Building Assets and Reducing Risks (BARR) I3 Scale-Up Evaluation

Final Report

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Executive Summary

Introduction

Building Assets, Reducing Risks (BARR) is a comprehensive, strength-based approach that uses eight components and focuses on the use of real-time data to build intentional staff-to-staff, staff-to-student, and student-to-student relationships in schools. This report focuses on an evaluation of BARR in ninth grade, where BARR aims to facilitate the challenging transition from middle to high school. The developer designed BARR around the following eight interlocking components:

1. a focus on the whole student (i.e., each student's academic, emotional, social, and physical needs)

2. professional development for school staff (i.e., trainings and coaching support)

3. BARR's social-emotional curriculum (i.e., "I-Time") to foster teacher-to-student and student-to-student relationships and help students learn and practice life skills

4. cohorts of students and staff to help educators cultivate connections with students and each other

5. regular block/team meetings of the cohort teacher teams to collaboratively identify struggling students and interventions, as well as students who should be accelerated

6. risk review meetings with school leadership, support staff, and community resources to address the needs of students who need more intensive support

7. partnering with families in student success

8. engaging school administrators to achieve specific, measurable goals and to network with other administrators in the BARR community for ideas

This scale-up evaluation is the third in a series of randomized controlled trials funded by the U.S. Department of Education's Investing in Innovation (i3) program. It follows a 2010 development grant (Corsello & Sharma, 2015) and a 2013 validation grant (Bos et al., 2019; Borman et al., 2021). This evaluation documents the scale-up of the BARR model during the grant period (2017–2021) and the implementation and impacts of the program in its first year of implementation in 66 schools across the United States.

The 66 schools included in the impact evaluation were distributed across three cohorts (2017–18, 2018–19, and 2019–20 school years) and included 21,529 students and 524 teachers. The schools were recruited from 12 states and the District of Columbia, with a focus on relatively low-performing schools and districts. Of the ninth-grade students in this evaluation, 64 percent

were eligible to receive free or reduced-price lunch and 15 percent were English learners. Approximately one third of students were white, and two thirds were students of color. Of the 66 schools, 12 were rural.

For the evaluation, schools in each cohort were randomly selected to receive the BARR model immediately (the treatment group) or receive BARR after one year (a "wait-list" control group) to provide a reference for measuring the impacts of the BARR model.

Some Study Schools Experienced Implementation Challenges

Schools participating in this evaluation and assigned to receive the BARR model (i.e., the treatment group) experienced challenges implementing BARR with fidelity during the first year more so than schools implementing the model in the two prior evaluations. This was the case especially in Cohort 1 and Cohort 3 but for very different reasons. In Cohort 1, three of the 15 schools randomized to BARR decided during the summer before implementation that they were unable to implement BARR that year.[1] Similarly, one of the 11 treatment schools in Cohort 2 also decided not to implement BARR. In Cohort 3, implementation of BARR was off to a good start, only to be severely compromised by the COVID-19 pandemic, which closed all school campuses in the 11 BARR schools in March 2020. None of these campuses reopened during the 2019–20 school year, and all teaching happened virtually after the campuses closed. All BARR activities continued and were modified to accommodate virtual delivery and to meet the new needs of teachers and school administrators during this challenging time. After excluding schools randomized into BARR but unable to implement in the study year, 67 percent of schools in Cohort 1, 50 percent of schools in Cohort 2, and 50 percent of schools in Cohort 3 met BARR Center's criteria for implementation of the BARR model with fidelity.[2]

## BARR Improved Teacher Experiences and Attitudes

Teachers are a major lever in BARR's theory of action. This study is the first BARR evaluation in which teachers were randomized (with their schools). The BARR model changes teachers' work environment, and BARR provides them with professional development and coaching on the BARR components introduced previously. It also sets expectations for teacher-to-teacher collaboration and for developing a more holistic view of their students' strengths and experiences. Because of this, we expected that BARR would impact teacher experiences and attitudes.

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[1] These schools became "crossover" schools for the purpose of the evaluation. That is, they remained classified as part of the BARR treatment group for analysis even though they were not able to implement and benefit from BARR during the study year but were ready to implement BARR the following year.

