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School-Based Mental Health Services Can Increase Access to Care and Decrease Suicide Attempts

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POLICY BRIEF

School-Based Mental Health Services Can Increase Access to Care and Decrease Suicide Attempts

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BRIEF HIGHLIGHTS

- *School-based mental health services (SBMH) are a promising way to provide children and adolescents with mental health support, but evidence about these programs' effectiveness is limited.*
- *We study a program that placed mental health clinicians in over half the schools in Hennepin County, Minnesota. The staggered timing of the roll-out allowed us to estimate the program's effects.*
- *The SBMH program increased students' access to mental health services by 8 percent and decreased rates of attempted suicide by 15 percent, averting approximately 260 self-reported suicide attempts a year by 2018.*
- *With a program cost of about $117 per pupil annually, our results suggest that SBMH could be a valuable investment in child and adolescent mental health.*

For additional details, see the full paper: Ezra Golberstein, Irina Zainullina, Aaron Sojourner, and Mark A. Sander. 2023. "Effects of School-Based Mental Health Services on Youth Outcomes." *Journal of Human Resources* 1222-12703R2; DOI: 10.3368/jhr.1222-12703R2. https://doi.org/10.3368/jhr.1222-12703R2.

Young people's mental health was suffering even before the COVID-19 pandemic. Rates of anxiety, depression, and other problems are relatively high in the United States, and suicide is the second-leading cause of death among young people. Amid concerns that the pandemic made the situation worse, there is growing interest in finding ways to provide children and adolescents with the mental health support they need (White House 2021).

Schools may be able to help, especially if they offer a way to identify and treat children who otherwise might not be able to access mental health services. School-based mental health (SBMH) services are gaining traction across the United States, but causal evidence about their effects is limited. Better evidence could inform federal, state, and local policymakers who make decisions around financing these services, as well as educational professionals who make decisions about how best to serve students.

We study an intervention that placed mental health clinicians in Minnesota schools. Our analysis focuses on the implementation of the SBMH program in K–12 public schools in Hennepin County, which includes the city of Minneapolis and its suburbs. We use administrative data and survey data on nearly 500,000 students, together with new data we collected on the implementation of the program from 2001 to 2019.

Because poor mental health in childhood and adolescence can have long-term consequences for students' health, educational, and economic well-being, we estimate the effects of SBMH on a range of outcomes: not only students' access to mental health services and their mental health status, but also outcomes related to academic performance, disciplinary actions, and juvenile justice involvement.

After SBMH was implemented in a school, rates of mental health service use rose, suggesting that the program enabled more students to access mental health support. We also find that SBMH reduced self-reported rates of suicide attempts by 15 percent. We find weaker evidence that SBMH decreased suspensions and juvenile justice involvement. We do not find effects on attendance or on academic achievement test scores, in contrast to previous research that has linked mental health services to those outcomes.

Our findings suggest that SBMH services, while not a silver bullet for all behavioral and learning outcomes, are a valuable investment in child and adolescent mental health. Policymakers and educators looking for ways to improve young people's mental health could consider investing in those services.

The School-Based Mental Health Model

Schools often provide some mental health supports via school social workers, counselors, or psychologists, but these resources are frequently limited. However, most schools say that they lack the capacity to deliver mental health services successfully to all students in need of those services.

By 2018, the SBMH program we study was averting approximately 260 self-reported suicide attempts a year.

The SBMH model that we study aims to provide a higher level of support by placing licensed mental health clinicians directly in schools, complementing the existing capacity of school counselors and social workers. Students are referred to SBMH services by teachers, who receive training on identifying mental health problems among students, as well as by school counselors, social workers, school psychologists, and school nurses. SBMH clinicians diagnose and treat mental health problems through individual, group, and family psychotherapy. They generally do not have the authority to prescribe drugs, but may refer students to physicians for prescription drugs.

