

Bottom Line

Intervention Report | Transition to College Topic Area

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WHAT WORKS CLEARINGHOUSE™

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Enrolling in college and completing a degree or certificate is one of the primary pathways to economic success. In 2018, median weekly earnings of full-time workers with a bachelor’s degree were 57 percent higher than full-time workers with a high school diploma only. Despite the economic advantages of educational attainment, only 33 percent of students enrolled in two-year institutions complete their programs within three years, and 62 percent of students enrolled in four-year institutions complete their programs within six years.¹ Several programs have been designed to support college enrollment and retention among college students. One example is *Bottom Line*. *Bottom Line* provides intensive advising for low-income high school students, most of whom are the first in their family to go to college. The advising is designed to help students apply for college and financial aid and select a high-quality, affordable

institution. For students who attend one of *Bottom Line*’s target colleges which they identified as providing a high-quality education at an affordable price, *Bottom Line* continues to provide regular support to students on campus for up to six years.²

This What Works Clearinghouse (WWC) report, part of the WWC’s Transition to College topic area, explores the effects of *Bottom Line* on enrolling and progressing in college. The WWC identified two studies of *Bottom Line*, one of which meets WWC standards. The evidence presented in this report is from one study of the impact of *Bottom Line* on high school and college students—including African-American, Hispanic, and Asian students—based in Boston, New York City, and Worcester, Massachusetts.

What Happens When Students Participate in *Bottom Line*?³

The evidence indicates that implementing *Bottom Line*:

- may increase college enrollment
- may increase progression in college

Findings on *Bottom Line* from the one study that meets WWC standards are shown in Table 1. The table reports an effectiveness rating and the number of studies and students that contributed to the findings.

Table 1. Summary of findings on *Bottom Line* from one study that meets WWC Standards

Outcome domain	Effectiveness rating	Average performance (study findings)		Evidence meeting WWC standards (version 4.0)	
		Intervention group	Comparison group	Number of studies	Number of students
College enrollment	Potentially positive effects	81% enrolled	70% enrolled	1	2,422
Progressing in college	Potentially positive effects	80% progressing	71% progressing	1	1,429

Note: Average performance values (study findings) are generated by one analysis conducted for each outcome, as reported by Barr & Castleman (2017). The college enrollment outcome reported in this study represents enrollment in a 4-year college. The progressing in college outcome reported in this study represents being enrolled in college for three or more semesters after high school. The effects of *Bottom Line* are not known for other outcomes within the Transition to College topic area, including middle school academic achievement, high school academic achievement, middle school attendance, high school attendance, college readiness, staying in high school, progressing in high school, completing high school, college attendance, college academic achievement, college degree attainment, and labor market outcomes.

BOX 1. HOW THE WWC REVIEWS AND DESCRIBES EVIDENCE

The WWC evaluates evidence based on the quality and results of reviewed studies. The criteria the WWC uses for evaluating evidence are defined in the [Procedures and Standards Handbooks](#) and the [Review Protocols](#). The studies summarized in this report were reviewed under WWC Standards (version 4.0) and the Transition to College topic area protocol (version 4.0).

To determine the effectiveness rating, the WWC considers what methods each study used, the direction of the effects, and the number of studies that tested the intervention. The higher the effectiveness rating, the more certain the WWC is about the reported results and about what will happen if the same intervention is implemented again. The following key explains the relationship between effectiveness ratings and the statements used in this report:

Effectiveness rating	Rating interpretation	Description of the evidence
Positive (or negative) effects	The intervention is <i>likely</i> to change an outcome	Strong evidence of a positive (or negative) effect, with no overriding contrary evidence
Potentially positive (or negative) effects	The intervention <i>may</i> change an outcome	Evidence of a positive (or negative) effect with no overriding contrary evidence
No discernible effects	The intervention <i>may result in little to no change</i> in an outcome	No affirmative evidence of effects
Mixed effects	The intervention <i>has inconsistent effects</i> on an outcome	Evidence includes studies in at least two of these categories: studies with positive effects, studies with negative effects, or more studies with indeterminate effects than with positive or negative effects

How is *Bottom Line* Implemented?