[2] BARR Center plans to re-examine the fidelity rubric and its scoring based on the results of this evaluation.

To capture these impacts, the evaluation assessed changes in teacher experiences along nine constructs (using a teacher survey) and found significant positive program effects for seven of these constructs (Exhibit 1). The most substantial effects were on "teacher collaboration with and view of colleagues," "teacher use of data," and "view of school supports." The corresponding effect sizes (ES[3]) were moderate to large (ES ranging from 0.36 to 0.63).

Exhibit 1. Impacts of BARR on Teacher Experiences and Attitudes
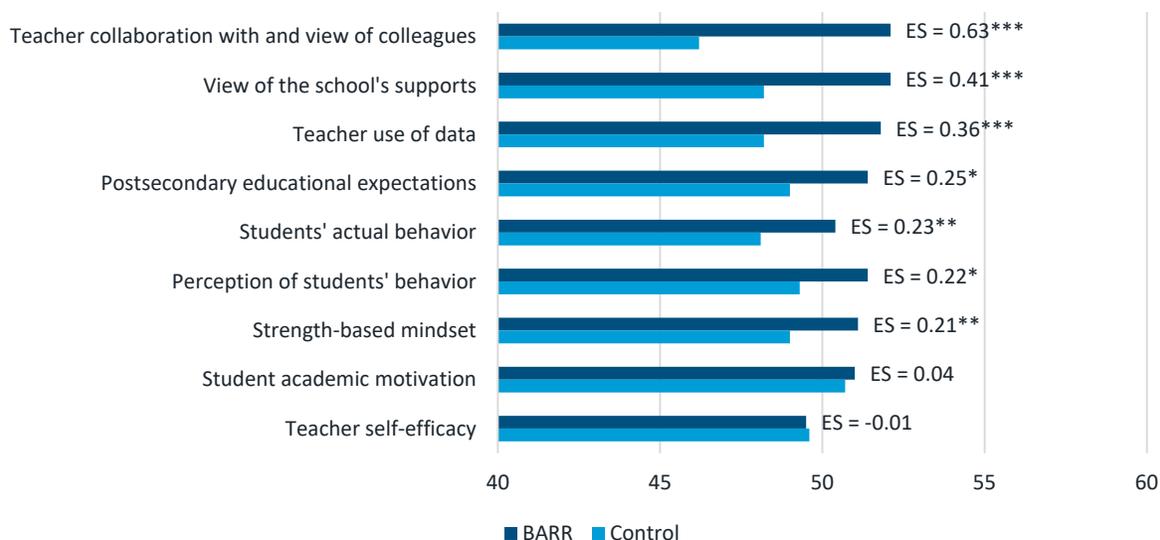
Note: All outcomes are survey scales with a mean of 50. "ES" is the effect size associated with the difference between the treatment and control groups. * = statistically significant at the $p < .05$ level; ** = statistically significant at the $p < .01$ level; *** = statistically significant at the $p < .001$ level.

## BARR Improved Credit Attainment and Reduced Course Failure

Reducing course failure in ninth grade is a major focus for BARR. The transition from middle to high school comes with new academic challenges that cause many students to begin experiencing course failures. Unless prevented or addressed, those failures have potentially serious consequences for students throughout their academic careers. By helping schools, teachers, students, and parents to stay on top of student performance during the ninth-grade year, BARR seeks to prevent students from failing courses and missing credits. This can also benefit their GPA.

As shown in Exhibit 2, across the three cohorts combined, BARR had substantial and statistically significant impacts on the proportion of students who passed all their core courses, an increase from 74 to 80 percent, for an effect size of 0.21. BARR's effects on credit attainment and course

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[3] To calculate an effect size, we divide the impact by the pooled standard deviation of the outcome variable in the treatment and control groups. Effect sizes allow us to easily compare the size of estimated program effects across outcomes and studies.

failure were strongest for male students, students of color, students eligible for free or reduced-price lunch, English learners, and students with disabilities. These groups were more likely to experience course failure, as evident in the control group. BARR thus reduced existing gaps in these outcomes between different demographic groups of ninth-grade students.