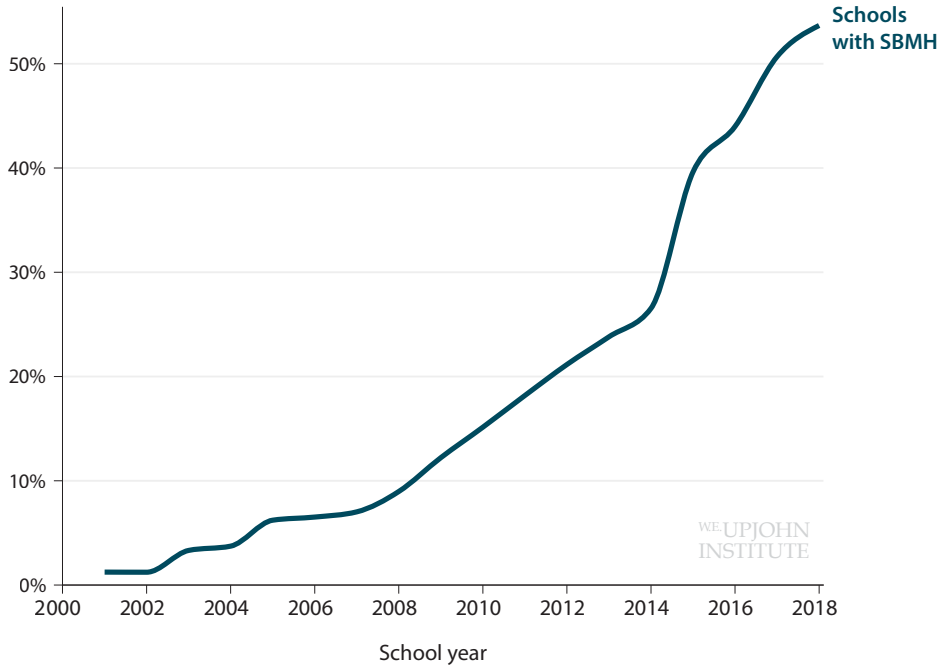
Proponents argue that mental health services in schools have several advantages: school staff can identify potential problems quickly; students can connect with services more easily than if they and their families had to navigate services in the community; and students who are uninsured or face other barriers can access treatment, improving equity in access to care.

However, evidence of the causal effects of SBMH has been limited, even as policy interest has risen sharply. Some states are appropriating direct funding for SBMH services, some are creating subsidies to increase the SBMH workforce, and others are changing their Medicaid policies to allow for more Medicaid financing of SBMH (Anderson 2021; Hill 2021). At the federal level, recent House and Senate bills have been proposed to enhance funding for SBMH. Every single witness in Senate Finance Committee hearings on child mental health in February 2022 testified to the importance of SBMH, and the Surgeon General called for greater investment in SBMH in a 2021 advisory (U.S. Surgeon General 2021). Better evidence of the effects of SBMH is needed to inform policy choices.

The SBMH Program in Hennepin County

During the first two decades of the 2000s, the state of Minnesota made a series of increasing grant investments that substantially expanded SBMH, including in Hennepin County, as Figure 1 shows. Of 263 schools that operated between 2001 and 2019 in

Figure 1 Growth in School-Based Mental Health Implementation across Hennepin County Schools, 2001–2018



SOURCE: Authors' original data collection.

School-based mental health is not a silver bullet for all behavioral and learning outcomes. But it can be a valuable investment in children and adolescents' well-being.

Hennepin County, which includes Minneapolis and 45 suburbs, 123 schools eventually implemented SBMH. The staggered timing of the rollout allows us to use a difference-in-differences approach to make causal estimates of the program's effects.

We estimate that SBMH, as implemented in Hennepin County over the study period, costs about $100,000 per year for the typical school, or about $117 per pupil. The typical school participating in SBMH has 0.75 full-time-equivalent clinical staff, along with some additional off-site support by the agency. We estimate that approximately 5 percent of students use services in a year if their school has SBMH.

