



OPENING DOORS

MORE GUIDANCE, BETTER RESULTS?

Three-Year Effects of an Enhanced Student Services
Program at Two Community Colleges

Susan Scrivener
Michael J. Weiss

AUGUST 2009

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Program at Two Community Colleges**

**Susan Scrivener
Michael J. Weiss**
with
Jedediah J. Teres



August 2009

Funders of the Opening Doors Project

The Annie E. Casey Foundation
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Ford Foundation
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The James Irvine Foundation
The Joyce Foundation
KnowledgeWorks Foundation
Lumina Foundation for Education
MacArthur Foundation Research Network on Socioeconomic Status and Health
MacArthur Foundation Research Network on Transitions to Adulthood
National Institutes of Health, National Institute of Child Health and Human Development
(RO1 HD046162)
Princeton University Industrial Relations Section
Robin Hood Foundation
The Spencer Foundation
U.S. Department of Education
U.S. Department of Labor
The William and Flora Hewlett Foundation
William T. Grant Foundation

Dissemination of MDRC publications is supported by the following funders that help finance MDRC's public policy outreach and expanding efforts to communicate the results and implications of our work to policymakers, practitioners, and others: The Ambrose Monell Foundation, The Annie E. Casey Foundation, Carnegie Corporation of New York, The Kresge Foundation, Sandler Foundation, and The Starr Foundation.

In addition, earnings from the MDRC Endowment help sustain our dissemination efforts. Contributors to the MDRC Endowment include Alcoa Foundation, The Ambrose Monell Foundation, Anheuser-Busch Foundation, Bristol-Myers Squibb Foundation, Charles Stewart Mott Foundation, Ford Foundation, The George Gund Foundation, The Grable Foundation, The Lizabeth and Frank Newman Charitable Foundation, The New York Times Company Foundation, Jan Nicholson, Paul H. O'Neill Charitable Foundation, John S. Reed, Sandler Foundation, and The Stupski Family Fund, as well as other individual contributors.

The findings and conclusions in this report do not necessarily represent the official positions or policies of the funders.

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Overview

Over the past four decades, community colleges have played an increasingly important role in higher education. Today, community colleges — which are accessible and affordable, relative to four-year institutions — enroll more than one in every three postsecondary education students. Unfortunately, among students who enroll in community colleges with the intent to earn a credential or transfer to a four-year institution, only 51 percent achieve their goal within six years. These students may face fewer difficulties and make better academic progress if they had better access to, or more adequate, student services, but, as it stands, student-to-counselor ratios at community colleges are often more than 1,000 to 1, limiting the assistance that students receive.

As part of MDRC’s multisite Opening Doors demonstration, Lorain County Community College and Owens Community College in Ohio ran a program that provided enhanced student services and a modest stipend to low-income students. Students in the Opening Doors program were assigned to one of a team of counselors, with whom they were expected to meet at least two times per semester for two semesters to discuss academic progress and resolve any issues that might affect their schooling. Each counselor worked with far fewer students than did the regular college counselors, which allowed for more frequent, intensive contact. Participating students were also eligible for a \$150 stipend for two semesters, for a total of \$300.

To estimate the effects of the program, MDRC worked with the colleges to randomly assign students either to a program group, whose members were eligible for the Opening Doors services and stipend, or to a control group, whose members received standard college services and no Opening Doors stipend. Any subsequent substantial differences in academic and other outcomes can be attributed to the program. This study’s findings include the following:

- **The program improved academic outcomes during the second semester that students were in the study.** Program group students registered for at least one course during the second semester at a higher rate than did control group students and earned an average of half a credit more during the semester. The registration impact is likely primarily the effect of Opening Doors services provided during the first semester. The program did not substantially affect outcomes during the first semester.
- **After students in the Opening Doors program received their two semesters of enhanced counseling services, the program continued to have a positive effect on registration rates in the semester that followed. The program did not, however, meaningfully affect academic outcomes in subsequent semesters.** The program did not significantly increase the average number of credits that students earned after the counseling program ended or over the study’s three-year follow-up period.

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Preface

If approved by Congress, the Obama Administration's College Access and Completion Fund will provide \$2.5 billion to states over five years to help them implement programs to increase college completion. This goal is of particular concern to community colleges, which account for approximately 40 percent of all college enrollments in this country and where roughly half of all students do not complete their studies within six years. These schools serve disproportionate numbers of low-income students, students of color, immigrants, and first-generation college students, who may need guidance in overcoming such barriers to success as inadequate academic preparation, the need to juggle school with work and family obligations, financial constraints, and other personal difficulties.

There is widespread belief among community college leaders that strengthening student services is key to improving academic outcomes. Unfortunately, student services are severely under-resourced at most community colleges: student-to-counselor ratios often exceed 1,000 to 1, seriously limiting the assistance that students receive. A recent national survey of entering community college students found that half did not meet with or recall seeing an adviser during their first four weeks of college. Thus, when policymakers and college administrators point to low persistence and graduation rates in community colleges, they often look to student support services as a possible solution. Such services can include orientation for new students, academic advising, financial aid counseling, career planning, job placement assistance, and other services.

This report presents the results of a study at two community colleges in Ohio that tested the use of enhanced student services for low-income students. The study was one of a very few that has used an experimental design to evaluate community college student services. The student-to-counselor ratio in the program was vastly lower than that in a control group, who received only the regular college services, and the program services were more intensive, comprehensive, and personalized. Students in the program group also received a small stipend as an incentive to meet with their counselors. The program, which increased the frequency of academic and financial aid advising, and other student services, generated initial improvements in academic outcomes and retention rates. However, for the most part, these effects did not persist once the program ended.

While the Opening Doors program in Ohio did not have an effect on students' long-term outcomes, it does leave us with a rough template for crafting an improved program and it raises valuable questions for future research. Would enhanced student services have longer-term impacts, for example, if they were more comprehensive, were offered for a longer period, or were paired with other reforms? It is our hope that community college administrators and policymakers will continue to consider alternative frameworks for providing services to struggling students that will help them overcome the barriers they face so they can succeed in school.

Gordon Berlin
President

Acknowledgments

The Opening Doors demonstration has received support from several foundations and government agencies, which are listed at the front of this report. We are grateful for their generous backing and ongoing commitment. We owe special thanks to Lumina Foundation for Education for providing the early support that made the demonstration possible and the funds that allowed the completion of this report. We also owe thanks to the funders that focused in particular on the demonstration at Lorain County Community College and Owens Community College: The George Gund Foundation, The Joyce Foundation, and KnowledgeWorks Foundation. We are grateful to Brett Visger, who worked at KnowledgeWorks when the demonstration began, for providing us with introductions and access to the Ohio colleges.

We are also grateful to the administrators and staff at Lorain and Owens who rose to the challenge of developing and running a new program and participating in a complex research project. Space does not permit us to name everyone who has played a role in Opening Doors, but we want to particularly acknowledge some individuals. Lorain's President Roy Church and Owens's President Christa Adams supported the project from its inception and provided crucial leadership. At Lorain, Judith Crocker, Mary Murphy, and Joe Fraconna worked closely with MDRC to develop the program model and fit the study's research procedures into the college's operations. Judith has continued to work with MDRC throughout the project and reviewed an earlier draft of this report. At Owens, Linda Stacy, Bill Ivoska, Donna Gruber, and Chip Campbell worked with MDRC to adapt the program for their college and set up the study's research procedures. Donna and Bill have served as our contacts at the college, and Bill reviewed an earlier draft of this report.

The Opening Doors coordinator and counselors at each college brought the program model to life. Ray Kneisel coordinated the program at Lorain, and Laura Hiss and Kita Graham played that role at Owens. They and the other Opening Doors counselors — Carrie Delaney, Maureen Hess, Eddie Henson, and Pat Zolman at Lorain; and Gwen Ames, Anna Cihak, Pat Dymarkowski, Beth Senecal, and Amy Towner at Owens — devoted a lot of time and effort to recruiting and assisting students. Mary Szabados at Lorain and Laurene Markis at Owens assisted with recruitment and provided valuable administrative support. We appreciate everyone's willingness to participate in various activities related to the study, including interviews with MDRC staff during numerous campus visits. Finally, we appreciate the help of the following individuals who provided student records data to MDRC: Stacy Lease, Lu Phillips, and Diana Smarsh at Lorain; and Jason Stokes and Matthew Lewis at Owens.

Many MDRC staff members have contributed to Opening Doors and to this report. Robert Ivry developed the demonstration, helped design the Ohio program, and provided

guidance on the study. Thomas Brock led the evaluation of the Opening Doors programs and helped set up the demonstration at Lorain. Two former MDRC employees played central roles in the study in Ohio. Melissa Wavelet worked closely with the colleges' administrators to design the program and offered guidance to help them deliver services to students as intended. Janelle Stevens worked with Melissa and one of this report's authors on all aspects of the demonstration at the colleges. JoAnna Hunter worked with Battelle Memorial Institute to conduct the 12-month survey in Ohio. Colleen Sommo oversaw the collection of the quantitative data used in this report, and former MDRC staff members Laura Llamado, Sarah Spell, Jenny Au, Michael Pih, and Asa Wilks programmed the data. The current MDRC staff mentioned, along with John Hutchins, Charles Michalopoulos, and Lashawn Richburg-Hayes, reviewed earlier drafts of this report and provided helpful comments. Erin Coghlan assisted in the production of the report and conducted fact-checking. Joel Gordon, Galina Farberova, and Shirley James and her staff developed and monitored the random assignment and baseline data collection process. Alice Tufel edited the report, and Stephanie Cowell and David Sobel prepared it for publication.

Finally, we would like to thank the hundreds of students who participated in the study at Lorain and Owens, and, in particular, those who answered surveys or participated in interviews. All were low-income students striving to get an education, most while juggling work and family responsibilities. We hope that the findings from the study in Ohio and the other sites in Opening Doors will be used to improve college programs and services for them and others in the future.

