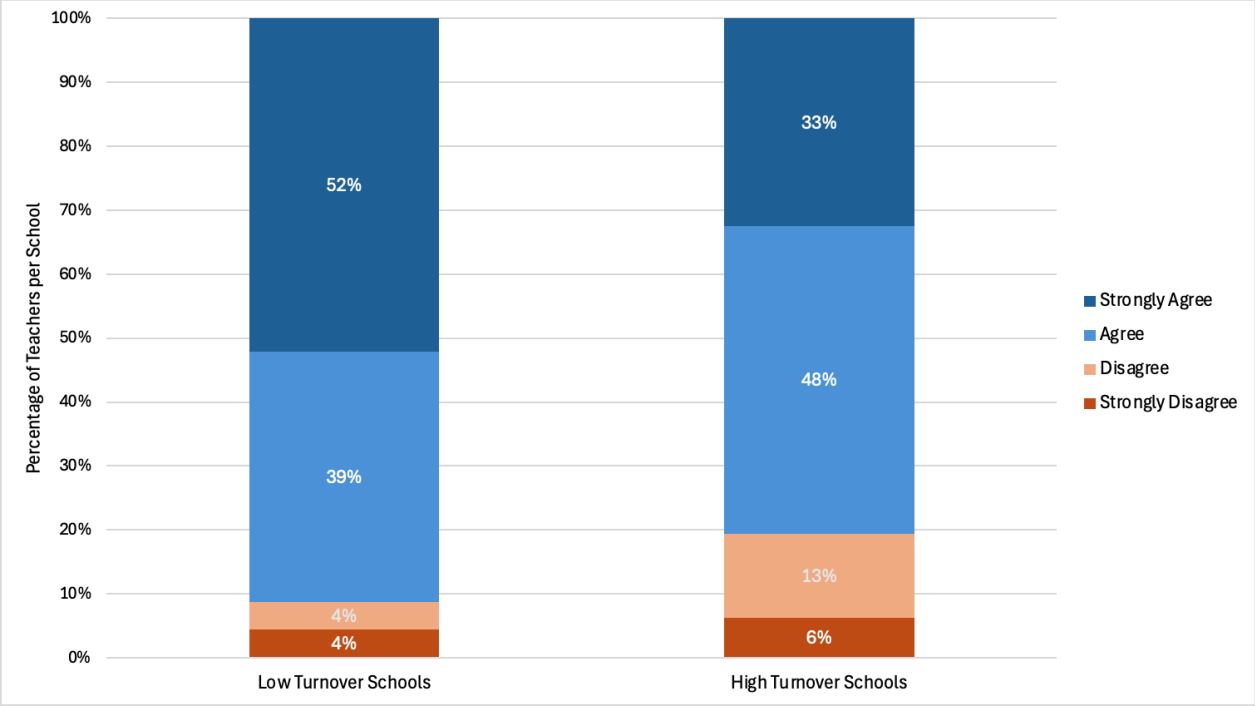
Figure 6 reports teacher perceptions of student needs for social, emotional and mental health support in the 2021/22 school year compared to the same point in a typical school year. The majority report somewhat more to much more student needs. 45% of teachers in high turnover schools reported students' needs were much more compared to 39% in low turnover schools.

Figure 6. Student needs for social/emotional/mental health support in the 2021/22 compared to typical school year



Finally, Figure 7 shows teachers' agreement with the statement that overall their school is a good place to work and learn. A strong majority of teachers agreed that their school is a good place to work an learn. 19% of teachers in high-turnover schools disagreed with this statement compared to 8% of teachers in low-turnover schools.

Figure 7. Overall, my school is a good place to work and learn



RECOMMENDATIONS

Our findings suggest low proficiency rates and disciplinary issues explain about 1 and 6 of the additional teacher losses experienced during the 2021/2022 year. This suggests that policies that improve these aspects of teacher working conditions may also help to reduce teacher turnover. We now consider some policies that may address these different factors affecting teacher turnover.