Exhibit 2. Impact of BARR on Percentage of Students Passing All Core Courses, Full Sample and Student Groups
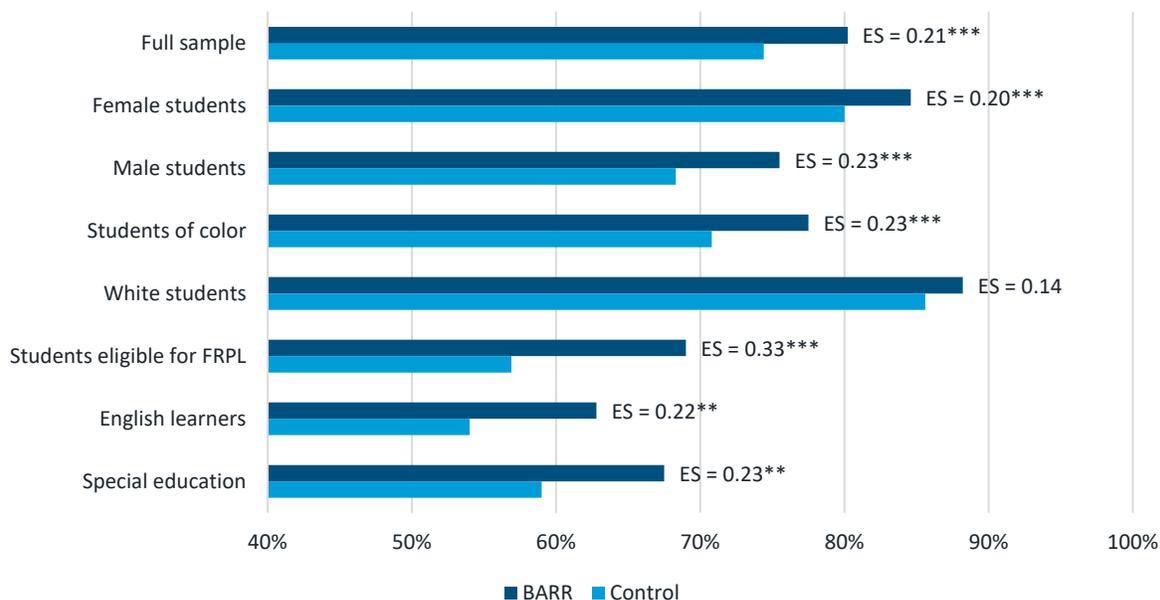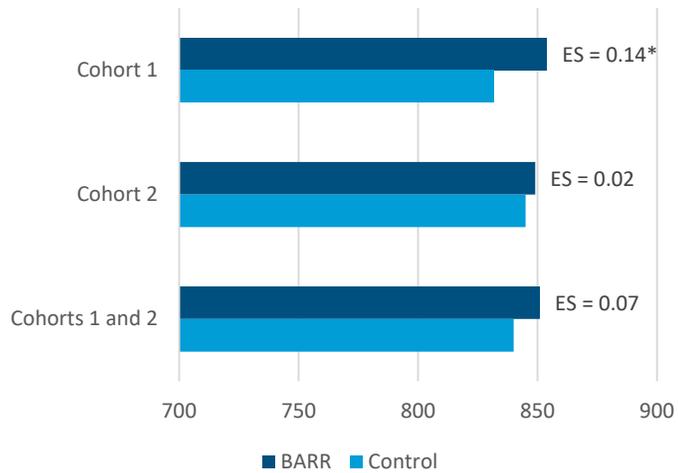

Note: "ES" is the effect size of the difference between the treatment and control groups. * = statistically significant at the $p < .05$ level; ** = statistically significant at the $p < .01$ level; *** = statistically significant at the $p < .001$ level.

BARR's impact on students' GPAs (not shown) was more modest than its impact on credit attainment and course failure (an increase from 2.5 to 2.6, for an effect size of 0.13). BARR's impacts on GPA were stronger for students of color, students eligible for free or reduced-price lunch, and English learners.