The Authors

Executive Summary

Since the mid-1960s, access to higher education has expanded dramatically, and community colleges have played an increasingly important role. Today, community colleges — which are accessible and affordable, relative to four-year institutions — enroll more than one in every three postsecondary education students.¹ Unfortunately, among students who enroll in community colleges with the intent to earn a credential or transfer to a four-year institution, only 51 percent achieve their goal within six years.² Institutional barriers, including inadequate student services, can impede community college students' academic progress. Student-to-counselor ratios at community colleges are often more than 1,000 to 1, limiting the assistance that students receive.³

This report presents results from a rigorous study of a program that provided enhanced student services and a modest stipend to low-income students at two community colleges in Ohio. The program was run as part of MDRC's multisite Opening Doors demonstration, which tested different programs to help students succeed in community college. At Lorain County Community College and Owens Community College, students in the Opening Doors program were assigned to one of a team of counselors, with whom they were expected to meet at least two times per semester for two semesters to discuss academic progress and resolve any issues that might affect their schooling. Each counselor worked with far fewer students than the regular college counselors did, which allowed for more frequent, intensive contact. Participating students were also eligible for a \$150 stipend for two semesters, for a total of \$300.

To estimate the effects of the program, MDRC randomly assigned students either to a program group, whose members were eligible for the Opening Doors services and stipend, or to a control group, whose members received standard college services and no Opening Doors stipend. Any subsequent substantial differences between the two groups in academic and other outcomes can be attributed to the program.

In summary, the key findings from this report are:

¹Stephen Provasnik and Michael Planty, *Community Colleges: Special Supplement to the 2008 Condition of Education* (Washington, DC: U.S. Department of Education, National Center for Education Statistics, 2008).

²Gary Hoachlander, Anna Sikora, and Laura Horn, *Community College Students: Goals, Academic Preparation, and Outcomes* (Washington, DC: U.S. Department of Education, National Center for Education Statistics, 2003).

³Norton W. Grubb, *'Getting into the World': Guidance and Counseling in Community Colleges* (New York: Community College Research Center, Teachers College, Columbia University, 2001), 6.

- **The Ohio colleges successfully delivered enhanced student services and a modest stipend to participating students.** Program group students reported receiving more academic advising, financial aid advising, and other student services, compared with control group members. Approximately 9 of every 10 program group members received at least one stipend payment.
- **The program improved academic outcomes during the second semester that students were in the study.** Program group students registered for classes at a higher rate than did control group students and earned an average of half a credit more during the second semester. The registration impact is likely primarily the effect of Opening Doors services provided during the first semester, since registration for the next semester typically occurred before the semester actually began. The program did not substantially affect outcomes during the first semester.
- **The program increased registration rates during the first “postprogram” semester — that is, the semester after the program’s enhanced counseling services ended. The program did not, however, meaningfully affect academic outcomes in the subsequent semesters.** The program did not significantly increase the average number of credits that students earned during the first semester after the program ended or over the study’s three-year follow-up period.

How Was the Program Evaluated?

To understand how the Opening Doors program was implemented, MDRC staff interviewed many Lorain and Owens administrators, faculty, and staff. MDRC also analyzed data from the colleges about the Opening Doors counseling and stipends, and data from a survey that was administered to study participants about a year after random assignment.

To estimate the effect, or “impact,” of the Opening Doors program, MDRC assigned students at the two colleges, at random, to either a program group or a control group. The study tracked both groups over time, using transcript data from the colleges, to determine whether the program improved academic outcomes for students. Random assignment ensures that the characteristics, including motivation levels and demographic characteristics, of students in the program group and control group are similar when a study begins; hence, any subsequent substantial differences in outcomes can be attributed to the program. This study, therefore, is estimating the *value added* of the Opening Doors program, above and beyond what students normally receive.

Whom Did the Programs Serve?

Lorain and Owens targeted students for their Opening Doors program who were between 18 and 34 years old, had family income below 250 percent of the federal poverty level, had a high school diploma or General Educational Development (GED) certificate, and were either beginning freshmen *or* continuing students who had completed fewer than 13 credits and had experienced academic difficulties (indicated by not passing courses or withdrawing from courses). The program was open to both part-time and full-time students.

Over a period of several semesters, a total of 2,139 students were randomly assigned for the study in Ohio — 1,073 in the program group and 1,066 in the control group. About 42 percent of the sample members are from Lorain and 58 percent are from Owens.

Approximately three-fourths of the sample members are women. Fifty-four percent of the sample members identified themselves as white, 30 percent as black, and 11 percent as Hispanic/Latino. With an average age of 24 (at the point of random assignment), the sample is somewhat older than a traditional college-going population. Many sample members are single parents, balancing family responsibilities with school. Roughly half were employed when they entered the study and about the same proportion lived in a household that received government benefits for families with income below the federal poverty level.

How Was the Program Implemented?

Lorain County Community College, which is in Elyria, a midsized city west of Cleveland, began operating the Opening Doors program during fall 2003. Owens Community College, in Toledo, started a year later. Both colleges operated the program through spring 2006. Lorain and Owens operated their Opening Doors program to its full extent during the fall and spring semesters. Some students in the program group received assistance from Opening Doors during the summer semester, but the services were far less intensive.

The key findings on the implementation of the Opening Doors program follow.

- **The colleges provided Opening Doors counseling services that were more intensive, comprehensive, and personalized than the colleges' standard services.**

The Opening Doors counselors each worked with far fewer students than did other counselors at the colleges. Over the course of the study, Lorain's Opening Doors program had the equivalent of one full-time counselor for every 81 students participating in the program in a given semester. At Owens, the corresponding number was 157. For the control group, the ratio of students to counselors or advisers at the colleges was more than 1,000 to 1.

Program group members were assigned to an Opening Doors counselor. The Opening Doors counseling sessions that MDRC observed covered a range of issues, including course selection, registration, financial aid, other financial issues, tutoring, work-based learning efforts, juggling school and work, career aspirations, and personal issues. The Opening Doors counselors provided intensive assistance themselves, and referred students to other services on and off campus. Both colleges designated staff in the financial aid office to serve as a special liaison for students in the Opening Doors program.

Control group members were not assigned to a counselor, but could seek help from a counselor or adviser on their own. In contrast to the counseling provided to Opening Doors students, the counseling that control group members received tended to be short-term and focused only on academic issues. Data from the study's 12-month survey show that the program increased the frequency with which students received academic advising, financial aid advising, and other student services.

- **The Ohio colleges implemented the Opening Doors stipend component as designed. About 9 of every 10 program group members received at least one stipend payment.**

Program group students were eligible for a \$150 stipend per semester for two semesters, which they could use for any purpose. The stipend's primary function was to promote contact between students and their counselor. It was paid in two installments each semester, after scheduled counseling meetings. A total of 89.3 percent of the program group members received at least one stipend payment, and 45.9 percent received the full \$300.

- **The implementation analysis suggests that the Opening Doors program was somewhat more intensive at Lorain than at Owens.**

As noted above, average caseloads were lower for Lorain's Opening Doors counselors than for their counterparts at Owens. Data from the programs suggest that students at Lorain may have had more contact with their Opening Doors counselor than students at Owens. A higher proportion of the program group members at Lorain than at Owens received at least one stipend payment, and a higher proportion received the full \$300.

Did the Program Make a Difference?

The first two semesters that each student was in the study, during which time Opening Doors services were provided to the program group, are called the "first program semester" and the "second program semester." The semesters that followed are called "postprogram semesters." Each sample member, regardless of the time of random assignment, was followed

up for six consecutive semesters — two program semesters and four postprogram semesters — over a period of three years.

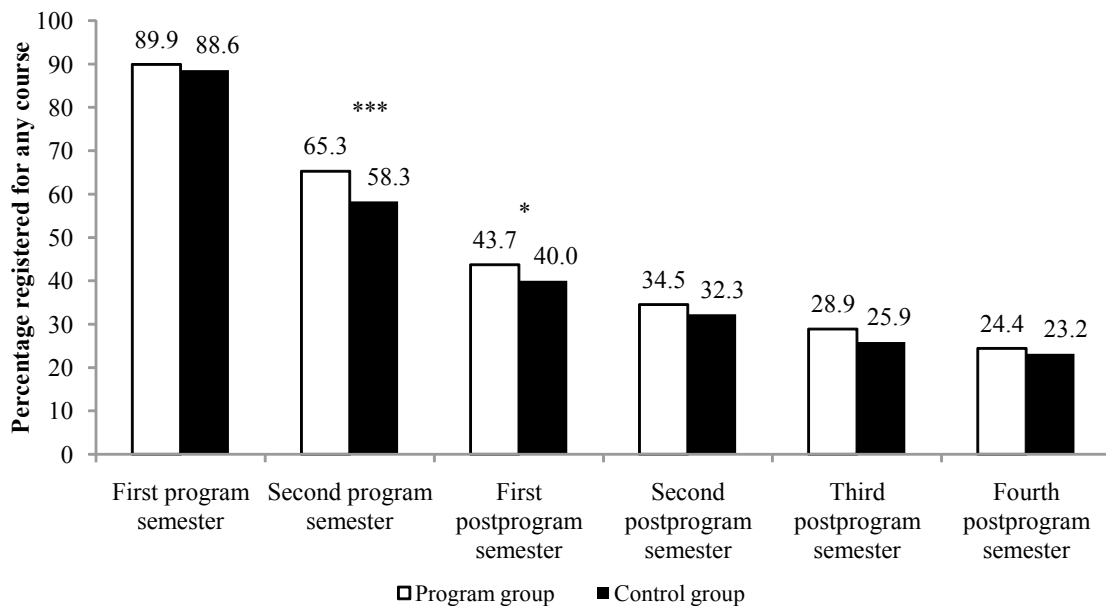
Figure ES.1 illustrates registration rates over the study’s three-year follow-up period. The white bars show the average outcomes for program group members, and the solid black bars show the averages for control group members. The difference between each pair of bars represents the program’s impact, and the presence of one or more asterisks indicates that an impact is *statistically significant*, meaning that it is unlikely to be due to chance. As the figure illustrates, over time there is an initial steep decline in registration rates for both research groups, followed by a more gradual decline. This pattern is common in community colleges. The primary question of the impact analysis is whether and to what extent the Opening Doors program affected those rates and other key academic outcomes.

The Opening Doors Demonstration

Figure ES.1

Effects on Registration Rates

Lorain County Community College and Owens Community College Report



SOURCES: Lorain County Community College and Owens Community College transcript data.

