What Works Clearinghouse™

ies INSTITUTE OF EDUCATION SCIENCES

October 2013

WWC Review of the Report "Late Interventions Matter Too: The Case of College Coaching New Hampshire"[1]

The findings from this review do not reflect the full body of research evidence on college coaching.

What is this study about?

The study examined whether providing college application coaching to high school seniors increased postsecondary enrollment. The program was aimed at students whom school counselors believed were on the verge of not applying to college, despite having tenth-grade test scores that were high enough to warrant applying.

Study authors chose high schools in New Hampshire based on their interest in the intervention and their willingness to participate in a randomized experiment. Approximately 1,150 students were randomly assigned into one of two groups. Students in the intervention group received the college coaching program, which was implemented by college students and provided in-person assistance with completing college application and financial aid forms, money to cover application fees, and a $100 cash incentive to participants for completing the college application process. Students in the comparison group did not receive the intervention (but they were eligible for the usual services normally available to them).

The authors used data from the New Hampshire Department of Education's Data Warehouse and the National Student Clearinghouse. The primary outcome was whether students enrolled in college, and follow-up analyses examined whether students attended at least 3 semesters of college.

Features of the College Coaching Program

College coaching was targeted at high school seniors whom school counselors identified as good candidates for college but who had not completed the college application process. It was implemented in the spring semester.

The college coaching program had three main components: mentoring, financial support, and a completion incentive. *Mentoring* involved weekly meetings with college undergraduates who helped students identify all of the steps that needed to be completed and who tracked progress in these tasks, assisted with entrance essay development, and helped students fill out all applications (including those for financial aid). *Financial support* included funds to cover college application and entrance exam fees. The *completion incentive* was $100, and was given to the students after they had completed the application process.

Meetings took place on school grounds, usually in a library or computer center, and usually with school guidance counselors present.

What did the study find?

The authors found, and the WWC confirmed, a statistically significant effect of the intervention on postsecondary enrollment: Students who were offered the chance to participate in the coaching program were more likely to enroll in a postsecondary institution than students who were not offered the chance to participate (57% vs. 52%). However, there was a statistically significant interaction with student gender, such that the intervention improved the postsecondary enrollment rate for women (63% in the intervention group vs. 50% in the comparison group), but for men, enrollment rates were virtually identical across the two groups (about 53%). The authors found that the intervention effects on postsecondary enrollment were similar for both non-White students and White students, and for students eligible for free or reduced-price lunch and students not eligible for this program.

For postsecondary enrollment in 3 or more semesters after high school graduation, the authors did not find a statistically significant difference between the intervention and comparison groups overall. However, as with the analysis of postsecondary enrollment, there was a statistically significant interaction with gender. The intervention increased the likelihood that women were enrolled in 3 or more semesters of college after high school (37% vs. 28%), but for men, the rates were virtually identical, at 44% across both groups.

WWC Rating

The research described in this report meets WWC evidence standards without reservations

Strengths: The study is a well-implemented randomized controlled trial.

Appendix A: Study details

Carrell, S., & Sacerdote, B. (2013). *Late interventions matter too: The case of college coaching New Hampshire* (NBER Working Paper 19031). Cambridge, MA: National Bureau of Economic Research. Retrieved from http://www.nber.org

Setting	The study was conducted in 12 high schools in New Hampshire. Schools were selected based on their willingness to participate in a randomized experiment.
Study sample	About 1,150 students participated in the study. The program targeted students who were considered to be good candidates for postsecondary attendance but whom school counselors believed were on the verge of not applying. Study authors randomly assigned the students into the intervention group and the comparison group. Overall, 55% of the sample was male, 31% of the students were eligible for free or reduced-price lunch, and 84% of the students were White. Approximately 53% of students in the sample had a tenth-grade math test score that was above the state median. For the state reading test, this figure was about 36%.
Intervention group	Students in the intervention group received college coaching, which was targeted at high school seniors whom school counselors identified as good candidates for college but who had not completed the college application process. The college coaching program had three main components: mentoring, financial support, and a completion incentive. *Mentoring* involved weekly meetings with college undergraduates who helped students identify all of the steps that needed to be completed and who tracked progress in these tasks, assisted with entrance essay development, and helped students fill out all applications (including those for financial aid). *Financial support* included funds to cover college application and entrance exam fees. The *completion incentive* was $100, and was given to the students after they had completed the application process. Meetings took place on school grounds, usually in a library or computer center, and usually with school guidance counselors present.
Comparison group	Students in the comparison group did not receive the intervention, but were eligible to receive the guidance services usually available to them.
Outcomes and measurement	The authors used data from the New Hampshire Department of Education's Data Warehouse and the National Student Clearinghouse. The following outcomes were reported: (a) postsecondary enrollment, and (b) enrolled in any type of postsecondary institution, 3 or more semesters after graduation. For a more detailed description of these outcome measures, see Appendix B.[2]
Support for implementation	College coaching was implemented by undergraduate students working full time (i.e., 20 hours a week) for about 10 weeks (January through mid-March). The coaching sessions took place on school grounds, usually in the library or computer center, and were usually attended by school guidance counselors.
Reason for review	This study was identified for review by the WWC because it received significant media attention.