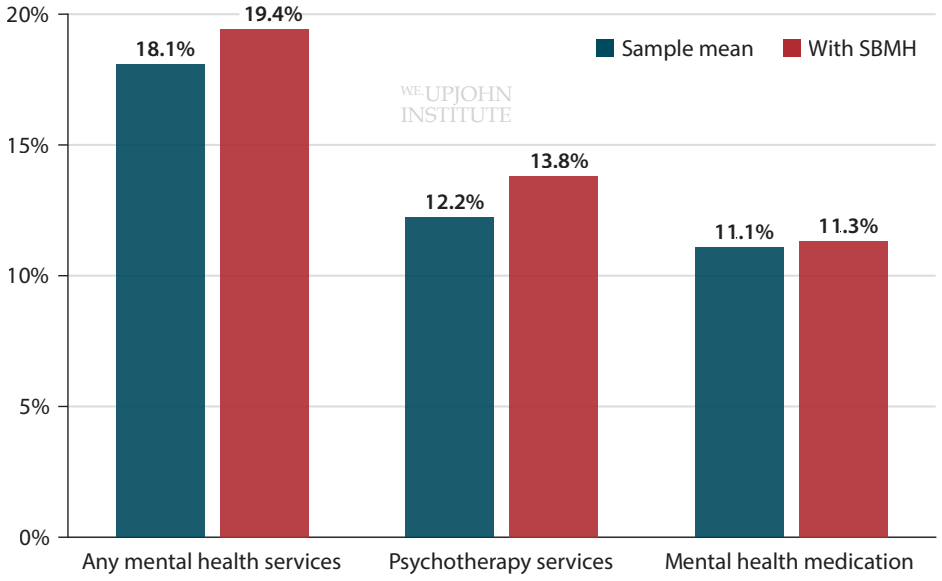
We pulled together data from 2001 to 2019 from several sources. We had linked student-level administrative data on which schools were attended in each year, along with outcomes related to academic performance, disciplinary actions, mental health services use, and juvenile justice involvement. We also had seven waves of the large-scale triennial Minnesota Student Survey data with information on mental health status and substance use. We linked both those data sources with our own data on the implementation of SBMH services across Hennepin County K-12 schools from 2001 to 2019.

Effects of SBMH on Student Outcomes

The estimates suggest that SBMH services raised the likelihood of a student using any mental health services by 7.6 percent compared to the sample average. As Figure 2 shows, this effect represents a rise in access to 19.4 percent from a sample mean of 18.1 percent. The overall increase in use of mental health services was driven by increases in psychotherapy use rather than prescription medication use.

We find that SBMH reduced rates of self-reported attempted suicide by 15 percent. As Figure 3 shows, SBMH reduced the proportion of students who reported a suicide attempt in the past 12 months by nearly 1 percentage point in the first year after implementation, and rates remained fairly steady during the first five years. On average,

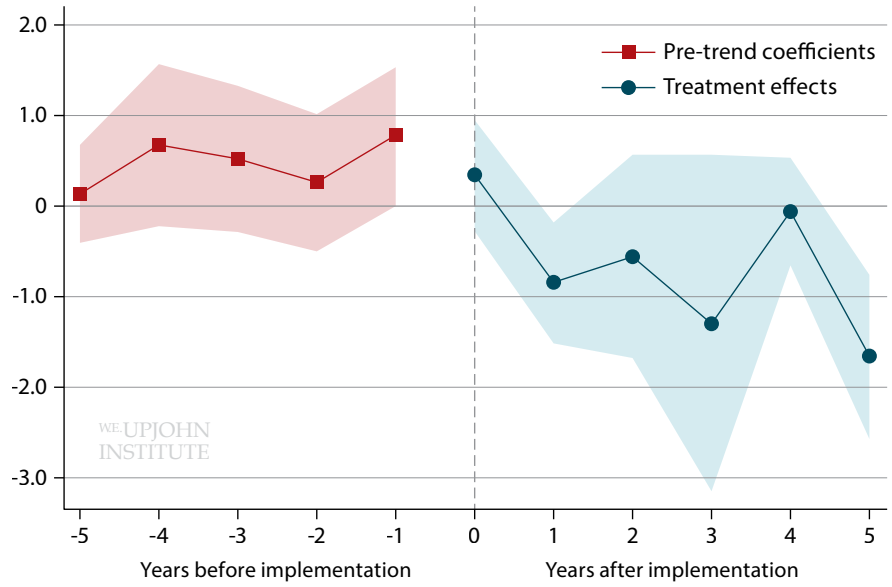
Figure 2 School-Based Mental Health Increased Access to Mental Health Services
Predicted probabilities of access to services