NOTES: A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

- **For the most part, the program did not substantially affect academic outcomes in the first program semester.**

As Figure ES.1 shows, the program group and control group had similar rates of registration during the first program semester. This is not surprising, since most program group students registered before receiving program services. In contrast, the program's enhanced counseling might be expected to positively affect the number of credits that students earned. As Figure ES.2 shows, however, the research groups earned about the same average number of credits during the first program semester.

- **The program increased registration rates and other academic outcomes in the second program semester.**

As shown in Figure ES.1, during the second program semester, 65.3 percent of the program group registered for at least one course, compared with 58.3 percent of the control group. The impact is likely primarily the effect of Opening Doors services provided during the first program semester, since registration typically occurs before a semester begins. During the second program semester, program group members earned an average of half a credit more than control group members. This impact is relatively modest: it represents one-sixth of a three-credit course. As Figure ES.2 shows, by the end of the second program semester, program group members had earned an average of 9.7 credits since entering the study, compared with 9.1 credits for the control group.

- **The program generated a small increase in registration rates during the first postprogram semester, but the effect dissipated in later semesters.**

As the third set of bars in Figure ES.1 illustrates, 43.7 percent of the program group members registered in the first postprogram semester, compared with 40.0 percent of the control group members. While smaller in magnitude than the program's impact on registration during the second program semester, this impact of 3.7 percentage points is statistically significant. Despite the impact on registration during the first postprogram semester, the program did not increase the average number of credits earned that semester. In the second, third, and fourth postprogram semesters, the program did not substantially affect registration or any other key academic outcomes.

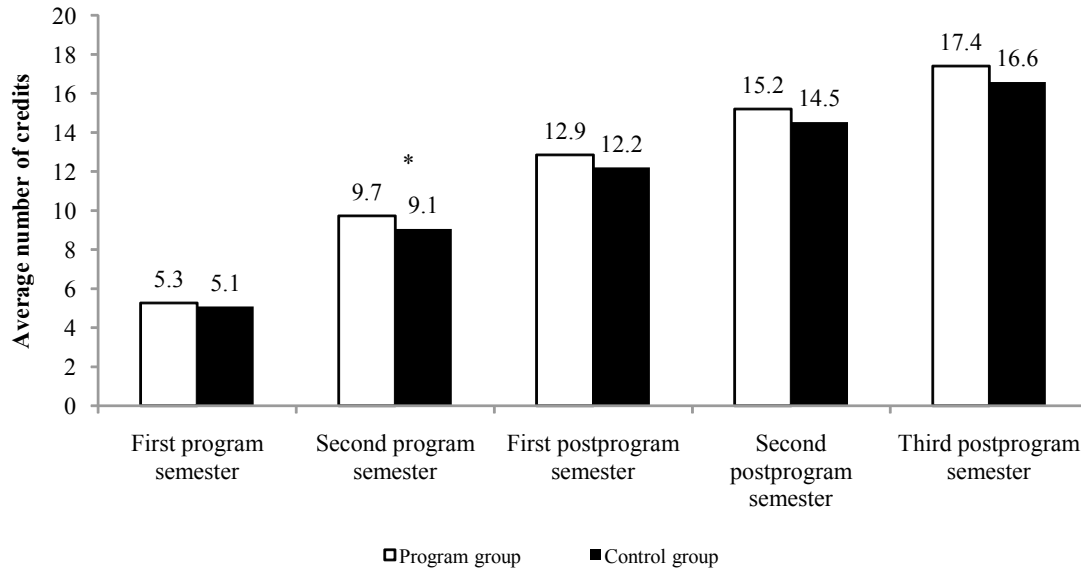
Cumulative outcomes over the full follow-up period show only modest impacts. Program group members registered for an average of 3.3 semesters over the three-year period, whereas control group members registered for an average of 3.1 semesters. The program did not

The Opening Doors Demonstration

Figure ES.2

Effects on Average Cumulative Credits Earned

Lorain County Community College and Owens Community College Report



SOURCES: Lorain County Community College and Owens Community College transcript data.

NOTES: A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

significantly increase the average number of credits that program group members earned during the study, as is illustrated in the rightmost set of bars in Figure ES.2. (The 0.8 difference in cumulative credits earned is not statistically significant.)

- **For the most part, program impacts did not vary across the two colleges.**

Most of the differences between the effects on academic outcomes at the colleges are not statistically significant.

What Are Some Conclusions Based on the Results?

It is reasonable to wonder whether a well-operated enhanced student services program (with a modest stipend) that lasts two semesters might have an effect on students' longer-term outcomes. Such an intervention might not only improve academic outcomes while services are

offered, but might also provide students with information about the college, clarity about their educational goals, improved problem-solving skills, and a feeling of connection to the college so that they can better cope with barriers in the future and continue to have better academic outcomes than students who did not receive the same help. The study in Ohio does not provide evidence of such effects.

The study — of one program tested at two colleges — cannot definitively determine how well this program might have worked at other colleges or how well other program models might have worked. It does, however, provide *suggestive* evidence, beyond the random assignment-based comparison, about enhancing student services.

Below are three ways in which the program in Ohio could have been changed to possibly produce larger or more lasting effects.

- 1. Provide services for a longer period.**

The program improved outcomes during the period in which students received services (and, to some extent, during the semester after the program ended). Many who advocate for enhanced student services view them as an ongoing need, since students continue to face barriers to success. They would argue that two semesters of enhanced services is not sufficient, and that in order for enhanced student services to lead to sustained impacts, program efforts must be sustained.

- 2. Provide more comprehensive enhanced student services.**

While increasing the program's duration is one possible way to boost the long-term impacts, it may also be worth exploring more comprehensive approaches to enhanced student services. The program studied in Ohio focused mainly on enhanced academic counseling, which is one of several key student services. Other components that could be offered include enhanced academic supports, such as tutoring, remedial assistance, and time management and study skills training, or enhanced supplemental services, like on-campus child care and transportation assistance.

- 3. Pair enhanced student services with other reforms.**

The program at Lorain and Owens provided the “lightest touch” of the programs that were operated as part of the multisite Opening Doors demonstration. Two colleges in Louisiana tested a performance-based scholarship program that provided up to \$2,000 and enhanced

student services to low-income parents over two semesters.⁴ A college in New York tested a “learning community” — an approach that typically groups students in linked courses with mutually reinforcing themes and assignments in order to improve their college learning experience — that restructured participating students’ first semester in college.⁵ A college in southern California offered a course that provided basic information on study skills and the requirements of college, along with enhanced student services and academic support for two semesters to students on probation.⁶ These more comprehensive programs generated larger positive effects for students, and in at least one case, the effects continued after the services ended. It is possible that in order for enhanced student services to have a substantial effect on community college students, they need to be offered in conjunction with reforms in other areas that are more substantial than the modest stipend offered in Ohio.

* * *

When college administrators consider whether or not to enhance student services, the cost of the enhancements could be an important factor. Given that the Opening Doors program in Ohio helped students when they received services (and in the semester after), it may be worthwhile for other colleges to offer similar enhancements, if the costs are modest. If funding is available, MDRC plans to conduct a study of the cost of the Ohio Opening Doors program. The research will provide an estimate of the gross cost of the services and will compare it with the cost of providing standard services at the colleges.

⁴Lashawn Richburg-Hayes, Thomas Brock, Allen LeBlanc, Christina Paxson, Cecilia Elena Rouse, and Lisa Barrow, *Rewarding Persistence: Effects of a Performance-Based Scholarship Program for Low-Income Parents* (New York: MDRC, 2009).

⁵Susan Scrivener, Dan Bloom, Allen LeBlanc, Christina Paxson, Cecilia Elena Rouse, and Colleen Sommo, with Jenny Au, Jedediah J. Teres, and Susan Yeh, *A Good Start: Two-Year Effects of a Freshmen Learning Community Program at Kingsborough Community College* (New York: MDRC, 2008).

⁶Susan Scrivener, Colleen Sommo, and Herbert Collado, *Getting Back on Track: Effects of a Community College Program for Probationary Students* (New York: MDRC, 2009).

Chapter 1

Introduction

Over the last 40 years, community colleges have played an increasingly important role in postsecondary education. In the fall of 1963, community colleges enrolled under three quarters of a million students; by the 2006-2007 school year, they enrolled 6.2 million students, an increase of 741 percent. During this same time period, public and private four-year colleges and universities saw their enrollments grow by less than 200 percent. The substantially faster growth rate of community colleges has led them now to enroll more than one in every three postsecondary education students.¹

As the proportion of postsecondary students enrolled at community colleges has increased, so has the understanding of the challenges that these students face. Among students who enroll in community colleges with the intention of earning a credential or transferring to a four-year institution, only 51 percent fulfill these expectations within six years of their initial enrollment.² Research by MDRC and others suggests that many community college students want to earn a degree, but are stymied by the competing demands of work, family, and school. Institutional barriers, such as poorly tailored instruction, insufficient financial aid, or inadequate student services, can also impede students' academic progress.³ As a result, community colleges are searching for innovative programs to improve the likelihood of academic success among their students.

This report presents results from a rigorous study of a program designed to increase academic success by providing enhanced student services and a modest stipend to low-income students at two community colleges in Ohio: Lorain County Community College and Owens Community College. Participating students were randomly assigned either to a control group, whose members received the college's regular services, or to a program group. Program group members were assigned to one of a team of counselors, with whom they were expected to meet at least two times per semester for two semesters to discuss academic progress and resolve any issues that might affect their schooling. Program group students also could and sometimes did meet with other counselors on the team. Each program counselor worked with far fewer students than did the regular college counselors, which allowed for more frequent, intensive contact. Program group students were also eligible for a \$150 stipend during each of the two semesters, for a total of \$300.

¹Provasnik and Planty (2008). Enrollment data do not include students who were enrolled only in non-credit courses.

²Hoachlander, Sikora, and Horn (2003).

³Brock and LeBlanc (2005).

The program at Lorain operated between 2003 and 2006, and the program at Owens operated between 2004 and 2006. This report updates and supplements the early findings that were presented in two separate reports in 2007, one focusing on Lorain, the other on Owens. The 2007 reports presented similar findings: while it was too soon to draw final conclusions, results indicated that the program improved some short-term academic outcomes for students, but did not yet appear to have had a significant lasting effect.⁴ This report synthesizes the previous findings, pools results across the two colleges, and extends analyses up to three years after students were randomly assigned in order to better assess the long-term effects of the program.

