Fact Sheet | Regional Educational Laboratory Mid-Atlantic

School climate during the COVID-19 pandemic in a sample of Pennsylvania schools

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The COVID-19 pandemic and related disruptions to schooling produced large negative impacts on student learning.[1,2,3,4] The enormous disruptions seem likely to have affected school climate as well, but the relationship between pandemic disruptions and school climate has not previously been examined in published research. School climate describes the quality and character of school life, including student and staff experiences of interpersonal relationships, teaching and learning practices, and school norms and values.[5] In school, the sudden shift to remote and hybrid learning, along with safety protocols and physical distancing measures, may have challenged the sense of belonging, engagement, and support that typically characterize a positive school climate.

To assess how school climate changed during the pandemic, the Pennsylvania Department of Education's (PDE's) Office for Safe Schools partnered with REL Mid-Atlantic to conduct a study using data from PDE's school climate survey. This survey, which is available on a voluntary basis to any school in the state, provides a way to track school climate and identify schools that need additional support to improve school climate. This fact sheet shares findings from the study.

Measuring school climate in Pennsylvania schools

PDE's survey focuses on three aspects of school climate: social and emotional learning, safe and respectful school climate, and student support and academic engagement. The study team used survey responses from students and teachers and created school-level scores for these three domains and an overall index that is an average across all three domains. School climate scores ranged from 1 (least favorable) to 99 (most favorable).

Domain	Domain Description	Example Item
Social and emotional learning	The respondents' perceptions of students' social and problem-solving skills	"Students in my school stop and think before doing anything when they get angry" (all respondents)
Safe and respectful school climate	The respondents' perceptions of students' and teachers' physical and emotional safety	"Students in my school treat each other with respect" (all respondents)
Student support and academic engagement	The respondents' perceptions of how much students are listened to, cared about, and helped by teachers and other adults in the school	"My teachers really care about me" (student respondents) "I really care about my students" (teacher respondents)

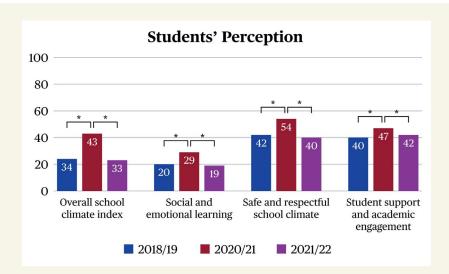### Did perceptions of school climate change from before the pandemic to the years during the pandemic?

The study examined changes in overall school climate and three domains over three school years (2018/19, 2020/21, and 2021/22) for a set of schools that participated in the survey during all three years. The 2019/20 school year was excluded from the study because some schools took the survey before the pandemic (fall and winter 2019/20), and some took it during pandemic disruptions (spring 2020). An important caveat of the analysis is that the sample of schools in the study is small (18 schools in the sample for students' perceptions of school climate and 28 schools for teachers' perceptions of school climate), self-selected, and not representative of the state as a whole.
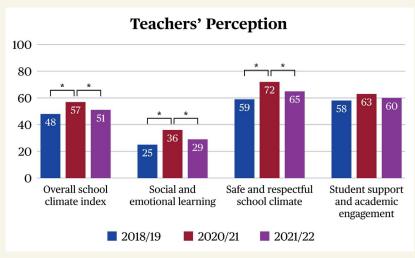
The schools in the sample differed from other schools in the state in that they had fewer Asian/Pacific Islander and Black students, had more White students, and were less likely to be in an urban setting. Another important caveat is that we cannot draw strong causal inferences: We can speculate about the reasons for any differences in school climate across years but cannot definitively identify the causes of changes.

Key findings

- Students' perceptions of overall school climate were more favorable in 2020/21 compared to their perceptions of school climate in 2018/19 and 2021/22. Specifically, in 2020/21, student scores were 9 scaled score points higher than in 2018/19 and 10 scaled score points higher than in 2021/22. This pattern was the same for each of the three school climate domains.

- Teachers' perceptions of overall school climate were also more favorable by 10 scaled score points in 2020/21 than in 2018/19 and more favorable by 6 scaled score points in 2020/21 than in 2021/22. This pattern was similar across domains, though the differences were smaller and not statistically significant for the student support and academic engagement domain.

Students and teachers reported more positive perceptions of school climate in 2020/21 compared to 2018/19 and 2021/22.

Source: PDE school climate survey 2018/19, 2020/21, and 2021/22.

Note: Overall school climate index is the average of all three school climate domains and is calculated at the school level. School climate scores are rounded to the nearest whole number. School climate is reported on a scale of 1 (least favorable) to 99 (most favorable). Scores in the range of 20 or lower are "unfavorable," 21 - 50 are "favorable," 51 - 80 are "more favorable," and 81 or higher are "most favorable." * indicates a statistical difference between the groups using a threshold of $p < .05$.