NOTE: Mental health services use data from administrative data available on Medicaid-enrolled students. Results are from models with individual-level covariates (age, race/ethnicity, sex, free/reduced-price lunch status), and include grade-level by year fixed effects. Predicted probabilities are based on our estimates of the average treatment effects on the treated in the full sample. See Table 2 in the full paper for details.

SBMH, as implemented in this study, increased rates of mental health services use by 7.6 percent.

Figure 3 School-Based Mental Health Reduced Self-Reported Suicide Attempts
Difference in the probability of a suicide attempt between students at schools with SBMH and students at schools without SBMH (percentage points)



NOTE: Suicide attempt = having any self-reported suicide attempt during the past 12 months. Data are from Minnesota Student Surveys. Results are from an event study model with individual-level covariates (age, race/ethnicity, sex), and grade-level by year fixed effects. Significance of test of pre-intervention trends: $p = 0.173$. Shaded areas show 95% confidence intervals.

about 3.7 percent of Hennepin County students in sixth grade and higher reported a suicide attempt in the past year. These estimates suggest that by 2018, SBMH was preventing approximately 260 suicide attempts a year.[1]

We find weaker evidence that SBMH services decreased suspensions and juvenile justice involvement. We do not find effects on attendance and test scores.

Conclusions

Our research provides new evidence on the impact of school-based mental health services on the well-being of children and adolescents. SBMH, as implemented in this study, increased rates of mental health services use by 7.6 percent. The program also decreased self-reported suicide attempts—perhaps one of the most critical outcomes—by 15 percent.

The value of SBMH in a given context will likely depend on how high the need is and how accessible mental health services are outside of school. Although we cannot tell from our data how many students in these particular schools need or would benefit from mental health services, recent estimates suggest that in 2021 approximately one in five U.S. adolescents had major depressive disorder and that fewer than half of adolescents who needed treatment had any mental health treatment (Flores et al. 2023). Data on patterns of mental health service use suggest that there is substantial unmet need.

[1] Our data do not allow us to make precise estimates of the number of suicide attempts averted by SBMH. However, we can make some approximate calculations. In the 2017–2018 school year, when a little more than half of Hennepin County schools were using SBMH, there were 93,214 students enrolled in grades 6–12. Given a 3.7 percent base rate of self-reported suicide attempts, if half of Hennepin County students were at schools using SBMH, the estimates that the program reduced self-reported suicide attempts by 15 percent suggest that SBMH averted approximately 260 attempts that year.

Policymakers and educators looking for ways to improve young people's mental health could consider investing in SBMH.

As policymakers grapple with how to address the crisis of child and adolescent mental health, information on the costs and benefits of different interventions is critical. The annual cost of this SBMH program was about $117 per student. These costs were shared by state grant funds and health insurers (to the extent children had insurance). The evidence of reductions in self-reported suicide attempts and the suggestive evidence of improvements in disciplinary behavior and juvenile justice involvement indicate the potential for important benefits. As schools continue to be an important place for identifying and treating mental health problems, additional research that further quantifies costs, benefits, and optimal size of school-based services will be valuable.

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