The enhanced student services program offered at Lorain and Owens represents one type of program being evaluated as part of a larger multisite study known as the Opening Doors demonstration. This chapter begins with an overview of the full Opening Doors demonstration, which took place at six community colleges in the United States and evaluated several innovative strategies for improving students' academic progress. Next, the chapter defines student support services, explains how they might lead to student success, and provides some information about the types of students attending community college and why they, in particular, may benefit from such services. That section is followed by a description of the current state of student services and some research evidence that suggests that enhancing these services is associated with higher student success rates.⁵ The chapter concludes with a description of the contents of the rest of this report.⁶

Overview of the Opening Doors Demonstration and Evaluation

With support from a consortium of funders, MDRC launched the Opening Doors demonstration in 2003. As part of the demonstration, six community colleges in four states each operated an innovative program that was designed to increase students' achievement and persistence in school. The programs included two or three of the following strategies: curricular and instructional innovations, enhanced student services, and supplementary financial aid. See Table 1.1 for a brief description of the programs studied as part of the Opening Doors demonstration.⁷

To measure the effects of each of the programs, the evaluation used a random assignment research design, a first in large-scale community college research. At each college, study participants were assigned, at random, either to a program group that received the Opening

⁴Scrivener and Au (2007); Scrivener and Pih (2007).

⁵See, for example, Mathur (2004); Steingass and Sykes (2008).

⁶Some sections of this report were adapted from prior MDRC reports about the Opening Doors demonstration.

⁷For results of the other programs, see Scrivener et al. (2008); Richburg-Hayes et al. (2009); and Scrivener, Sommo, and Collado (2009).

The Opening Doors Demonstration

Table 1.1

Opening Doors Programs and Target Groups

Lorain County Community College and Owens Community College Report

Site	Brief Program Description	Target Group
Chaffey College Rancho Cucamonga, California	A College Success course and enhanced student services: Students took a one-semester College Success course, taught by a counselor, that provided instruction on study skills, goal setting, and college regulations; as part of the course, students were expected to visit the college's Success Centers, which provided extra academic support. The college operated two versions of the program: the original version was voluntary; the enhanced version was framed as required and offered a second-semester College Success course.	Students ages 18-34 who earned fewer than 35 credits and who were on either academic probation (had a cumulative grade point average below 2.0 [C]) or progress probation (had completed fewer than half the courses in which they enrolled).
Delgado Community College and Louisiana Technical College-West Jefferson New Orleans area, Louisiana	A scholarship predicated on academic performance and enhanced counseling: Students were eligible for \$1,000 scholarship for each of two semesters; scholarship was tied to maintaining at least half-time enrollment and a grade point average of 2.0 (C); students also eligible for enhanced counseling.	Parents ages 18-34 whose family income was below 200 percent of the federal poverty level.
Kingsborough Community College Brooklyn, New York	Learning Communities and a book voucher: Groups of up to 25 students took three linked courses together their first semester in college; students received enhanced counseling and tutoring and vouchers to pay for textbooks.	Incoming freshmen ages 17-34 who planned to attend college full time.
Lorain County Community College and Owens Community College Elyria and Toledo, OH, respectively	Enhanced student services and a modest stipend: Students were assigned to an Opening Doors counselor with a small caseload with whom they were expected to meet frequently; students had access to designated contact in financial aid office; students were eligible for \$150 stipend for each of two semesters.	Students ages 18-34 whose family income was below 250 percent of the federal poverty level and who either were incoming freshmen or had completed fewer than 13 credits and had a history of academic difficulties.

SOURCE: MDRRC field research data.

Doors services or to a control group that received only the college's standard services. Both groups were tracked over time to determine which group attained better outcomes (such as credits earned and retention). Random assignment ensures that the motivation levels and personal characteristics of students in the program group and control group were similar at the beginning of the study;⁸ hence, any subsequent substantial differences in outcomes can be attributed with a high level of confidence to differences in the way students were treated after they were randomly assigned. Using statistical techniques, studies that do not utilize a random assignment research design are still capable of accounting for observable differences (in such variables as gender, race, and income) between the program group and a comparison group. However, one major advantage of the random assignment design is that, since program and control group members are assigned at random, the two groups will, on average, be equivalent on both observed characteristics and unobserved characteristics (such as motivation and ability). For this reason, the experimental design is ideal for attempting to make causal inferences about a program's effectiveness.

This report focuses on one of the Opening Doors programs designed to increase students' chances of achieving academic success: enhanced student services and a modest stipend. The following sections provide some background on student services in the community college setting; a detailed description of the Opening Doors program implemented at Lorain County Community College and Owens Community College appears in Chapter 3.

Background on Student Services at Community Colleges

Components of Student Services

To begin, it is important to consider what is meant by *student services*. Definitions can vary, but the following catalog of their elements — developed as part of an earlier MDRC publication on student services⁹ — offers one useful, relatively comprehensive description of what student services encompass:

- **Academic guidance and counseling**, including orientation, information on navigating the college, reading and math assessments, educational planning and advising that helps students select courses to meet major requirements that fit their career goals, monitoring students' progress to ensure that they reach educational benchmarks in a timely way, early registration, forums or presentations on topics to help students persist, and transfer counseling to en-

⁸The program group and control group should be similar in terms of averages, as well as other distributional characteristics.

⁹Purnell and Blank (2004).

sure that students complete the requirements needed to enroll in four-year colleges or universities

- **Academic supports**, such as tutoring, remedial assistance, and time management and study skills training
- **Personal guidance and counseling**, which can consist of crisis intervention, information and referral, mental health counseling, life skills counseling, mentoring or coaching, and peer support
- **Career counseling**, which encompasses aptitude assessments, development of career plans, and sharing of information on careers and their skill requirements
- **Supplemental services**, such as child care subsidies or vouchers, transportation tokens or passes, and book and supply vouchers, that help students pursue an education

Theory of Change

Discussed here is the logic behind how student services might lead to increases in students' likelihood of succeeding academically. The focus is on the potential of student services both to help students integrate into campus life and to provide accurate information so that students can make well-informed decisions.

Analyses by Tinto that focus on why students do or do not leave institutions of higher education before completion provide interesting clues about the possible role of student services in promoting educational success. Building on theories that attempt to explain the individual, societal, and environmental factors that contribute to departure in many different contexts, Tinto has developed a framework for understanding student attrition from postsecondary institutions.¹⁰ He concludes that a very broad array of factors affect students' decisions to stay in postsecondary institutions or to exit institutions before completion. Tinto asserts that it is important to examine how the larger system of academic and social forces can help or hinder academic progress.¹¹ Although four-year and community college students continue to be involved in many off-campus experiences and relationships, their interactions with the postsecondary institution — for instance, the level and nature of their involvement with faculty, staff, peer groups, and extracurricular activities — become very important aspects of their lives after enrollment.

¹⁰Tinto (1993), as cited in Purnell and Blank (2004).

¹¹Tinto (1993), as cited in Purnell and Blank (2004).

This line of reasoning suggests that activities and supports that promote students' integration into the life of the community college can influence whether students stay or drop out. Student services may have the capacity to offer those kinds of activities and supports. Thus, Tinto's analysis points to a possible pathway by which student services influence outcomes: these interventions may help students feel part of a community, which, in turn, helps them persist academically.¹²

In describing components of one college's student advising program, Steingass and Sykes explain a potential theory of change underlying enhanced student advising:

[A]dvisers can help students feel more connected with the university by increasing the number of advising interactions with each individual student. By feeling more connected with the university, students make more informed educational decisions, interact more with faculty, collaborate with other students outside of class, and report higher levels of satisfaction with their undergraduate experience. Consequently, students will experience higher levels of academic success and persist at higher rates.¹³

In other words, the logic behind the enhanced student services strategy of school improvement involves several steps. First, schools encourage or require students to interact more with student services. These increased interactions lead students to feel more integrated, having a greater sense of belonging in the college. This integration may be accompanied by increased participation and engagement in college life, improving students' overall college experience. Finally, the more integrated, engaged, and generally satisfied student will be more likely to succeed in school.

Integration, engagement, and eventually, improved satisfaction together make up one mechanism through which student services may increase student success. In addition, enhanced services may result in improved student success by providing students with information they otherwise might not obtain, enabling them to make better-informed decisions. This information could be about what courses are available to a student; what path a student must take in order to enter a certain career; who can help out with financial aid; and what academic, psychological, social, and family supports the college offers. Providing useful and accurate information to students is a primary goal of many student services, a goal that, if met, may lead to greater student success.

¹²Tinto (1993), as cited in Purnell and Blank (2004).

¹³Steingass and Sykes (2008), 19.

While the mechanism through which student services could lead to improved student success rates can be explained logically, it remains unclear whether community college students actually need those services.

Selected Characteristics of Community College Students

While student services are important at postsecondary institutions in general, these services may be particularly vital at community colleges because of the types of students who attend them. The following paragraphs are not intended to exhaustively describe community college students; rather, the selected characteristics discussed are meant to exemplify why the types of students who attend community college may benefit significantly from enhanced student services.

Many community college students enter school woefully underprepared academically.¹⁴ During the 2003-2004 school year, about 29 percent of community college students reported having taken some remedial (or developmental) coursework *during their first year at college*.¹⁵ This number is well below the actual percentage who require remediation, since it represents student self-report and it reflects course-taking during the first year of community college only. Estimates from a longitudinal study that tracked a nationally representative sample of eighth graders for 12 years suggest that among students whose first institution of attendance was a community college, over 60 percent took at least one remedial course at their postsecondary institution.¹⁶ In order to become “college-ready,” these academically underprepared students may benefit greatly from support services like tutoring and remedial assistance (and advising on how and where to get these services). In addition, because these academically underprepared students are often required to take developmental course sequences prior to completing certain credit-bearing courses and their degree, strong academic advising may be helpful in plotting and tracking their path of study.