What can we learn from this?

Finding a positive bump in school climate scores for the 2020/21 school year, a year in which students experienced a lot of disruption, was unexpected. To better understand how COVID disrupted instruction in this sample of schools, the study team used the Return to Learn Tracker assembled by the American Enterprise Institute to identify the percentage of weeks that schools spent using in-person, hybrid, or remote learning in the 2020/21 school year. Of the schools in the sample with information available on learning modality in 2020/21 (83 percent of schools in the student sample and 90 percent in the teacher sample), none experienced fully in-person learning in 2020/21.

Although we cannot draw clear conclusions about causality, we can identify a few potential reasons that teachers and students had more favorable perceptions of school climate during hybrid and remote learning. First, in-person learning can expose students to more negative peer interactions and social anxiety. There is evidence that both bullying and youth suicide rates fell during remote learning.[6, 7, 8, 9] Second, schools were encouraged to spend more time on social and emotional wellness and connection during remote learning. Students and teachers may have been more respectful to one another or more understanding during a time of collective hardship. Regardless, the fact that students' perceptions of social and emotional learning, safe and respectful school climate, and student support and academic engagement were all higher during hybrid and remote learning suggests that being in school can be a source of more negative experiences for students.

Surprisingly, there was also no evidence that students or teachers perceived school climate less favorably in 2021/22 (the second full school year after the start of the pandemic) compared to 2018/19 (before the pandemic). On the positive side, this suggests the pandemic did not leave a lasting impact on students' or teachers' perceptions of school climate for schools in this sample. This is surprising given the noted declines in test scores and the increase in disruptive incidents in schools in 2021/22.[10, 11] But, it also suggests that these schools struggled to maintain their 2020/21 improvements in climate once students returned to in-person learning in 2021/22 and that more can be done to try to improve school climate when students are learning in person.

As mentioned above, one important limitation of this study is that the findings represent just a small sample of Pennsylvania schools because most schools do not complete the survey annually. Increasing the number of schools completing surveys over multiple years could better inform educators statewide about the relationship between school climate and other factors, such as learning modality or interventions to improve school climate, because the sample would better represent schools in the state.

Endnotes

1   U.S. Department of Education (March, 2022). School Pulse Survey. https://ies.ed.gov/schoolsurvey/spp/

2   Office for Civil Rights (2021). Education in a pandemic: The disparate impacts of COVID-19 on America's students. U.S. Department of Education. https://www2.ed.gov/about/offices/list/ocr/docs/20210608-impacts-of-covid19.pdf

3   U.S. Surgeon General (2021). Protecting Youth Mental Health: The U.S. Surgeon General's Advisory on youth mental health crisis further exposed by COVID-19 pandemic. Available at: https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf

4   Kuhfeld, M. & Lewis, K. (2022a). Student achievement in 2021-2022: Cause for hope and continued urgency. https://www.nwea.org/uploads/2022/07/Student-Achievement-in-2021-22-Cause-for-hope-and-concern.researchbrief-1.pdf

5   Cohen, J., McCabe, L., Michelli, N. M., & Pickeral, T. (2009). School climate: Research, policy, practice, and teacher education. *Teachers College Record*, 111(1), 180-213.

6   Hansen, B., Sabia, J. J., & Schaller, J. (2022). *In-person schooling and youth suicide: Evidence from school calendars and pandemic school closures* (No. w30795). National Bureau of Economic Research. https://www.nber.org/papers/w30795

7   Bacher-Hicks, A., Goodman, J., Grief Green, J., & Holt, M. (2022). The COVID-19 pandemic disrupted both school bullying and cyberbullying. *AER: Insights*, 4(3), 353-370.

8   Vaillancourt, T., Brittain, H., Krygsman, A., Farrell, A. H., Landon, S., & Pepler, D. (2021). School bullying before and during COVID-19: Results from a population-based randomized design. *Aggressive Behavior*, 47(5), 557-569.

9   Centers for Disease Control and Prevention. (2023). *Youth Risk Behavior Survey data summary and trends report: 2011-2021*. https://www.cdc.gov/healthyyouth/data/yrbs/pdf/YRBS_Data-Summary-Trends_Report2023_508.pdf

10   Welsh, R. O. (2022). School discipline in the age of COVID-19: Exploring patterns, policy, and practice considerations. *Peabody Journal of Education*, 97(3), 291-308.

11   Lewis, K., Kuhfeld, M., Ruzek, E., & McEachin, A. (2021). *Learning during COVID-19: Reading and math achievement in the 2020-21 school year*. NWEA. https://www.nwea.org/uploads/2021/07/Learning-during-COVID-19-Reading-and-math-achievement-in-the-2020-2021-school-year.research-brief-1.pdf