The following section provides details of how *Bottom Line* was implemented. This information can help educators identify the requirements for implementing *Bottom Line* and determine whether implementing this intervention would be feasible in their districts, schools, or colleges. Information on *Bottom Line* presented in this section comes from the one study that meets WWC standards (Barr & Castleman, 2017) and from correspondence with the developer.

- **Goal:** *Bottom Line* aims to help students to enroll in high-quality, affordable colleges and persist in college to attain a degree.
- **Target population:** *Bottom Line* is designed for students from low-income backgrounds, most of whom are the first in their family to go to college. Students of color comprise the majority of those served by *Bottom Line*. The majority of students learn about *Bottom Line* through word of mouth referrals, but *Bottom Line* also actively recruits students through recruitment events at local college fairs, as well as through schools and local organizations. They target school districts in each region and specific schools within each district.
- **Method of delivery:** *Bottom Line* advisors provide individualized guidance to high school students in preparing college applications, applying for financial aid, searching for scholarships, and selecting colleges that align with each student's goals. *Bottom Line* advisors at

target colleges provide the ongoing structure and support needed for students to graduate and achieve their career goals.

- **Frequency and duration of service:** High school students meet with their *Bottom Line* advisors for an hour every three to four weeks during the college application and selection process. College students meet with their *Bottom Line* advisors three to four times per semester. For both high school and college students, additional contacts are held between meetings through a combination of texting, email, and video or phone calls.
- **Intervention components:** The *Bottom Line* college advising model includes *Bottom Line Access* for high school juniors and seniors, and *Bottom Line Success*, which entails advising for those students who attend a target college. See Table 2 for additional details. A new initiative called *Career Connections* was launched in 2018 to strengthen *Bottom Line's* capacity to build students' career readiness skills and strengthen pathways to the experiences and professional connections needed to launch a career.

Comparison group: In the one study that contributes to this intervention report, students in the comparison group did not have access to *Bottom Line* support, but they were able to access existing college advising support services.

Table 2. Components of *Bottom Line*

Key component	Description
One-on-one college application advising	<p><i>Bottom Line</i> advisors begin advising students between the end of their junior year in high school and the beginning of their senior year. They have average caseloads of 65 students. Students meet individually with their advisor for about an hour every three to four weeks at <i>Bottom Line</i>'s office within their community. Using the LEAD Model (Lists, Essays, Applications, Decisions), advisors help students compile lists of potential colleges to consider, write essays, and complete their applications.</p> <p><i>Bottom Line</i> advisors encourage students to apply to a set of target colleges and universities in the area that they have identified as providing a high-quality education at an affordable price. In each of the three major cities in which <i>Bottom Line</i> is located (Boston, New York City, and Chicago),⁴ <i>Bottom Line</i> has about ten to twenty target institutions they recommend to students.</p>
Financial aid support	College affordability is a principal focus for <i>Bottom Line</i> . Advisors help students complete the Free Application for Federal Student Aid (FAFSA) and supplementary financial aid forms. They also help students search for additional scholarships and make informed decisions about the affordability of each school they are considering.
College selection guidance	<i>Bottom Line</i> advisors help students review college acceptances and financial aid packages, ensuring they have a good understanding of the cost of attendance and select a college that is aligned with their goals.
Transition assistance	Approximately 50 percent of students choose to enroll in one of the target institutions and can continue into the <i>Bottom Line Success</i> program. In the summer after high school, advisors support students with completing all enrollment requirements, including scheduling placement tests, preparing a payment plan, and attending orientation.
College orientation and continued support	<p><i>Bottom Line Success</i> advisors are located at each target institution. Advisors have an average caseload of 85 students and meet with students about three to four times per semester to provide the following supports connected to their DEAL model:</p> <ul style="list-style-type: none"> • Degree – including connections with tutoring, advising, and other resources • Employability – including identifying students' desired career, building a strong resume, strengthening their networks, and connecting to career-relevant experiences • Affordability – ensuring students complete financial aid requirements and have a plan to pay their tuition bills each semester • Life – including adjusting to college life, getting involved with extracurricular activities, and balancing their workload with other activities and responsibilities <p><i>Bottom Line</i> continues to provide support to students while they are in college for up to six years.</p>

What Does *Bottom Line* Cost?

