

UPWARD BOUND EXECUTIVE SUMMARY

Policymakers have long been concerned about the disparities in college attendance between more and less advantaged groups of students. Data from the 1990s indicate that students from low-income families were less than half as likely to attend a four-year college or university as students from high-income families. This difference is not surprising given disparities in financial resources and college preparation between high- and low-income high school students. While the vast majority of high-income high school graduates are qualified to attend a four-year college—based on grades and test scores—only half of low-income students have adequate qualifications (U.S. Department of Education 1997), and low-income students face greater financial barriers to college attendance (Kane 1999).

Upward Bound is one of the largest and longest-running federal programs designed to help economically disadvantaged students prepare for, enter, and succeed in college.¹ Upward Bound is “designed to generate skills and motivation necessary for success in education beyond high school among young people from low-income backgrounds and inadequate secondary school preparation” (Public Law 90-222, Dec. 23, 1967). Over 56,000 students now participate in 761 regular Upward Bound projects across the country, with the majority hosted by four-year colleges. According to the program’s regulations, at least two-thirds of each project’s participants must be both low-income and potential first-generation college students. Students typically enter the regular Upward Bound program while in ninth or tenth grade. Although students may participate in Upward Bound through the summer following twelfth grade (for three to four years total), participants typically remain in Upward Bound for about 20 months (Myers et al. 2004). Projects provide students with a variety of services, including instruction, tutoring, and counseling. In addition to regularly scheduled meetings throughout the school year, projects offer an intensive instructional program that meets daily for about six weeks during the summer.

Since December 1991, Mathematica Policy Research, Inc. (MPR), has been conducting the National Evaluation of Upward Bound for the U.S. Department of Education. The evaluation has included an implementation study—to assess how the program is implemented—and a longitudinal impact study. The impact study is designed to measure the effects of regular Upward Bound on student outcomes. For the impact study, eligible applicants from a nationally representative sample of projects were randomly assigned to Upward Bound or to a control group. Results from the implementation study were presented in Moore (1997); Myers and Schirm (1999) presented interim estimates of the effects of Upward Bound on high school outcomes. Myers et al. (2004) presented the evaluation’s final estimates of the program’s effects on high school outcomes, along with interim estimates of the program’s effects on college attendance and postsecondary credits earned. That report presented estimates based on data collected between 1999 and 2000.

¹ Within Upward Bound there are three programs: regular Upward Bound, Veterans Upward Bound, and Upward Bound Math-Science. The focus of this report is regular Upward Bound and we use the term “Upward Bound” to refer to that program.

In this report, we summarize the evaluation's latest findings based on data collected between 2003 and 2004, approximately seven to nine years after sample members were scheduled to graduate from high school. The research questions addressed are:

- What effect does Upward Bound have on the likelihood of attending a postsecondary institution and on the highest level of postsecondary attendance?
- What is the effect of Upward Bound on the likelihood of attending a relatively selective four-year college or university?
- What is the effect of Upward Bound on the likelihood of receiving financial aid in college?
- What is the effect of Upward Bound on the likelihood of earning a postsecondary degree, certificate, or license?
- For which groups of eligible applicants are the effects of Upward Bound greatest?
- What is the effect of Upward Bound participation length and completion on postsecondary outcomes?

METHODS AND DATA

Methods

A nationally representative sample of 67 Upward Bound projects hosted by two- and four-year colleges was selected for the evaluation. From 1992 to 1994, eligible applicants within each project were randomly assigned to either a treatment group that was allowed to enroll in Upward Bound or to a control group that was not allowed to enroll in Upward Bound. About 1,500 applicants were assigned to the treatment group and about 1,300 to the control group. To measure the effects of Upward Bound, we compared the outcomes of the two groups. Because eligible applicants were randomly assigned to the two groups and because only treatment group members were offered the opportunity to participate in Upward Bound, the differences in outcomes between the treatment and control groups reveal the effects of Upward Bound above and beyond the other programs and services that are available to eligible applicants to Upward Bound.