In addition to the high percentage of underprepared students, the vast majority of community college students are “nontraditional.” These nontraditional students have one or more of the following characteristics: they delay postsecondary enrollment, are financially independent, attend school part time, work full time while enrolled, have children or dependents other than a spouse, are single parents, or dropped out of high school.¹⁷ These characteristics are sometimes referred to as “risk factors” because they have been negatively correlated with persistence in college.¹⁸ Enhanced student services may be particularly helpful at increasing the likelihood that

¹⁴Duke and Strawn (2008).

¹⁵Provasnik and Planty (2008).

¹⁶Adelman (2004).

¹⁷Horn, Berger, and Carroll (2005); Choy (2002).

¹⁸Choy (2002), 11.

nontraditional students will succeed in school. Whether the services are orientation services for students who have been out of school for a while, financial aid advising for financially independent students, time management training for students who are working full time while attending school, or child-care subsidies for parents, the special needs of nontraditional students may be addressed by enhanced student services.

Finally, community college students frequently come from low-income backgrounds and have parents who did not attend college. More than one-fourth of students who attended community college during the 2003-2004 school year were from families whose income was at or below 125 percent of the 2002 federal poverty threshold.¹⁹ For these low-income students, enhanced services geared toward financial assistance may be critical to their likelihood to persist. Meanwhile, nearly half of all beginning postsecondary students at public two-year institutions had parents whose highest education level was a high school diploma or less in 1995-1996.²⁰ For these students, whose parents are unable to provide experienced guidance about life in college, orientation sessions and information on navigating life on campus may be particularly valuable.

Community college students come from a diverse set of backgrounds. Although there is no such thing as a “typical” community college student, the types of students represented on community college campuses often must overcome significant challenges and obstacles in order to complete their studies. Enhanced student services are designed, in part, to address some of those challenges.

Quantifying the Shortage of Services

In order to understand the *enhancement* of student services, it is important to consider the current state of student services. Enhancements could be conceived of as “more” services, “better” services, or both. Described here is some information on the current state of student services provided at community colleges — an amount that many perceive as a shortage, suggesting that one starting point for an intervention is simply to provide more services.

Academic advising and counseling is arguably the most important student service and an area where most community college students receive minimal help. Extraordinarily high student-to-counselor ratios are the most dramatic sign of the shortage of student services. One study shows that the average student-to-counselor ratio in U.S. community colleges is almost 1,000 to 1,²¹ while a report examining the diversity of the California community college system found that the median ratio of students to counselor ranged from 1,400 to 1 in 1994 to approx-

¹⁹Provasnik and Planty (2008).

²⁰Horn, Berger, and Carroll (2005).

²¹Grubb (2001), 6.

imately 1,700 to 1 in 2001.²² Exacerbating the shortage of student services, the budgets of colleges are often based on formulas that focus on “full-time equivalents,” which tend to count part-time enrollments and teaching loads for less than their full worth and thus underrepresent part-time students and their needs.

The student-to-counselor ratio alone suggests a shortage of student services. The Community College Survey of Student Engagement (CCSSE) provides some additional information about the current state of student services.²³ According to this survey, more than 6 in every 10 students say that academic advising/planning is very important. Yet, only 13 percent of students reported using academic advising/planning services “often,” whereas 35 percent reported using these services “rarely/never.” Students’ reporting on the importance and use of financial aid advising tells a similar story. In general, students report that many student services are important to them; however, they do not report using these services often.²⁴

Students and administrators alike appear to agree that there is a need for student services. An MDRC study found that students highlighted financial aid, counseling (including guidance counseling, personal counseling, and academic advising), and packages of services and supports offered through special programs as being critical in making it possible for them to enter and complete a college program.²⁵ This perceived need is not limited to students; nearly 1,000 college administrators who responded to a survey about student retention practices reported that a key reason why students drop out is inadequate academic advising.²⁶

Evidence of Success

While there is convincing descriptive evidence of the *perception* that student services are critical to students’ academic success, evidence of the *actual* benefit of providing additional student services, above and beyond what is typically offered, is limited to correlational studies. For example, research by the California Community Colleges Chancellor’s Office suggests that special services targeting nontraditional students are linked to better academic outcomes and improved retention rates. Attributes associated with these positive outcomes appear to be that the services are consistent, that they take into account students’ strengths, and that they respond to students’ needs and to the challenges posed by a college environment.²⁷

²²Woodlief, Thomas, and Orozco (2003), as cited in Purnell and Blank (2004).

²³Although the survey is not offered to a nationally representative sample of community college students, the CCSSE cohort member colleges enroll over 3.7 million credit students, or about 58 percent of the nation’s total credit student population.

²⁴CCSSE (2008).

²⁵Matus-Grossman and Gooden (2002).

²⁶Purnell and Blank (2004), 11-12.

²⁷Mathur (2004).

Students who get no advising, or inadequate advising, may be more likely to drop out of school. A 1989 study found that first-year students who felt that they had received good-quality advising withdrew from public four-year institutions at a rate that was 25 percent lower than students who believed their advising to be of poor quality, and 40 percent lower than students who reported that they had received no advising.²⁸

A more recent study (published in 2008) of the effectiveness of enhanced student services was conducted at Virginia Commonwealth University. This study found that the more times students met with academic advisers, the more satisfied they were with the services they received. In addition, students who met with their advisers at least twice per semester were more likely to be in good academic standing at the end of their first year and were more likely to persist in school, compared with students who met with their advisers fewer times.²⁹

Such past research provides evidence of a correlation between student services and student success. However, it is difficult to ascertain whether this relationship is causal because, even after accounting for observable student background characteristics (such as gender) and observable contextual factors (such as institutional size), the relationship may be confounded by the influence of unobserved or difficult-to-quantify student characteristics (such as motivation) and unobserved or difficult-to-quantify contextual factors (such as teacher effectiveness). While past research has found promising results, few studies have employed rigorous research designs, and none of the large-scale studies has used a random assignment research design. As such, the Opening Doors random assignment evaluation at the colleges in Ohio provides an important contribution to the growing body of research on the effectiveness of enhanced student services.

Enhancing Student Services

The research presented in this report is from a random assignment evaluation of one program of enhanced student services. Researchers and practitioners have a variety of ideas about what an optimal student services package might look like. For example, many claim that, at a minimum, sufficient staffing is necessary in order to enable more frequent interactions between students and support services.³⁰ Similarly, it has been suggested that strategies need to be developed to ensure that students use support services (such as making them mandatory or integrating them into the regular classroom experience).³¹ Still others have discussed the optimal organization of the delivery of student services, suggesting that all services need to be housed in the same location, for a one-stop student services center.³² In addition, whole bodies

²⁸Cuseo (2003), as cited in Purnell and Blank (2004), 11.

²⁹Steingass and Sykes (2008).

³⁰Grubb (2001); Gordon, Habley, and Associates (2000), as cited in Scrivener and Pih (2007).

³¹CCSSE (2008).

³²Purnell and Blank (2004).

of literature exist on career counseling, psychological counseling, and other categories of student services. The details of the specific enhanced student service package studied in this report are presented in Chapter 3; here, it is simply noted that the main focus of the Opening Doors program was on reducing the caseload of academic counselors to facilitate more frequent contact, designating a specific contact in the financial aid office for program group students, and providing a modest stipend to students who visited their academic counselor.

The Remainder of This Report

The next chapter describes the college settings where this study took place and the characteristics of the research sample. It also describes the sources of data used in this study.

Chapter 3 provides an overview of the program's history and implementation at the two colleges, as well as a discussion of the program's impact on receipt of student services.

Chapter 4 presents the program's effects on various educational outcomes.

Chapter 5 provides some implications of the findings, presents a discussion of several important questions raised by this report, and offers areas for future research about student services.

Chapter 2

The Sites, Sample, and Data Sources

This report presents results from a random assignment evaluation of the Opening Doors programs at Lorain County Community College and Owens Community College. This chapter first describes the two colleges. It then discusses how students became part of the research sample and presents some characteristics of the sample members. Finally, the chapter includes a discussion of the data sources used in this report and the follow-up periods for the impact analyses.

The Participating Colleges

Lorain County Community College

The Environment

Lorain County Community College is located in Elyria, a midsized city of approximately 56,000, in northeast Ohio, about 25 miles west of Cleveland. The vast majority of residents (81 percent) are white, and most of the rest (14 percent) are black.¹

Elyria is set in what is sometimes referred to as the nation's "Rust Belt," an area spanning several Midwest and Mid-Atlantic states. Through much of the twentieth century, the region had a high concentration of manufacturing and heavy industry, and many residents worked in factories. Over recent decades, however, this sector of the economy has declined. Between 1980 and 2005, for example, the United States lost 24 percent of its manufacturing jobs.² During that period, northeast Ohio lost 41 percent of its manufacturing jobs, and Lorain County suffered the most substantial job losses of any county in the region.³ Thousands of displaced workers needed to be retrained, a challenge that Lorain County Community College has taken on, and new businesses had to be developed and attracted to the area.

¹See www.factfinder.census.gov. The population estimate and the race breakdown are from 2000.

²Austrian (2006).

³The Public Services Institute and the Joint Center for Policy Research, Lorain County Community College (2004).

The College

Lorain County Community College was granted a charter by the Ohio Board of Regents to provide higher education services in 1963. In 1964, the Lorain School of Technology was incorporated into the community college.⁴ Most students at Lorain County Community College go to school at the forested main campus in Elyria, but some students take classes at the satellite campus in the nearby city of Lorain.

Lorain is a well established community college that offers a range of programs leading to an associate's degree or a technical or vocational certificate. During the 2003-2004 school year, when the study began at Lorain, the most commonly pursued academic and vocational programs at the college were (1) Health Professions and Related Clinical Sciences, (2) Liberal Arts and Sciences, Social Sciences, and Humanities, and (3) Business, Management, and Marketing. Notably, Lorain is the only community college in the state that offers a University Partnership Program, in which students can earn bachelor's degrees and master's degrees from any of eight four-year institutions in Ohio without leaving the Lorain campus.⁵

During the fall 2003 semester, Lorain served approximately 9,400 students, and, as is the case at most community colleges, the majority (about two-thirds) attended part time. About two-thirds of the students were women and nearly half were over 25 years of age. The student body is predominantly non-Hispanic white. The in-state tuition at Lorain for the 2003-2004 school year was \$2,565, and about half of the first-time, full-time students received some form of financial aid.⁶

Owens Community College

The Environment

Owens Community College is located in Toledo, Ohio's fourth largest city, with a population just over 300,000. Over two-thirds (70 percent) of the city's residents are white, and about one-fourth (24 percent) are black.⁷

Toledo is in the northwest part of the state, on the western end of Lake Erie. Like Elyria, it is in the Rust Belt and has a high concentration of manufacturing plants, including large

⁴See www.lorainccc.edu.