BARR Improved Academic Achievement in Cohort 1

We used the Preliminary Scholastic Aptitude Test (PSAT), administered in the fall of tenth grade, as an independent measure of student achievement in the evaluation. Due to the COVID-19 pandemic, we could not consistently administer the PSAT test in fall 2020. Therefore, this outcome was available for impact analysis only for Cohort 1 and Cohort 2. Exhibit 3 shows that BARR had a positive impact on PSAT scores in Cohort 1 (an average score of 854 in BARR schools compared to 832 in control schools, for an effect size of 0.14). There was no such impact in

Exhibit 3. Impacts of BARR on PSAT Scores, by Cohort

Note. "ES" is the effect size of the difference between the treatment and control groups. * = statistically significant at the $p < .05$ level.

Cohort 2, and the combined impact for Cohort 1 and Cohort 2 (an estimated difference of 11 points—840 in control schools and 851 in BARR schools) was not statistically significant.

Analyses of PSAT scores for different groups of students (Exhibit 4) showed a significant positive impact on the PSAT for male students, students of color, students eligible for free or reduced-price lunch, and English learners. After adjusting for the fact that some schools did not implement BARR in the study year or did not offer it to all their students, we found positive impacts on the PSAT scores of male students, students of color, students eligible for free or reduced-price lunch, and English learners (ES = 0.13, 0.16, 0.14, and 0.21, respectively; not shown in exhibit).

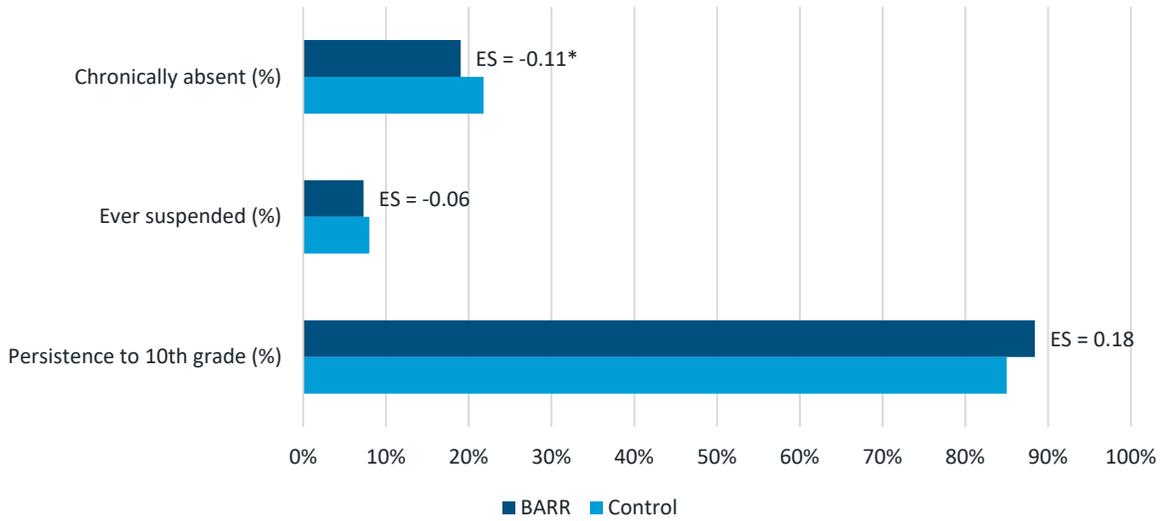**Exhibit 4. Impacts of BARR on PSAT Scores, by Student Group**
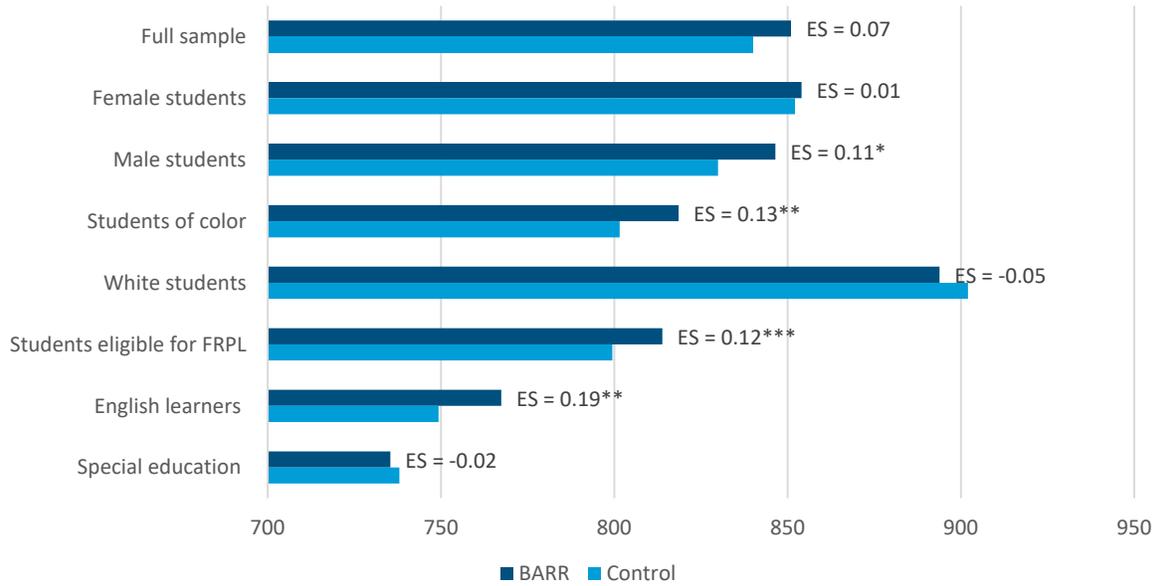
Note. "ES" is the effect size of the difference between the treatment and control groups. * = statistically significant at the p < .05 level; ** = statistically significant at the p < .01 level; *** = statistically significant at the p < .001 level.