Data Sources

Several data sources have informed this report. From 1992 to 1994, a baseline survey collected information on students who applied to Upward Bound projects in the study. Follow-up surveys of all treatment and control group members were conducted in 1994–1995, 1996–1997, 1998–1999, 2001–2002, and 2003–2004, and high school and postsecondary transcripts were collected after each survey. Upward Bound project staff reported on the participation of students in the program. In addition to the survey, transcript, and participation data that were collected specifically for the evaluation, we also obtained data from two administrative sources: the National Student Clearinghouse and the federal Student Financial Aid records.

At the time of the fifth follow-up survey in 2003–2004, the majority of sample members had been out of high school for about seven to nine years. This report provides the national evaluation’s first estimates of the effect of Upward Bound on postsecondary completion and updates previous estimates of the program’s effects on other postsecondary outcomes.

CONTEXT FOR FINDINGS

To interpret the evaluation’s findings, it is important to understand the service environment and, specifically, the other precollege services that low-income students tend to receive. Information from the evaluation’s control group confirms that although many Upward Bound participants would have received some precollege services if they had not participated in Upward Bound, the services would have been much less intensive than the services provided by Upward Bound. Almost half of the control group members received no precollege services, and many of those who did—including the nine percent who participated in Talent Search—participated in programs that are substantially less intensive than Upward Bound.

Upward Bound thus provides low-income high school students with the opportunity to participate in a more intensive program than most of them would participate in otherwise. By comparing the study’s treatment group to its control group, this evaluation estimates the effects of the opportunity to participate in Upward Bound, along with actual Upward Bound participation, in a context where many low-income students receive low-intensity and low-cost precollege services. We do not estimate the effect that Upward Bound would have if, instead, very few low-income students participated in any other precollege services. Furthermore, while Upward Bound is a well-developed program model, we also do not estimate the effect of any particular set of services, such as the Upward Bound summer program or the academic offerings. Finally, the findings from this evaluation should not be used to assess the importance of providing any type of precollege assistance to disadvantaged youth. Rather, the findings are informative about the value-added effect of the opportunity to participate in Upward Bound—an unusually intensive precollege program—to the students who seek that opportunity and are eligible to participate in the program.

It is also important to understand that the estimates are of the long-term effects of Upward Bound, using a group of eligible applicants who applied to Upward Bound in the mid-1990s. To the extent that the types of services provided by regular Upward Bound and other precollege programs and the types of students served by these programs have not changed much since the mid-1990s, this report may provide a reasonable assessment of the effects of Upward Bound as it operates today. However, there have been changes in the universe of Upward Bound grantees over the past 15 years, along with changes in student targeting, which suggest that findings based on students who participated in the program in the mid-1990s may not be directly applicable to current participants.

OVERVIEW OF MAJOR FINDINGS

Different data sources and methods have different relative strengths and limitations, and there are a number of reasonable approaches to combining data from the multiple sources to measure postsecondary enrollment or completion. We examine estimated impacts for a broad

range of measures and assess the robustness of the conclusions implied by the estimates in an attempt to ascertain whether a conclusion is supported by a preponderance of evidence. Based on this analytical approach, this report's main findings on the effects of both the opportunity to participate in Upward Bound and actual participation in the program, for the average eligible applicant, are as follows:

- ***Upward Bound had no detectable effect on the rate of overall postsecondary enrollment for the average eligible applicant.*** Across the full set of measures, Upward Bound consistently had no detectable effect on overall postsecondary enrollment. According to a measure based on the most recent survey data only, more than four-fifths of both treatment group members and control group members attended some type of postsecondary institution, including four-year institutions, two-year colleges, and vocational schools.
- ***Upward Bound had no detectable effect on the types of postsecondary institutions sample members attended.*** According to most of the alternative estimates, Upward Bound did not have a detectable effect on the type of institutions eligible applicants attended, either in level or selectivity. Across estimates, enrollment at four-year and vocational institutions appeared to rise slightly, offset by a decline in those whose highest level of schooling was at a two-year institution. Similarly, the average estimated likelihood of attending a more selective four-year institution was higher for treatment group students, although very few estimated impacts were significant across the alternative measures considered.
- ***Upward Bound had no detectable effect on the rate of receipt of financial aid.*** Across the range of measures, treatment group members reported applying for and receiving aid at higher levels than control group members, but none of the differences were statistically significant.
- ***Upward Bound increased the likelihood of earning a postsecondary credential, largely through an increase in the receipt of certificates and licenses.*** As reported in the survey, approximately 55 percent of treatment group members and 42 percent of control group members had obtained a postsecondary credential of some type by seven to nine years after scheduled high school graduation, a difference that is statistically significant. The program had a significant positive effect on the likelihood of earning a certificate or license, but had no detectable effect on the likelihood of earning a bachelor's or the likelihood of earning an associate's degree.
- ***Upward Bound had positive effects on postsecondary outcomes for eligible applicants who participated longer or completed the program.*** Our findings suggest that Upward Bound participants would reap larger benefits from additional participation. Additional Upward Bound participation (both through increased duration and program completion) raises enrollment and completion at four-year institutions, while having negligible effects on enrollment and completion at two-year and other institutions. Furthermore, both increased duration and completion increase enrollment rates at more selective four-year colleges and universities, as well as the likelihood of receiving financial aid. Because treatment group members were not randomly assigned to different durations of participation, however, these findings are

based on nonexperimental methods, and the validity of these estimates depends on the validity of strong, but untestable assumptions.

Because the findings for the full evaluation sample may conceal important differences across subgroups, we also present effect estimates for selected subgroups of eligible applicants. Upward Bound had a number of statistically significant effects for eligible applicants who were classified as higher performing based on their ninth-grade transcripts. For eligible applicants with ninth-grade grade point averages greater than 2.5, Upward Bound increased overall postsecondary attendance, increased attendance at four-year colleges and universities, decreased attendance at two-year institutions, increased the likelihood of attending a highly selective four-year institution, and increased the receipt of financial aid.

Upward Bound does not appear to have consistently positive effects on both postsecondary enrollment *and* completion for any of the subgroups examined; however, it might be possible to identify groups of applicants who are relatively less likely to experience postsecondary academic success in particular areas, and who benefit from being given the opportunity to participate in Upward Bound. Given positive effects seen for some subgroups of Upward Bound applicants on some outcomes, it may be tempting to conclude that the overall effects of Upward Bound might have been larger had the program targeted students differently. However, this would affect the composition of students enrolled in Upward Bound, and possibly the mix of services provided, and thus it is unknown what the effects of Upward Bound might be if the program were targeted differently.

That positive results are observed for certain subgroups may also raise the question as to why effects are not observed for the broader population of all eligible applicants. The answer might be that Upward Bound applicants are generally very highly motivated and, thus, likely to pursue postsecondary education on their own. The motivation of applicants to Upward Bound to pursue education beyond high school is reflected in their postsecondary enrollment rates, which are high relative to national rates of similarly disadvantaged students. Nationwide, among all students in eighth-grade in 1988, approximately 76 percent enrolled in postsecondary education within about eight years after high school (Ingels et al. 2002). Among disadvantaged students, the national postsecondary enrollment rate was much lower—less than 60 percent for students who were in the lowest quartile of socioeconomic status or whose parents did not attend college. In comparison, 81 percent of Upward Bound applicants assigned to the control group enrolled in postsecondary education within seven to nine years after high school. Thus, even without the opportunity to participate in Upward Bound, Upward Bound applicants attend postsecondary institutions at a rate similar to the national average, and at a much higher rate than the average disadvantaged student.