This preliminary list of costs is not designed to be exhaustive; rather, it provides educators an overview of the major resources needed to implement *Bottom Line*. The program costs described in Table 3 are based on the information available as of August 2020.

Bottom Line is a 501(c)(3) nonprofit organization that is nearly fully funded by private and corporate donors and

foundations. The total cost per student receiving intensive advising through the *Bottom Line Access* and *Bottom Line Success* programs is approximately \$6,000 over a five- to six-year period. These costs are paid for by *Bottom Line*, and the target colleges provide access to their facilities. Students and families incur no costs.

Table 3. Cost ingredients for *Bottom Line*

Cost Ingredients	Description	Source of funding
Personnel	<i>Bottom Line</i> is staffed by full-time advisors with college degrees who provide direct services to high school and college students. Advisors spend their first year learning the organization's curriculum, building relationships with students and staff, serving their caseload, and mastering advisor competencies. Returning advisors take on additional responsibilities, such as helping to plan career-readiness events or organizing care package assembly events for students. Program administrators support the program and conduct recruitment activities.	<i>Bottom Line</i>
Facilities	Facilities costs include space for administrative staff and for providing services. <i>Bottom Line Access</i> has offices in each of the communities served where high school students meet with their advisors. <i>Bottom Line Success</i> has offices in each target college they work with where college students can meet with their advisors.	<i>Bottom Line</i> ; colleges
Equipment and materials	Standard information technology (IT) equipment such as computers, phones, printers, and photocopiers for staff is required.	<i>Bottom Line</i>
Direct assistance	Colleges may waive the application fee for <i>Bottom Line</i> participants.	Colleges

For More Information:

About *Bottom Line*

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About the cost of the intervention

Web: <https://www.bottomline.org/>

Research Summary

The WWC identified two studies that investigated the effectiveness of *Bottom Line* (Figure 1):

- One study meets WWC group design standards without reservations
- One study is ineligible for review

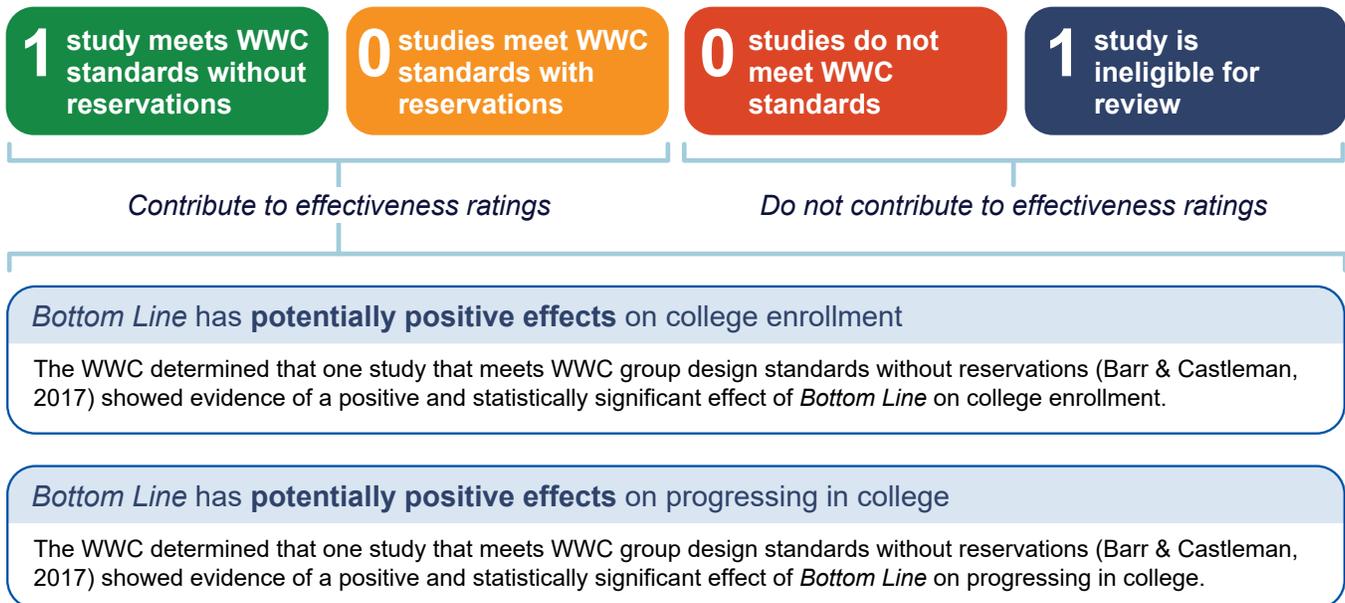
The WWC reviews findings on the intervention's effects on eligible outcome domains from studies that meet standards, either with or without reservations. Based on this review, the WWC generates an effectiveness rating, which summarizes how the intervention impacts, or changes, a particular outcome domain. The WWC reports additional supplement-