BARR Reduced Chronic Absenteeism

Examining behavioral outcomes as recorded in school administrative data, we found that BARR significantly reduced chronic absenteeism (students being absent more than 10 percent of the time—Exhibit 5). Assignment to BARR caused a negative (favorable) impact on the percentage of students who were chronically absent. The rate of chronic absenteeism was 19 percent in BARR schools, compared to 22 percent in control schools (ES = –0.11).
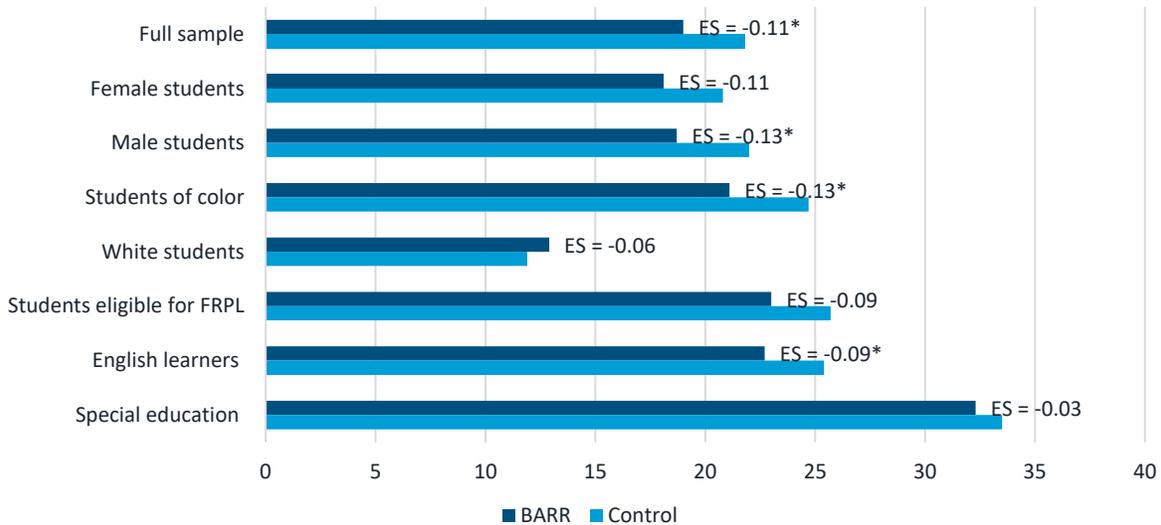
Exhibit 5. BARR Impact on Chronic Absenteeism, Suspension, and Persistence to 10th Grade

Note. "ES" is the effect size of the difference between the treatment and control groups. * = statistically significant at the *p* < .05 level.

