



**YALE CHILD  
STUDY CENTER**

*Where discovery inspires care*

230 S. Frontage Road, New Haven, CT 06519

## **Executive Summary**

### **Impact of School-Based Mental Health Care on Students' Educational and Out-of-School Outcomes**

**A Compendium of Yale Child Study Center Research Conducted on Behalf of Effective School Solutions**

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From January 2023 to January 2024, Yale Child Study Center (YCSC) conducted independent analyses of data collected by Effective School Solutions (ESS) during the 2021-22 and 2022-23 school years and provided to YCSC in Fall 2022. The analysis consisted of three parts: 1) an analysis of the impact of ESS interventions overall on academic outcomes, 2) a fidelity analysis of ESS services on academic outcomes, and 3) an analysis of ESS services on out-of-school high acuity care. Analyses 1 and 2 were completed using data collected from Tier 3 students, i.e., those receiving intensive, in-school clinical support. Analysis 3 relied on Tier 2 and Tier 3 students.

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Following enrollment in ESS services:

- 65% of Tier 3 students maintained or increased their GPA
  - For Tier 3 students, severe disciplinary incidents decreased by more than 17%
  - For every additional weekly ESS session provided to Tier 3 students, GPA increased by 5% while absences and disciplinary incidents decreased by 6-10%
  - The average number of inpatient hospitalizations for Tier 2 and Tier 3 students decreased by 56%
  - The average number of weeks in higher levels of care (HLOC) for Tier 2 and Tier 3 students decreased by 35%
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### **PART 1: Impact of ESS Interventions on Academic Outcomes Across the 2021-22 School Year**

Overall, the YCSC analysis of over 4,000 Tier 3 students revealed substantial positive impacts on academic outcomes across the 2021-2022 Impact Report (Table 1). Following enrollment in ESS services, students had significant gains in GPA, reductions in absences, and reductions in severe disciplinary incidents compared to baseline.

Ninety-six percent of students reported neutral or positive wellness ratings at the end of the school year.

The external validation analysis further revealed interesting trends. All racial identity groups saw more students increase or maintain their GPA than decrease it across the 2021-22 school year, with White, Hispanic/Latino, and African American students showing the greatest gains. African American students showed substantial decreases in absences across the school year. These findings indicate that, in response to ESS' intensive, in-school clinical support services, some academic outcomes differ for students based on personal identity measures. They further underscore the need for more research to examine when, how, and why these outcomes differ especially for students from historically underrepresented backgrounds.

Table 1. Comparison of metrics and outcomes between ESS Impact Report and YCSC external analysis.

Outcome	YCSC
Total number of students served	4,431
Total number of districts & states served	103 districts across 9 states
Total therapeutic interactions	344,181
Total types of services delivered	85,663 Individual Sessions 35,597 Family Sessions 103,203 Group Therapy Sessions 23,272 Learning Strategies Sessions 34,748 Urgent Intervention Sessions 31,705 Therapeutic Check-Ins
% students maintained/increased GPA	65%
% decrease in absences	10.2%
% decrease in total severe disciplinary incidents	17.5%
therapeutic wellness rating	96% Positive/Neutral in June

## PART 2: Fidelity analysis of ESS Services on Academic Outcomes Across the 2021-22 School Year

This analysis sought to test the hypothesis that impact of high-fidelity ESS programming would have a better impact on academic outcomes than low-fidelity programming across the 2021-22 school year. High-fidelity programming occurred when students received at least 3 non-administrative services per week plus 1 family session in the past 2 weeks for at least 50% of the school year (n=661, 21.2%). Low-fidelity programming occurred when students received this same combination of services for

less than 50% of the school year (n=2,458, 78.8%). Racial identity was entered as a covariate in all analyses.