tal findings, such as enrolling in a two-year college, on the WWC website (<https://whatworks.ed.gov>).

These supplemental findings and findings from studies that either do not meet WWC standards or are ineligible for review do not contribute to the effectiveness ratings.

The one study of *Bottom Line* that meets WWC group design standards reported findings on college enrollment and progressing in college. No other findings in the study meet WWC group design standards within any outcome domain included in the Transition to College topic area.⁵ Citations for the two studies reviewed for this report are listed in the References section, which begins on page 8.

Figure 1. Effectiveness ratings for *Bottom Line*



Main Findings

Table 4 shows the findings from the one *Bottom Line* study that meets WWC standards. The table includes WWC calculations of the mean difference, effect size, and performance of the intervention group relative to the comparison group. Based on findings from the one study that meets WWC standards, the effectiveness rating for college

enrollment is *potentially positive effects*, indicating evidence of a positive effect with no overriding contrary evidence. This finding is based on 2,422 students. The effectiveness rating for progressing in college is *potentially positive effects*, indicating evidence of a positive effect with no overriding contrary evidence. This finding is based on 1,429 students.

Table 4. Findings by outcome domain from the study of *Bottom Line* that meets WWC Standards

Measure (study)	Study sample	Sample size	Mean		WWC calculations			p-value
			Intervention group	Comparison group	Mean difference	Effect size	Improvement index	
Enrolled in a 4-year college (%)	Full sample	2,422	80.60	70.30	10.30	0.34	+13	< .01
Outcome average for college enrollment (Barr & Castleman, 2017) ^a						0.34	+13	Statistically significant
Continuously enrolled for the 3 semesters following high school (%)	Cohort 1	1,429	80.40	70.50	9.90	0.33	+13	< .01
Outcome average for progressing in college (Barr & Castleman, 2017) ^a						0.33	+13	Statistically significant