Examining the impact on chronic absenteeism by student group, we found that impacts on chronic absenteeism were strongest for male students and students of color as shown in Exhibit 6 (ES = –0.13 for both groups).

Exhibit 6. Impact of BARR on Chronic Absenteeism, by Student Group

Note. "ES" is the effect size of the difference between the treatment and control groups. * = statistically significant at the *p* < .05 level; ** = statistically significant at the p < .01 level.

BARR Impacts on Suspensions and Persistence to 10th Grade Were Mixed

As shown in Exhibit 5, we did not find statistically significant impacts on suspension rates when examining these outcomes across all three cohorts or on persistence to 10th grade in the same school when examining these outcomes across two cohorts. We did find a statistically significant reduction in suspensions in Cohort 1 (from 11.6 to 7.6 percent of students—not shown) but no comparable impacts in the other two cohorts.

Scale-Up of the BARR Model Was Successful

During the grant period, BARR significantly increased the number of schools it served, from 26 in the 2015-16 school year (the last year before the scale-up grant) to 224 in the 2021-22 school year, the last year of this grant. To do so, the BARR developer built a sustainable organizational infrastructure, including *BARR Center*, a 501C3 not-for-profit corporation from which to manage the work. With this center as its base, BARR and its partner Hazelden Betty Ford Foundation assembled a national network of regional coaches and mentors, who have assumed the responsibility for providing day-to-day support to BARR schools and their districts. As a result, the original BARR developer and her team at BARR Center are no longer solely responsible for most of the day-to-day interactions and support activities with BARR schools but rather provide oversight, which has proven important to scaling the model nationwide.

BARR Center demonstrated progress in scaling six strategies that they considered important to grow and sustain the model over time. During the grant period, BARR Center was particularly successful in strengthening BARR Center infrastructure (i.e., sufficient staffing, sustainable budget), determining and sharing the cost of services, and scaling school-level and coach training and supports. These strategies were under direct control of BARR Center, and their successful scaling was facilitated by attentive and responsive BARR Center staff and coaches and a focus on building infrastructure. Encouraging schools to build local awareness of the BARR model and to continue implementing the model over time were harder to scale. These two strategies were primarily driven by school administrator decisions and not within the direct control of BARR Center.

BARR Center is working to build additional infrastructure and supports to address remaining scale-up challenges. For example, BARR Center implemented a mentorship model to train new coaches and a coach mastery rubric that examines coaches' proficiency in essential knowledge areas to ensure newly trained BARR coaches have the tools and capacity needed to support the diverse needs of schools working toward full implementation of the BARR model. BARR Center also plans to launch a school accreditation process that formally certifies schools that continue to implement the BARR model over multiple years.

Conclusion

The findings of this scale-up evaluation are consistent with those we found in our 2019 i3 validation study of BARR and the ones that Corsello and Sharma found in their 2015 evaluation of BARR's first i3 development grant. All three studies found substantial positive impacts on credit attainment and course failure and smaller effects on academic achievement and grades. In this evaluation, we also found a favorable effect on chronic absenteeism and substantial favorable effects on a range of teacher experiences and attitudes.[4]

In this evaluation, more so than in the two previous studies, there was considerable variation in impacts across cohorts and student groups. Partially, this may reflect underlying differences in the composition of the three cohorts of schools and partially it reflects differences in study school implementation challenges. Cohort 3 was significantly impacted by the COVID-19 pandemic.

The findings from this evaluation continue to support the conclusion we made at the end of the validation study, which is that BARR is an effective model for schools aiming to improve students' transitions into ninth grade, reduce course failure, and narrow gaps in student academic outcomes between different demographic groups of students, while improving teacher collaboration and view of colleagues, use of data, and view of school supports.

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[4] The other two BARR i3 evaluations also found that BARR teachers were more positive about their experiences than control teachers, but in those two studies, teachers were not randomly assigned to BARR. This study is the first BARR evaluation in which teachers were randomized (with their schools).