⁵For more information, see Lorain's Web site, www.lorainccc.edu.

⁶The information in this section about the 2003-2004 school year at Lorain was originally drawn from the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS), at [www.nces.ed.gov/IPEDS](http://nces.ed.gov/IPEDS). The 2003-2004 data are no longer posted. Updated information is available at <http://nces.ed.gov/collegenavigator/?id=203748>.

⁷See www.factfinder.census.gov. The population estimate and the race breakdown are from 2000.

automobile factories. In recent years, however, the number of jobs in manufacturing has declined, while the number in services industries, such as health care, has increased.⁸ Toledo is home to a number of higher education institutions, including the University of Toledo, Davis College, and Mercy College of Northwest Ohio.

The College

Owens was granted a charter to provide educational services as a technical college in 1967. In 1994, the college was chartered as a comprehensive state community college, with a range of academic programs, although it has retained its technical and career programs.⁹ During the 2004-2005 school year, when the study started at Owens, the most commonly awarded associate's degrees were in the following three areas: (1) Health Professions and Related Clinical Sciences, (2) Business, Management, and Marketing, and (3) Engineering Technologies. Owens offers classes at a main campus in Toledo, as well as at a campus in the nearby small city of Findlay.

During the fall 2004 semester, Owens served about 20,000 students, more than double the number served by Lorain. The majority of students at Owens (about two-thirds) attended part time, just over half were men, and half were over 25 years old. As at Lorain, the student body at Owens is predominantly non-Hispanic white. The in-state tuition at Owens for the 2004-2005 school year was \$2,680, and about three in every five first-time, full-time students received some form of financial aid.¹⁰

Identifying, Recruiting, and Randomly Assigning Students

Lorain and Owens targeted students for their Opening Doors program who met the following criteria:

- Were age 18 to 34 years
- Had a family income below 250 percent of the federal poverty level

⁸See <http://lmi.state.oh.us/ces/LMR.htm> (Ohio Department of Job and Family Services, Ohio Labor Market Information).

⁹See www.owens.edu.

¹⁰The information in this section about the 2004-2005 school year at Owens was originally drawn from the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS), at [www.nces.ed.gov/IPEDS](http://nces.ed.gov/IPEDS). The 2004-2005 data are no longer posted. Updated information is available at <http://nces.ed.gov/collegenavigator/?id=204945>.

- Were beginning freshmen *or* continuing students who had completed fewer than 13 credits and had experienced academic difficulties (indicated by not passing courses or withdrawing from courses)¹¹
- Had a high school diploma or General Educational Development (GED) certificate
- Did not have an associate's degree from an accredited college or university

The program was open to both part-time and full-time students.¹²

The colleges used their student databases, which contain family income information from the Free Application for Federal Student Aid (FAFSA), to identify eligible students. Once a student was identified as eligible, college staff sent an initial invitation letter or postcard describing the Opening Doors program, its potential benefits, and the study. The letter or postcard encouraged the student to call and set up an appointment for study intake.

Neither Lorain nor Owens had a group registration event or other gathering that would have facilitated randomly assigning large numbers of students to the study at once. As a result, the college staff had to conduct extensive outreach to make students aware of the opportunity to participate in the study and encourage them to sign up. They sent follow-up letters and made multiple phone calls to recruit students. They also posted flyers around campus, placed advertisements in newspapers and on the radio, and recruited students in the college bookstore, cafeteria, advising center, and outside classrooms.

MDRC arranged for the college staff to receive assistance from a consultant with expertise in recruitment for education and workforce programs. She provided training to the Opening Doors staff and helped the colleges revise their recruitment materials. Once the Opening Doors program became established on the campuses, word of mouth helped the recruitment effort.

Eligible students who were interested in the study met one-on-one or in small groups with Opening Doors staff. After verifying students' eligibility for the study, staff explained the study and program. If students agreed to participate in the study, staff obtained their written consent and collected baseline information (discussed below). Once the paperwork was complete, at Lorain, the Opening Doors staff telephoned MDRC with students' names and identifica-

¹¹“Academic difficulty” was defined as earning no more than 75 percent of the credits attempted.

¹²This list of criteria was in effect for most of the study. For the first round of sample intake at Lorain (which accounts for 10 percent of the sample at Lorain and 4 percent of the full pooled sample), however, the criteria were somewhat narrower. The income cut-off was 200 percent of the federal poverty level and the credit completion cut-off was 60 percent. MDRC and Lorain agreed to broaden the criteria to increase the pool of students who were eligible for the study and, thus, generate a larger research sample.

tion numbers, and MDRC's computer system randomly assigned students to the program group or to the control group. At Owens, staff transmitted students' information to MDRC, and MDRC sent the students' research group designations back to the college, all via a secure Web site.

After the random assignment process was complete, staff at both colleges informed students about their research group designation and gave the students a \$20 gift card from a major discount store as compensation for their time. The students who were assigned to the program group were scheduled to meet with a counselor from the Opening Doors program at a later date. The appointment typically took place shortly before the semester began or early in the semester. The students who were assigned to the control group were told they could seek out the counseling and other student services offered on campus.

The study started at Lorain in 2003 and at Owens a year later. Random assignment at Lorain occurred prior to five consecutive semesters and yielded five cohorts of sample members: fall 2003, spring 2004, fall 2004, spring 2005, and fall 2005. Study intake at Owens occurred before three semesters and yielded three cohorts: fall 2004, spring 2005, and fall 2005. The total, pooled research sample in Ohio is 2,139 — 1,073 in the program group and 1,066 in the control group. The sample includes 898 students from Lorain and 1,241 students from Owens (42 percent of the sample members are from Lorain and 58 percent are from Owens).

Characteristics of the Sample

Table 2.1 presents some characteristics of the sample members, based on a questionnaire (the Baseline Information Form) that they completed just before they were randomly assigned. The first column of the table shows characteristics for the full, pooled research sample.

Approximately three-fourths of the pooled sample members are women. Fifty-four percent of the sample members identified themselves as white, 30 percent as black, and 11 percent as Hispanic/Latino. Almost all the sample members (99 percent) are U.S. citizens and few (8 percent) reported that a language other than English is regularly spoken in their home.

On average, the sample is somewhat older than a traditional college-going population. Less than a third of the sample members were between 18 and 20 years old when they entered the study, and more than a third were 26 or older. The average age was 24 (not shown in Table 2.1). Almost half of the sample members graduated from high school (or received their GED certificate) more than five years before they entered the study. Forty-four percent reported that they had completed some college credits before random assignment.

Many of the study participants in Ohio are single parents who are balancing family responsibilities with school: about two-thirds of the sample members were parents at baseline and

The Opening Doors Demonstration

Table 2.1

Selected Characteristics of Sample Members at Baseline

Lorain County Community College and Owens Community College Report

Characteristic (%)	Full Sample	Lorain Sample	Owens Sample
Gender			
Male	24.3	18.9	28.1 ***
Female	75.7	81.1	71.9 ***
Age in years			
18-20	28.1	14.4	38.0 ***
21-25	35.0	38.6	32.4 ***
26-30	23.8	29.8	19.5 ***
31-34	13.1	17.2	10.2 ***
Marital status			
Married	19.9	27.3	14.5 ***
Unmarried	80.1	72.7	85.5 ***
Race/ethnicity ^a			
Hispanic/Latino	10.9	14.4	8.3 ***
Black, non-Hispanic	29.9	21.1	36.4 ***
White, non-Hispanic	54.1	58.8	50.7 ***
Asian or Pacific Islander	0.6	0.2	0.9 **
Other ^b	4.5	5.5	3.7 **
Has one child or more	64.3	82.2	51.4 ***
Household receiving any government benefits ^c	48.3	54.9	43.5 ***
Financially dependent on parents	17.6	9.6	23.4 ***
Ever employed	98.3	99.6	97.4 ***
Currently employed	55.9	54.3	57.1
Highest grade completed			
8th or lower	1.4	1.6	1.3
9th	3.8	4.5	3.3
10th	5.8	6.9	5.0 *
11th	8.5	11.0	6.6 ***
12th	80.5	76.0	83.8 ***
Diplomas/degrees earned ^d			
High school diploma	75.7	70.7	79.3 ***
General Educational Development (GED) certificate	22.9	27.7	19.3 ***
Occupational/technical certificate	10.8	15.8	7.1 ***

(continued)

Table 2.1 (continued)

Characteristic (%)	Full Sample	Lorain Sample	Owens Sample
Date of high school graduation/GED certificate receipt			
During the past year	21.5	12.9	27.8 ***
Between 1 and 5 years ago	31.3	29.3	32.8 *
More than 5 years ago	47.2	57.8	39.4 ***
Main reason for enrolling in college ^d			
To complete a certificate program	9.8	11.0	8.8 *
To obtain an associate's degree	49.0	55.9	44.0 ***
To transfer to a 4-year college/university	24.4	20.0	27.5 ***
To obtain/update job skills	12.5	10.0	14.3 ***
Other	7.2	5.6	8.4 **
First person in family to attend college	35.9	37.0	35.1
Completed any college courses/credits	43.6	43.5	43.6
Working personal computer in home	64.2	65.6	63.2
Owns or has access to a working car	88.3	90.3	86.9 **
Language other than English spoken regularly in home	8.1	10.9	6.1 ***
U.S. citizen	98.8	98.8	98.9
Region in which respondent was born			
North America	96.9	96.8	97.0
Asia	0.4	0.1	0.7 *
Latin America and the Caribbean	1.0	2.0	0.3 ***
Other ^e	1.6	1.1	2.0
Region in which respondent's mother was born ^f			
North America	94.0	91.8	95.7 ***
Asia	0.7	0.3	0.9
Latin America and the Caribbean	2.8	5.6	0.6 ***
Other ^e	2.6	2.3	2.8
Sample size	2,139	898	1,241

(continued)

Table 2.1 (continued)

SOURCE: MDRC calculations using Baseline Information Form (BIF) data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between the two groups of sample members. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

^aRespondents who indicated that they are Hispanic and who chose a race are included only in the Hispanic/Latino category.