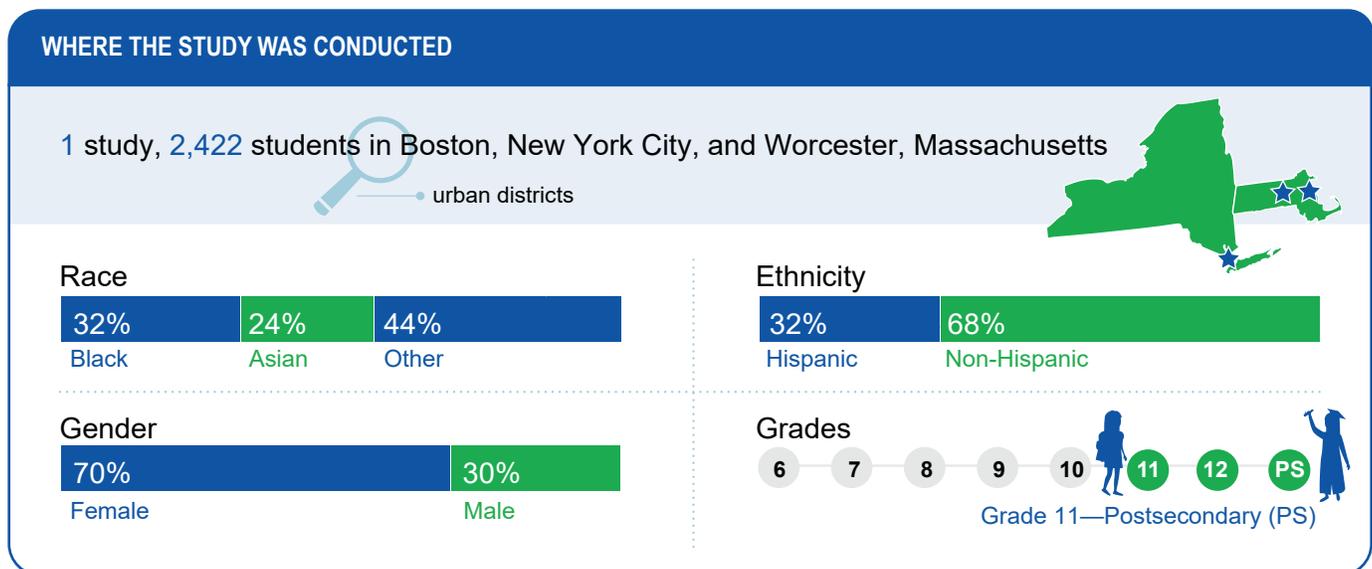
Notes: For mean difference and effect size values reported in the table, a positive number favors the intervention group and a negative number favors the comparison group. The effect size is a standardized measure of the effect of an intervention on outcomes, representing the average change expected for all individuals who are given the intervention (measured in standard deviations of the outcome measure). An indicator of the effect of the intervention, the improvement index can be interpreted as the expected change in percentile rank for an average comparison group student if that student had received the intervention. For example, an improvement index of +13 means that the expected percentile rank of the average comparison group student would increase by 13 points if the student received *Bottom Line*. A positive improvement index does not necessarily mean the estimated effect is statistically significant. Some statistics may not sum as expected due to rounding.

^a Barr & Castleman (2017) did not require corrections for clustering nor difference-in-differences adjustments. The p-values for college enrollment and progressing in college were calculated by the WWC. This study is characterized as having a statistically significant positive effect on college enrollment and progressing in college because the estimated effects are positive and statistically significant. For more information, please refer to the WWC Procedures Handbook, version 4.0, page 22.

In What Context Was *Bottom Line* Studied?

The following section provides information on the setting of the one study of *Bottom Line* that meets WWC standards, and a description of the participants in the research.

This information can help educators understand the context in which the study of *Bottom Line* was conducted, and determine whether the program might be suitable for their setting.



Details of Each Study that Meets WWC Standards

This section presents details for the study of *Bottom Line* that meets WWC standards. These details include the full study reference, findings description, findings summary, and description of study characteristics. A summary of domain findings for the study is presented below, followed by a description of the study characteristics. These study-level details include contextual information about the study setting, methods, sample, intervention group, comparison group, outcomes, and implementation details. For additional information, readers should refer to the original study.

Findings from Barr & Castleman (2017) show evidence of a statistically significant positive effect of *Bottom Line* on college enrollment (Table 5). This finding is based on an outcome analysis that includes 2,422 students. The finding on progressing in college, which also shows evidence of a statistically significant positive effect, is based on an outcome analysis that includes 1,429 students. The findings and research details summarized for this study come from three related citations, including the primary study listed above. See the References section, which begins on page 8, for a list of all related publications.