Appendix B: Outcome measures for each domain

Enrollment	
Enrollment	Postsecondary enrollment information was obtained from the National Student Clearinghouse.
Persistence	
Enrolled 3 or more semesters after high school graduation	Postsecondary enrollment information was obtained from the National Student Clearinghouse.

Table Notes: The study also provided results for persistence 2 years post high school graduation. This outcome is conceptually similar to enrollment in 3+ semesters after high school graduation, and the results observed were virtually identical across the two analyses. The study also provided results for attendance at a 4-year college (vs. attending a 2-year college and not attending postsecondary, combined). This is not an eligible outcome as specified in the WWC Postsecondary Education Review Protocol v. 2.

The data for *Enrolled 3 or more semesters after high school graduation* are from the 2009, 2010, and 2011 cohorts, because an insufficient amount of time had elapsed at the time of report publication (May 2013) for the 2012 cohort to be included in this analysis.

Appendix C: Study findings for each domain

Domain and outcome measure	Study sample	Sample size	Mean (standard deviation)		WWC calculations			*p*-value
			Intervention group	Comparison group	Mean difference	Effect size	Improvement index	
Enrollment (end of coaching program)								
Postsecondary enrollment	Full sample	1,149 students	57%	52%	5%	0.13	+5	0.03
Domain average for enrollment (end of coaching program)						**0.13**	**+5**	**Statistically significant**
Persistence (2 years after high school)								
Enrolled 3 or more semesters after high school	Full sample	950 students	41%	37%	4%	0.10	+4	0.12
Domain average for persistence (2 years after high school)						**0.10**	**+4**	**Not statistically significant**

Table Notes: Positive results for mean difference, effect size, and improvement index favor the intervention group; negative results favor the comparison group. The effect size is a standardized measure of the effect of an intervention on student outcomes, representing the change (measured in standard deviations) in an average student's outcome that can be expected if the student is given the intervention. The improvement index is an alternate presentation of the effect size, reflecting the change in an average student's percentile rank that can be expected if the student is given the intervention. The WWC-computed average effect size is a simple average rounded to two decimal places; the average improvement index is calculated from the average effect size.

Study Notes: Corrections for multiple comparisons were not needed. The *p*-values presented here were computed by the WWC. The sample sizes and percentages reported in this table are from Table 1 (p. 26) and Appendix Table 3 (p. 43) of the manuscript.

Appendix D: Supplemental findings by domain

Domain and outcome measure	Study sample	Sample size	Mean (standard deviation)		WWC calculations			*p*-value
			Intervention group	Comparison group	Mean difference	Effect size	Improvement index	
Enrollment (end of coaching program)								
Postsecondary enrollment	Men	632 students	53%	53%	0%	0.00	0	0.95
Postsecondary enrollment	Women	517 students	63%	50%	13%	0.31	+12	<0.001
Persistence (2 years after high school)								
Enrolled 3 or more semesters after high school	Men	531 students	44%	44%	0%	–0.01	0	0.91
Enrolled 3 or more semesters after high school	Women	419 students	37%	28%	9%	0.25	+10	0.01

Table Notes: Positive results for mean difference, effect size, and improvement index favor the intervention group; negative results favor the comparison group. The effect size is a standardized measure of the effect of an intervention on student outcomes, representing the change (measured in standard deviations) in an average student's outcome that can be expected if the student is given the intervention. The improvement index is an alternate presentation of the effect size, reflecting the change in an average student's percentile rank that can be expected if the student is given the intervention.