^b“Other race” includes American Indians/Alaskan Natives and those who marked “other race/ethnicity” or more than one racial/ethnic category.

^cBenefits include Unemployment/Dislocated Worker benefits, Supplemental Security Income (SSI) or disability, cash assistance or welfare, food stamps, and Section 8 or public housing.

^dDistributions may not add to 100 percent because categories are not mutually exclusive.

^eThis category includes the Baltics, the Commonwealth of Independent States, eastern and western Europe, North Africa, Sub-Saharan Africa, the Near East, and Oceania. The Commonwealth of Independent States includes Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russia, Tajikistan, Turkmenistan (until August 2005), Ukraine, and Uzbekistan. Countries are grouped by region according to the U.S. Bureau of the Census, International Data Base.

^fThe majority of respondents reported that both parents were born in the same region as each other.

most were unmarried. The sample members who were parents had an average of two children, and many of the children were young: the average age of the sample members’ youngest child was about 3 years (not shown in Table 2.1).

Only 18 percent of the sample members reported that they were financially dependent on their parents. Just over half were employed when they entered the study and just under half said that someone in their household received government benefits designed for people living below the federal poverty level.

Roughly a third of the sample members were the first in their family to attend college. Almost three-fourths said that their main reason for enrolling in college was to obtain an associate’s degree or to transfer to a four-year college or university.

In addition to presenting the characteristics of the pooled sample, Table 2.1 presents the characteristics of the sample members from each college. An asterisk in the rightmost column of the table indicates that the difference between the proportion of sample members from Lorain with the given characteristic and the proportion of sample members from Owens with that characteristic is statistically significant (meaning that the difference is unlikely to be due to chance). As the table shows, the samples are quite different. Compared with sample members at Owens, sample members from Lorain are more likely to be women, older, married, and parents. They are less likely to be financially dependent on their own parents and more likely to be

receiving government benefits.¹³ (Chapter 4 addresses the decision to pool the two samples for the analyses presented in this report.)

The research sample should not be considered representative of the broader student body at Lorain and Owens. The sample consists only of low-income students who either were new to the college or had already experienced some academic difficulties.

Data Sources and Follow-Up Periods

To study the Opening Doors program in Ohio, the analyses presented in this report rely on several data sources, described below.

Baseline Data

As mentioned above, just before students were randomly assigned to the research groups at Lorain and Owens, they completed a questionnaire, called the Baseline Information Form (BIF), and a baseline survey. The BIF collected demographic and other background information. The survey contained a series of questions about students' well-being and their health. Baseline data are used to describe the sample and define subgroups of sample members for analysis. Baseline data are also used to assess the success of random assignment at creating research groups that are statistically indistinguishable from one another at the start of the study.

Lorain and Owens Transcript Data

Lorain and Owens provided to MDRC transcript data for sample members. These data include various academic outcomes, including courses for which sample members registered, number of credits earned, and course grades. This report presents a range of transcript data outcomes for the first two semesters during which each sample member was in the study (called the "first program semester" and the "second program semester") and the three subsequent semesters (called "postprogram semesters"). This yields a five-semester follow-up period for each of the five cohorts at Lorain and each of the three cohorts at Owens. The report also presents registration information for a sixth semester (the fourth postprogram semester) for each cohort. Transcript data are used in Chapter 4 to help describe the impacts of the program.

¹³Appendix A presents a more comprehensive list of the characteristics that were collected on the BIF. It also presents characteristics separately for the program group and control group members and discusses the differences between the research groups and any implications for the impact analyses described in this report.

Lorain and Owens Financial Aid Data

The colleges shared with MDRC information about the amount and type of financial aid (exclusive of the Opening Doors stipend) that students in the research sample received. Chapter 4 presents financial aid outcomes through the third postprogram semester.

Opening Doors Counseling and Stipend Data

Lorain and Owens provided to MDRC data about the counseling and stipends offered as part of the Opening Doors program. Opening Doors counselors at both colleges recorded information in a database about their contacts with students. The colleges also recorded the incidence and amount of the Opening Doors stipend payments to students. These data are used in Chapter 3 to help describe the implementation of the program.

National Student Clearinghouse Data

The National Student Clearinghouse, a nonprofit organization, collects and distributes enrollment, degree, and certificate data from more than 3,300 colleges that enroll 92 percent of the nation's college students.¹⁴ The Clearinghouse data are used in Chapter 4 to provide information about sample members who may have attended a postsecondary institution other than Lorain or Owens. This report presents Clearinghouse data through the fourth postprogram semester.

The Opening Doors 12-Month Survey

A survey was administered to Opening Doors sample members approximately 12 months after random assignment. MDRC attempted to locate and interview all the sample members. Response rates were very high in Ohio: 85 percent of sample members completed the survey.¹⁵ The survey included questions about a wide range of topics, including sample members' educational experiences, social relationships and supports, and health.¹⁶ Selected measures from the survey are used in Chapters 3 and 4.

Field Research

Periodically throughout the operation of the Opening Doors program, MDRC staff visited Lorain and Owens to conduct field research. MDRC interviewed many college administra-

¹⁴National Student Clearinghouse (2009).

¹⁵See Appendix B for an analysis of the response rates for the 12-month survey and any implications for the analysis.

¹⁶The Opening Doors 12-Month Survey included some questions from the Community College Survey of Student Engagement, with permission.

tors, faculty, and staff, including those involved in the Opening Doors program. The interviews provided information on the operation of the program and about the key differences between the program and the standard college services that were available to the members of the study's control group. MDRC observed some Opening Doors counseling sessions and reviewed key documents, such as program orientation materials. MDRC also interviewed a subset of program and control group members from Lorain for a special study at two of the colleges in the Opening Doors demonstration about factors that affected students' ability to persist in school. (Because Owens joined the Opening Doors demonstration a year after Lorain, it was not included in the study.)¹⁷ Information from the field research is used in Chapter 3 to describe the program.

¹⁷The special study is discussed in Gardenhire-Crooks, Collado, and Ray (2006).

Chapter 3

The Implementation of the Ohio Opening Doors Program

Lorain County Community College and Owens Community College ran an Opening Doors program that provided enhanced counseling from a counselor with a small caseload, in addition to providing a modest stipend. This chapter describes how the program was developed and implemented. It then briefly covers the key differences between the program and the regular college environment facing the study's control group. Finally, the chapter presents some findings about sample members' experiences in college. The chapter draws from field research conducted by MDRC staff, Opening Doors counseling and stipend data from the two colleges, and data from the Opening Doors 12-Month Survey.

The key implementation findings are:

- Lorain and Owens succeeded in providing Opening Doors counseling services that were more intensive, comprehensive, and personalized than the colleges' standard services. Data from the study's 12-month survey show that the program increased the frequency with which students received academic advising, financial aid advising, and other student services.
- The Ohio colleges implemented the Opening Doors stipend component as designed — students could receive up to \$300 in stipend payments over two semesters. A total of 89.3 percent of the program group members received at least one stipend payment, and 45.9 percent received the full \$300.
- The implementation analysis suggests that the Opening Doors program was somewhat more intensive at Lorain than at Owens. Average caseloads were lower for Lorain's Opening Doors counselors. Program group students at Lorain received stipend payments at a higher rate and may have had more contact with their counselor.

History of the Opening Doors Program in Ohio

MDRC and the leadership of Lorain County Community College began working together in late 2002 to design an Opening Doors intervention. The college was interested in building upon its existing network of student supports, as well as its previous efforts to provide

targeted services to low-wage workers, displaced workers,¹ at-risk youth, and other groups of students who might benefit. Over a period of several months, Lorain and MDRC defined and fleshed out the package of services that constituted the college's Opening Doors program. Although Lorain initially considered targeting only students who were low-wage workers, it expanded the eligibility criteria to meet the sample size requirements for the study and thus included a broader subset of the college's low-income students, some of whom were not working. Lorain launched its program during the fall 2003 semester.

After Lorain had joined the Opening Doors demonstration, MDRC and some of the demonstration's funders were interested in including a second Ohio college in the study. The leadership of Owens Community College was interested in the opportunity, and in late 2003, Owens and MDRC began working together. Various program interventions were discussed, but it was quickly agreed that Owens would implement a program similar to Lorain's and target the same population. To get help designing their program, Owens administrators visited Lorain to learn about its program and its experiences in the study. The two colleges remained in touch throughout the implementation of their programs. Owens ran a small pilot of its Opening Doors program, serving about 35 students, during the summer 2004 semester, and kicked off its full-scale program during fall 2004. The program operated at both Lorain and Owens through spring 2006, with a new cohort at each college enrolling in the study every fall and spring semester through fall 2005.²

Implementation of the Opening Doors Program

After providing some information about the timing of the program services and the program's staffing, this section describes the implementation of the program's enhanced student services and stipend.

Timing of Program Services

The Ohio colleges operated their Opening Doors program to its full extent during the fall and spring semesters. The program's designers intended that participating students would receive the full array of program services for two semesters. Thus, program group students who started in Opening Doors in a fall semester continued through the spring, and students who began in a spring semester participated in the program the following fall semester.

¹According to the U.S. Bureau of Labor Statistics (2008), "Displaced workers are defined as persons 20 years of age and older who lost or left jobs because their plant or company closed or moved, there was insufficient work for them to do, or their position or shift was abolished."

²At Lorain, the program was called "Opening Doors Enhanced Services." At Owens, it was called "Owens Personalized Enhancement Network," or OPEN.

Toward the end of each student's second semester in the study, the Opening Doors counselors prepared them to make the transition out of the program and encouraged them to begin using the college's standard advising and counseling services. During interviews with MDRC, Opening Doors counselors reported that some students continued to seek assistance from the program after their two semesters ended, and that the counselors tended to help the students who reached out to them. This scenario occurred more frequently at Lorain than it did at Owens.