Research details for Barr & Castleman (2017)

Barr, A., & Castleman, B. (2017). *The bottom line on college counseling*. Boston, MA: Bottom Line. Retrieved from https://www.bottomline.org/sites/default/files/The%20Bottom%20Line%20on%20College%20Counseling%20RCT-Paper_10_2017.pdf

Table 5. Summary of findings from Barr & Castleman (2017)

		Meets WWC Group Design Standards Without Reservations		
		Study findings		
Outcome domain	Sample size	Average effect size	Improvement index	Statistically significant
College enrollment	2,422 students	0.34	13	Yes
Progressing in college	1,429 students	0.33	13	Yes

Table 6. Description of study characteristics for Barr & Castleman (2017)

WWC evidence rating	Meets WWC Group Design Standards Without Reservations. This is a randomized controlled trial (RCT) with low attrition. ⁶ For more information on how the WWC assigns study ratings, please see the WWC Procedures and Standards Handbooks (version 4.0) and WWC Standards Briefs , available on the WWC website.
Setting	The study was conducted with two cohorts of high school students, representing the graduating classes of 2015 and 2016 in Boston, New York City, and Worcester, Massachusetts. Students who received the intervention were encouraged to attend a <i>Bottom Line</i> target college where they could continue the program; approximately 50 percent of students in the intervention group did so. There are about 30 of these target colleges, and they were described in the study as ones that offered an optimal combination of quality and affordability. These institutions are located in the same geographic region as the study high schools; examples include Boston University, the State University of New York at Albany, and target campuses in the City University of New York and University of Massachusetts systems.
Methods	The study is a student-level RCT conducted across multiple high schools and colleges implementing the <i>Bottom Line</i> program. The sample frame included students who submitted applications to participate in <i>Bottom Line</i> prior to the start of their senior year, during one of three time periods that closed in May 2014, August 2014, or August 2015. The majority of students learned about <i>Bottom Line</i> through word of mouth referrals, but the program also engaged in active recruiting at local college fairs and at selected schools, and advertised the program via signage in local communities and through radio commercials. Eligible students were then randomly assigned to receive an invitation to receive <i>Bottom Line</i> services or not. Randomization was conducted with two groups: students who graduated high school in 2015 (cohort 1) and students who graduated in 2016 (cohort 2). The randomization procedure took into account the minimum number of students expected to be served in each of the <i>Bottom Line</i> cities (Boston, New York City, and Worcester, MA), resulting in differing probabilities of assignment across the three cities.
Study sample	<p>The total sample included 2,422 students; 1,687 of these students were assigned to the <i>Bottom Line</i> program and the remaining 735 students were assigned to the comparison group. Cohort 1 included 995 students assigned to the <i>Bottom Line</i> program and 434 students assigned to the comparison group. Cohort 2 included 692 students assigned to the <i>Bottom Line</i> program and 301 students assigned to the comparison group.</p> <p>The high school students in the sample were from families that earn less than 200 percent of the federal poverty guidelines. Program eligibility required that students have earned at least a 2.5 high school GPA. About 81 percent of students in the sample were first-generation college students; approximately 70 percent were female and 32 percent Hispanic. Thirty-two percent of students in the sample were Black, 24 percent were Asian, and race was not specified for 44 percent of students.</p>
Intervention group	The <i>Bottom Line</i> college advising model provides two programs: <i>Bottom Line Access</i> for high school juniors and seniors and <i>Bottom Line Success</i> for students who attend a target college. The study followed students who were randomly assigned to the <i>Bottom Line Access</i> program as they transitioned to the <i>Bottom Line Success</i> program. Advisors interacted with students during high school, on average, 13 times during a 15-month period in which the intervention was delivered, starting with May of the student's junior year of high school through August of the year of graduation. Most meetings involved working on college applications or financial aid. Overall, this entailed 10-15 hours of contact time between advisors and students. After high school graduation, students who chose to attend a <i>Bottom Line</i> target college were matched to a new advisor at their college to continue to receive advising through <i>Bottom Line Success</i> .
Comparison group	Students in the comparison group had access to existing college advising support services. The study surveyed Cohort 1 students and found that almost all respondents in both groups applied for college (100 percent of intervention students and 99 percent of comparison students) and financial aid (99 percent of intervention students and 97 percent of comparison students). The authors did not administer the survey to students in Cohort 2.
Outcomes and measurement	<p>Study authors reported findings on two outcome measures that are eligible for review under the Transition to College topic area. These outcomes include enrolled in a 4-year college (college enrollment domain) and continuously enrolled for the three semesters following high school (progressing in college domain).</p> <p>The study also reported supplemental findings including enrolled in any college, enrolled in a 2-year college (college enrollment domain), enrolled in any college for a second year, enrolled in a 2-year college for a second year, and enrolled in a 4-year college for a second year (progressing in college domain). A summary of these findings is available on the WWC website (https://whatworks.ed.gov). The supplemental findings do not factor into the intervention's rating of effectiveness.</p> <p>Three study-reported findings, applied to college, filled out the Free Application for Federal Student Aid (FAFSA), and number of college applications completed (college readiness domain), did not meet WWC group design standards because analytic sample sizes were not reported.</p>
Additional implementation details	<i>Bottom Line</i> is a 501(c)(3) privately funded organization that serves low-income and first-generation students. The organization currently serves students in Boston, New York City, Chicago, and Worcester, Massachusetts. https://www.bottomline.org/what-we-do . Financial support for the study was provided by the Michael & Susan Dell Foundation, the Coalition for Evidence-Based Policy, and the Laura and John Arnold Foundation.