Study Notes: The percentages reported in this table were taken from the manuscript (Table 1, p. 26, and Appendix Table 3, p. 43). The sample sizes were provided by the study authors. The *p*-values presented here were computed by the WWC. Corrections for multiple comparisons were needed but would have not changed the statistical conclusions, and as such, these were not applied.

The study report provides several other subgroup analyses, based only on the women in the sample: first generation college students, racial/ethnic minorities, and free/reduced-price lunch eligible students. The authors reported no statistically significant differential effects on any of these subgroups, suggesting that the coaching program effects are similar across different categories of these groups (that is, the analyses suggest similar effect sizes for first generation college students and those who are not first generation college students, etc.). Results obtained from the study authors confirm these analyses. In addition, the study reports an analysis comparing students above the 75th percentile vs. those below the 75th percentile on a state achievement test. This is not a protocol-specified subgroup, and therefore, is not included here.

Endnotes

[1] Single study reviews examine evidence published in a study (supplemented, if necessary, by information obtained directly from the author[s]) to assess whether the study design meets WWC evidence standards. The review reports the WWC's assessment of whether the study meets WWC evidence standards and summarizes the study findings following WWC conventions for reporting evidence on effectiveness. This study was reviewed using the Postsecondary Education topic area review protocol, version 2.0. A quick review of this study was released on January 16, 2013, and this report is the follow-up review that replaces that initial assessment.

[2] Study authors also measured enrollment in a 4-year college (vs. a 2-year college and no enrollment) and enrollment in a 2-year college (vs. a 4-year college and no enrollment). However, these outcomes are not eligible for review under the Postsecondary Education topic area review protocol, version 2.0.)

Recommended Citation

U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse. (2013, October). *WWC review of the report: Late interventions matter too: The case of college coaching New Hampshire.* Retrieved from http://whatworks.ed.gov

Glossary of Terms

Attrition Attrition occurs when an outcome variable is not available for all participants initially assigned to the intervention and comparison groups. The WWC considers the total attrition rate and the difference in attrition rates across groups within a study.

Clustering adjustment If intervention assignment is made at a cluster level and the analysis is conducted at the student level, the WWC will adjust the statistical significance to account for this mismatch, if necessary.

Confounding factor A confounding factor is a component of a study that is completely aligned with one of the study conditions, making it impossible to separate how much of the observed effect was due to the intervention and how much was due to the factor.

Design The design of a study is the method by which intervention and comparison groups were assigned.

Domain A domain is a group of closely related outcomes.

Effect size The effect size is a measure of the magnitude of an effect. The WWC uses a standardized measure to facilitate comparisons across studies and outcomes.

Eligibility A study is eligible for review if it falls within the scope of the review protocol and uses either an experimental or matched comparison group design.

Equivalence A demonstration that the analysis sample groups are similar on observed characteristics defined in the review area protocol.

Improvement index Along a percentile distribution of students, the improvement index represents the gain or loss of the average student due to the intervention. As the average student starts at the 50th percentile, the measure ranges from –50 to +50.

Multiple comparison adjustment When a study includes multiple outcomes or comparison groups, the WWC will adjust the statistical significance to account for the multiple comparisons, if necessary.

Quasi-experimental design (QED) A quasi-experimental design (QED) is a research design in which subjects are assigned to intervention and comparison groups through a process that is not random.

Randomized controlled trial (RCT) A randomized controlled trial (RCT) is an experiment in which investigators randomly assign eligible participants into intervention and comparison groups.

Single-case design (SCD) A research approach in which an outcome variable is measured repeatedly within and across different conditions that are defined by the presence or absence of an intervention.

Standard deviation The standard deviation of a measure shows how much variation exists across observations in the sample. A low standard deviation indicates that the observations in the sample tend to be very close to the mean; a high standard deviation indicates that the observations in the sample are spread out over a large range of values.

Statistical significance Statistical significance is the probability that the difference between groups is a result of chance rather than a real difference between the groups. The WWC labels a finding statistically significant if the likelihood that the difference is due to chance is less than 5% ($p < 0.05$).

Substantively important A substantively important finding is one that has an effect size of 0.25 or greater, regardless of statistical significance.

Please see the WWC Procedures and Standards Handbook (version 2.1) for additional details.