Overall, students receiving high-fidelity program implementation had better academic outcomes than students receiving low-fidelity program implementation. Students receiving high-fidelity programming had a higher GPA during marking periods (as opposed to baseline) than students receiving low-fidelity programming (GPA of 2.6 vs. 2.3), and a greater percentage of students showing GPA improvement (32% vs. 21%). They also had fewer absences during marking periods (3.5 vs. 5.7).

Regardless of program fidelity, a higher number of average sessions per week significantly predicted a greater increase in GPA and a greater reduction in total disciplinary incidents (including out of school suspensions) across the school year, and fewer absences during marking periods (Table 2). Additional correlational analyses indicated that there is a dose-response for students receiving low-fidelity programming. Students receiving low-fidelity programming, but also more average weekly sessions, had a higher GPA, fewer absences, and fewer out-of-school suspensions during marking periods. However, no significant correlations were present for students receiving high-fidelity programming. That is, for those students receiving services at least 50% of the weeks across the school year, more is not necessarily better, but for those receiving services less than 50% of the year, more *is* better.

Table 2. Effects of more weekly therapeutic engagements on educational outcomes.

Outcome	For every additional weekly session provided:
Average GPA	Increased by 5%
Average absences	Decreased by 6%
Average total disciplinary incidents	Decreased by 10%
Average out of School Suspensions	Decreased by 10%

YCSC concludes that high-fidelity ESS programming appears to have beneficial effects for students in greatest need of mental health services. Though effect sizes for these analyses were small, there were several significant positive effects of program fidelity implementation on multiple student outcomes. YCSC has submitted a report detailing these analyses to the Education Resources Information Center (ERIC) for evaluation by the What Works Clearinghouse to determine if this evidence meets the Tier 3 level of Promising Evidence as set forth by the Every Student Succeeds Act (ESSA).

### **PART 3: Analysis of ESS Interventions on Out-Of-School High Acuity Care Across the 2022-23 School Year**

This analysis sought to test the hypothesis that in-school mental health services reduces students' out-of-school high-acuity care. This analysis compared outcomes in the 12 months prior to in-school ESS services (baseline), with outcomes in the 12 months after ESS enrollment in in-school intensive mental health services (treatment) across the 2022-23 school year for over 700 K-12 students in five states receiving Tier 2 or Tier 3 ESS services in school. From baseline to treatment, average inpatient hospitalization stays, average intensive outpatient (IOP) referrals, and average number of weeks in higher levels of care (HLOC) all significantly decreased, from 23-56% (Table 3). Average partial hospitalization (PHP) referrals did not change. In the same vein, the proportion of students needing inpatient hospitalizations, IOPs, and HLOC was significantly reduced following enrollment in ESS services, from 4-11% (Table 3). The most significant changes in out-of-school high acuity care occurred in high school students (grades 9-12). Students enrolled in ESS services for 12 or more months (compared to less than 12 months) had significantly fewer IOP referrals and fewer weeks in HLOC, indicating a dose-response effect as was evident for academic outcomes.

Table 3. Impacts of ESS services on out-of-school high acuity care.

Outcome	Change in average number from baseline	Change in proportion of students needing care from baseline
Inpatient hospitalizations	Decreased by 56%	Decreased by 11%
Intensive outpatient referrals (IOPs)	Decreased by 23%	Decreased by 4%
Weeks in higher level of care (HLOC)	Decreased by 35%	Decreased by 6%

Collectively, these findings indicate that intensive mental health services provided in school benefit students and may also reduce healthcare costs. Meeting students where they are, in schools, to provide much-needed intensive mental health services, has strong potential as a treatment paradigm and as a policy intervention.

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### **Conclusions**

These independent analyses indicate significant impacts of ESS programming for adolescents across multiple domains. Following enrollment in ESS services, students saw significant improvements in both academic and mental health outcomes, as

indicated by increases in GPA, reductions in absences and disciplinary incidents, and reductions in out-of-school high acuity care incidents. Furthermore, these findings suggest that delivery of higher-fidelity ESS programming or longer duration in ESS programming may be most beneficial for the students at greatest risk of mental and behavioral health disorders.