DISCIPLINARY ISSUES

To address discipline-related turnover, evidence supports expanding Tier 1 MTSS behavioral supports, closing critical staffing gaps in school-based mental health services, and scaling mentorship initiatives for early-career teachers. Strengthening these supports can create improvements in both student outcomes and teacher retention, creating a more stable and supportive school environment across North Carolina.

Strengthening Multi-tiered Systems of Support. MTSS is a school improvement framework that encompasses academic, behavioral, social, and emotional instruction and support. In a typical three-tiered model, Core (Tier 1) includes the instruction and support all students receive; Supplemental (Tier 2) includes additional instruction or interventions for students who need extra support; and Intensive (Tier 3) includes targeted, small-group or individualized interventions for students with more significant needs. Research shows that a similar support framework reduced teacher burnout and improved school climate.[8]Targeted (Tier 2) teacher-delivered behavioral interventions in K–5 classrooms have been shown to reduce disruptive behavior and are associated with better teacher perceptions of classroom climate.[9] It is important to note the strong relationship between disciplinary issues and mental health needs of students.[10] In North Carolina, several districts have piloted school-wide mental health interventions, Project AWARE/ACTIVATE, which includes expanding MTSS to mental health needs.[11] We can learn from these districts the challenges and successes of applying MTSS to improve mental health supports, potentially addressing behavioral issues at their source. Expanding Tier 1 supports is critical because these interventions reach the largest number of students and help prevent the escalation of behavioral issues. By embedding behavioral expectations, social-emotional learning, and mental health promotion into core instruction, Tier 1 MTSS reduces the burden on Tier 2 and Tier 3 systems and improves overall school climate.[12]

> Expand Tier 1 behavioral supports to embed social-emotional learning, clear behavioral expectations, and mental health promotion into everyday instruction. This prevents escalation of student behavioral issues, reduces teacher burnout, and strengthens overall school climate.

Close critical staffing gaps in school-based mental health services. North Carolina ranks 46th nationally in mental health support for students, employing only 25% of the recommended number of school psychologists and social workers.[13] Research consistently shows that when schools are appropriately staffed with counselors, social workers, and psychologists, both student outcomes and teacher experiences improve. For example, schools with more mental health professionals have lower suspension rates, stronger student-teacher relationships, and improved academic achievement.[13] They also see reductions in teacher stress and burnout, especially in high-need schools where behavioral and emotional challenges are more prevalent.[14] Oklahoma and Nevada used federal relief funds to hire school counselors and mental health professionals, while Iowa brought in additional nurses, support specialists, and also hosted fully funded summer learning programs to address academic and emotional needs.[15,16,17]

Scale mentorship for early career teachers. Mentorship programs may be particularly helpful for supporting teacher retention when dealing with behavioral challenges and classroom management.[18,19] For instance, Illinois created a Building Mentor program that paired experienced teachers with new hires, offering practical guidance through their first year.[20] North Carolina has found significant benefits from the New Teacher Support Program which provides trained mentors to beginning teachers.[21] These benefits may be observed most in low performing schools that struggle most with teacher retention.[21]

STUDENT LEARNING LOSSES

Reforms targeting student learning losses has garnered significant attention in the post-COVID-19 era. School closures and inconsistent access to technology exacerbated learning losses throughout the United States.[22-24] Effects of learning loss on teacher turnover could create a spiral that contributes to additional learning loss given evidence of significant harmful effects of teacher turnover on student achievement.[2]

Expand Summer Learning Programs. COVID-19 school closures widened academic gaps, with particularly severe losses in math and reading among disadvantaged students.[24] In response, many states launched intensive summer programs.[25] Iowa, for example, used federal recovery funds to host fully funded summer school sessions focused on both academic and emotional recovery.[26] Despite summer learning showing mixed outcomes depending on delivery format, research indicates that in-person programs with trained educators are among the most promising tools for boosting student learning growth.[27]