References

Study that meets WWC group design standards

Barr, A., & Castleman, B. (2017). *The bottom line on college counseling*. Boston, MA: Bottom Line. Retrieved from https://www.bottomline.org/sites/default/files/The%20Bottom%20Line%20on%20College%20Counseling%20RCTPaper_10_2017.pdf

Additional sources:

Barr, A., & Castleman, B. (2016). *Advising students to and through college: Experimental evidence from the Bottom Line advising program*. Boston, MA: Bottom Line. Retrieved from https://www.bottomline.org/sites/default/files/Advising%20Students%20To%20and%20Through%20College_web.pdf

Castleman, B., & Goodman, J. (2015). *Intensive college counseling and the college enrollment choices of low-income students*. [Abstract]. SREE 2015 Spring Conference. Retrieved from <https://eric.ed.gov/?id=ED562330>

Studies that meet WWC group design standards with reservations

None

Studies that do not meet WWC group design standards

None

Study that is ineligible for review under WWC regression discontinuity design standards

Castleman, B., & Goodman, J. (2018). Intensive college counseling and the enrollment and persistence of low-income students. *Education Finance and Policy*, 13(1), 19-41. Retrieved from <https://eric.ed.gov/?id=EJ1165326> The study is ineligible for review under the WWC regression discontinuity design standards because the forcing variable used to calculate impacts is not the same as the forcing variable used to assign units to groups.

Endnotes

¹McFarland, J., Hussar, B., Zhang, J., Wang, X., Wang, K., Hein, S., Diliberti, M., Forrest Cataldi, E., Bullock Mann, F., and Barmer, A. (2019). *The Condition of Education 2019* (NCES 2019-144). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2019144>

²The descriptive information for this intervention comes from Barr & Castleman (2017). The What Works Clearinghouse (WWC) requests developers review the intervention description sections for accuracy from their perspective. The WWC provided the developer with the intervention description in August 2020 and the WWC incorporated feedback from the developer. Further verification of the accuracy of the descriptive information for this intervention is beyond the scope of this review.

³The literature search reflects documents publicly available by May 2020. Reviews of the studies in this report used the standards from the WWC Procedures and Standards Handbook (version 4.0) and the Transition to College review protocol (version 4.0). The evidence presented in this report is based on available research. Findings and conclusions could change as new research becomes available.

⁴The target colleges for Worcester, Massachusetts are the same as those for Boston.

⁵The effects of *Bottom Line* are not known for other outcome domains within the Transition to College topic area, including middle school academic achievement, high school academic achievement, middle school attendance, high school attendance, staying in high school, progressing in high school, completing high school, college attendance, college academic achievement, college degree attainment, and labor market outcomes.

⁶The study is a randomized controlled trial with no attrition.

Recommended Citation

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