Invest in High-Impact Tutoring. High-dosage tutoring, which is structured, frequent, and relationship-based, is widely considered one of the most effective interventions for learning recovery. Studies show it can produce learning equivalent to an additional three to fifteen months of schooling when implemented well.[28] Minnesota and other states have used federal ESSER funds to scale tutoring programs in response to pandemic-related learning loss.[29] Research from Union County, North Carolina also shows promising results, particularly when it is applied to whole grades.[30] Expanding access to high-impact tutoring in North Carolina, specifically in math and reading for grades 3-8, could directly address academic deficits while also improving classroom engagement and teacher morale.

> North Carolina can address COVID-19 learning losses by expanding summer learning and high-impact tutoring programs. Research out of Union County shows that high dosage tutoring is also cost effective compared to other tutoring programs and interventions

Leveraging Accountability for Formative Purposes. Traditional accountability systems usually rely on standardized test scores to evaluate schools and teachers. Depending on teacher's perceptions of accountability and how it has been implemented, it has been associated with increased stress and turnover.[31-33] Shifting to more formative use of assessment to improve teaching practices may help as well as considering ways to better partner with teachers in implementation.[34,35] When applied well, accountability can help schools identify learning gaps, target resources, and support teacher professional development.

CONCLUSION

Teacher turnover rates in North Carolina public schools rose significantly in the pandemic. We find that these increases can be partially attributed to concurrent increases in behavioral issues and learning loss. Increased earning loss and disciplinary issues explain about 1 in 6 additional teacher departures in 2021/22. We also find significant effects of these factors prior to the pandemic suggesting that the problems were just magnified by the pandemic. Teacher reports also support these findings. Teachers in schools with higher turnover also experienced significant new academic and behavioral challenges from their students during the pandemic and lower satisfaction with their school.

Research and practice point to potential solutions. Behavioral issues may be reduced through bolstering mental health support staff, multi-tiered systems of support and early teacher coaching. Student learning loss can be mitigated through summer school, high dosage tutoring and well-designed accountability systems. Our research highlights that policies implemented to bolster student achievement and behaviors may also have important spillover effects to teacher turnover. Given associations of teacher turnover with future learning loss and behavioral issues, this may multiply the benefits of interventions targeting student learning loss and behavioral infractions and further justify educational investments in North Carolina students.

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i. These averages reflect the percentage of teachers in a given year who leave their given school in North Carolina. The total number of teachers in our sample in a given year ranges from 74312 to 81044.

ii. We measure below as the percentage of students in a school that score below level 3 in math or reading. We measure disciplinary infractions based on whether the student was ever suspended over the course of the school year. Chronic absenteeism is defined as missing 10% or more of school days a year. We use the total number of schools days to determine chronic absenteeism. Official counts will be different for the small number of students that change schools during the school year.

iii. All models control for year indicators. Results are similar and slightly smaller with a school fixed effect models and when controlling for student demographics (race/ethnicity, gender, economic disadvantage, number of students) and teacher characteristics (experience, experience-squared, tenure, tenure-squared, certification status, race/ethnicity, gender, salary, licensure), grade indicators, and when allowing the controls also to have different effect during the pandemic/post-pandemic years. The only difference is that in the school fixed effect models the effect of chronic absenteeism becomes negative, predicting lower teacher turnover when chronic absenteeism is higher. We do not want to over interpret this finding given that it goes away in teacher fixed effect models where we are better able to control for matching of teachers to students and in models where we consider school-level averages of students characteristics rather than classroom averages, which would not be biased by matching.

iv. This number was calculated by performing a mediation analysis to capture the extent to which increases suspension and below proficiency mediated the effects on teacher turnover in 2021/22.

v. We report percentages out of total number of teachers who responded with an answer, other than “don’t know” or “not sure”.

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