Also, some students in the program group received assistance from Opening Doors during the summer semester, but the services were far less intensive. During summers, counselors were available to help students, but they did not offer help as proactively, systematically, or regularly. (As discussed below, during the summer of 2004, Lorain used extra program funding to provide an additional \$75 stipend to program group students who were taking at least one course.)

Administrative Structure, Staffing, and Training

The Opening Doors program at Lorain and Owens was housed in the Student Services division of the college and was overseen by administrators in that division. Each program had a full-time Opening Doors program coordinator, who also served as an Opening Doors counselor, and two or three part-time counselors. The part-time counselors all worked full time at the college, and thus had other duties (including working in the college's counseling center, leading career development workshops, and recruiting students to the college). At Lorain, one of the part-time counselors spent about half of her time on Opening Doors, another spent about one-fourth of her time on the program, and the third part-time counselor spent about one-tenth of his time on Opening Doors. At Owens, the part-time counselors each spent about half of their time on Opening Doors.

Most of the Opening Doors counselors had experience working at the college, while a few were hired for the program. The Opening Doors counselors received some training in the program model. Staff without experience as academic advisers also received training in that aspect of the role. Training topics included the requirements of different majors at the college, and course scheduling and registration issues.

Both colleges assigned administrative staff to Opening Doors, who helped recruit sample members, scheduled appointments, and maintained program records. Owens also hired a student worker to help with the administrative tasks, and arranged for staff from the college's Student Outreach Services (SOS) unit to call students during recruitment and to remind them about appointments.

Both programs experienced some staff turnover throughout the study, but turnover was a more substantial issue at Owens. At Lorain, one of the part-time counselors left the college in 2004, but she was replaced relatively quickly. At Owens, the program coordinator left the position just before the first semester of implementation. A few months later, the senior administrator who oversaw the program went on leave, owing to health problems. Over the program's two-year operations, two of the part-time counselors left their positions. Owens responded quickly, filling most of the positions within weeks. When a counselor left the program during the summer of 2005, however, the college decided not to replace her. As a result, for the fall 2005 and spring 2006 semesters, Owens's Opening Doors program had two part-time counselors, rather than three. This affected caseload sizes, as discussed below.

Enhanced Counseling and Advising

The linchpin of the Opening Doors program in Ohio was a team of counselors with whom students were expected to meet regularly for two full semesters to discuss academic progress and any issues that might affect their schooling. Each student was assigned to a counselor, who acted as the student's primary contact, but students could, and sometimes did, see other counselors on the team. MDRC field research found that the Lorain program relied somewhat more heavily on the team approach than did the Owens program.

The Opening Doors counselors each worked with far fewer students than other counselors at the colleges. Lorain's Opening Doors program had the equivalent of one full-time counselor for every 81 students participating in the program in a given semester, on average. At Owens, the corresponding number was 157. At Owens, caseload sizes peaked when the program had only two part-time counselors, rather than three. During the fall 2005 semester, Owens had one full-time Opening Doors counselor for every 256 program group students.

For the control group, the ratio of students to counselors or advisers at the colleges was more than 1,000 to 1. Although the Opening Doors counselors worked with far fewer students than typical counselors or advisers, they reported to MDRC that sometimes it was difficult to keep on top of their work and they felt frustrated that they were not doing everything they could for their students. This was especially true during the period when caseload sizes were largest at Owens.

The counseling in Opening Doors was designed to be more intensive, personalized, and comprehensive than what students would typically receive at Lorain or Owens. The markedly lower student-to-staff ratio in the program allowed counselors to see students more frequently and spend more time with them. This increased contact, the program's designers posited, would allow the counselors to uncover and address more issues relevant to the students' success in school. During each of the two program semesters (fall and spring), students were expected to

meet with their counselor a minimum of twice, once shortly before or early in the semester, and then again in mid-semester. These meetings triggered the payment of the Opening Doors stipend, as described below.

As was intended by the program's designers, the program coordinator at Lorain strongly encouraged the counselors to contact students much more frequently than twice a semester. This message became increasingly strong as the program matured. MDRC's field research suggests that the message that counselors should try to meet with students frequently was not as strong at Owens. In addition, since the Opening Doors counselors at Owens had larger case-loads than the counselors at Lorain, maintaining frequent contact was more challenging at Owens. Although the Opening Doors counselors strongly encouraged students to participate in the program, there were no sanctions for students who did not meet with their counselor (other than not receiving the stipend).

One of the counselors at Lorain typically worked at least one evening a week, and one of the counselors at Owens typically worked on Saturdays. As was true during regular hours, students could make appointments or just drop in.

In the counseling sessions that MDRC observed, staff and students talked about a range of issues, including course scheduling, registration, financial aid and other financial issues, tutoring, work-based learning efforts, juggling school and work, career aspirations, and personal issues. The Opening Doors counselors provided one-on-one counseling themselves, and referred students to other services on and off campus. Because the Opening Doors counselors were not trained as therapists, they did not delve into psychological issues with students. One of the part-time counselors at Lorain had expertise as a career development specialist, and she met with many of the participating students to help them explore career options and align their academic efforts with their employment goals. For the most part, based on the observed counseling sessions, the Opening Doors counselors seemed to have developed comfortable, trusting relationships with students.

MDRC field research suggested that the program started up more slowly at Owens than at Lorain, and that services were less intensive. As a result, MDRC provided more technical assistance to the program staff at Owens. MDRC provided advising guides to the counselors to help structure the two expected meetings with students. The guides focused the conversations on anticipating and overcoming challenges to completing courses, and on students' short- and long-term goals. At the first counseling session, students were given a resource binder, prepared for Opening Doors, which provided information about Owens's academics, financial aid, tutoring, and other campus services, as well as services available in the community.

To facilitate the enhanced counseling in Opening Doors, the colleges created a database to record key information about participating students and their contacts with staff. The coun-

selors recorded their in-person and telephone contacts with students, including the length of the meeting and the topics covered. They sometimes also noted e-mail or regular mail communications. In interviews, the counselors said they sometimes reviewed the information prior to talking with a student. As noted above, students sometimes met with an Opening Doors counselor who was not their primary contact. The database allowed staff to review the records for any participating student, facilitating the team approach.

Table 3.1 presents some information from the colleges' Opening Doors counseling database. The data from Owens do not reliably distinguish between in-person and telephone contacts, so the table shows tallies for both types together. During students' first semester in the program, 94.3 percent of the pooled program group members had at least one contact with an Opening Doors counselor either in person or over the telephone. The program group averaged just over four such contacts during that semester.

During the second program semester, 71.4 percent of the program group members had contact in person or over the telephone with a counselor. The lower proportion, compared with the first semester, likely reflects the decrease in the proportion of students who were taking classes. (Registration rates are discussed in Chapter 4.)

As the bottom panel of Table 3.1 shows, 95.4 percent of the program group members had at least one in-person or telephone contact with an Opening Doors counselor during their time in the study. The majority of program group students — 58.4 percent — had at least six contacts, and the average number of contacts was just over eight. The summary outcomes include contacts during the two main program semesters (fall and spring), summer semesters, and any postprogram semesters.³ A total of 17.1 percent of the program group members had contact with an Opening Doors counselor after their second program semester.

Appendix Table C.1 shows information on students' contact with Opening Doors counselors separately for each college. According to the Opening Doors databases, a higher proportion of the program group at Lorain had contact in person or over the phone with a counselor, and the contact was more frequent. Lorain staff may have been more diligent about entering contacts into the database, so this comparison should be interpreted cautiously. (Also, for the most part, the 12-month survey data that are discussed below do not show higher rates of contact for the Lorain program group compared with the Owens program group.)

³The data include contacts through the spring 2006 semester.

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Table 3.1

**Opening Doors Counseling Sessions Among the Program Group Members
Lorain County Community College and Owens Community College Report**

Outcome	Program Group
<u>First program semester</u>	
Had one or more contacts with counselor (%)	94.3
Number of contacts (%)	
0	5.7
1-2	27.5
3-5	42.2
6 or more	24.6
Average number of contacts	4.1
<u>Second program semester</u>	
Had one or more contacts with counselor (%)	71.4
Number of contacts (%)	
0	28.6
1-2	31.4
3-5	26.0
6 or more	14.0
Average number of contacts	2.7
<u>Summary outcomes^a</u>	
Had one or more contacts with counselor (%)	95.4
Number of contacts (%)	
0	4.6
1-2	13.6
3-5	23.4
6 or more	58.4
Average number of contacts	8.2
Sample size	1,073

SOURCES: MDRC calculations from Lorain County Community College and Owens Community College Opening Doors counseling data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

“Contact” includes all contact between students and counselors determined to be in person or over the telephone.

^aAfter the second program semester, 184 sample members (17.1 percent) had contact with a counselor. Summary outcomes include data through spring 2006.

The Opening Doors counseling data from Lorain distinguished between in-person and telephone contacts. According to the data, virtually all the program group members at the college (99.6 percent) had at least one in-person contact with a counselor. Of the total number of contacts at Lorain, about two-thirds were in person (not shown in Table C.1).

Finally, both colleges designated staff in the financial aid office to serve as a special liaison for Opening Doors students. The staff members worked with other students at the college, but were asked to provide enhanced advising services to students in the Opening Doors program group. According to records from Lorain, the staff member in the financial aid office spent about 40 percent of her time on Opening Doors. Participating students could bypass waiting lines that were sometimes long and could receive more personalized attention than was typical. She helped program group students fill out aid applications, talked to them about anticipating their future needs, and talked to them about their classes and how their performance might affect their aid. The Opening Doors counselors sometimes contacted her themselves to seek help in resolving students' issues. MDRC field research suggests that the two designated financial aid staff members at Owens did not spend a substantial portion of their time on Opening Doors, and only a small proportion of the program group members received enhanced attention.

Other Enhanced Student Services

The Opening Doors program at Lorain offered a few additional activities in which some program group members took part. The Opening Doors staff held lunchtime gatherings about once a semester to share information about services available on campus and to foster relationships among participating students. Staff also arranged "study tables," where a group of students could study together with one of the Opening Doors counselors, and tutoring sessions before midterms and final exams. According to the Opening Doors counseling data, 13.5 percent of the program group members at Lorain attended a social event (like the lunchtime gatherings noted above) and 8.6 percent attended one of the study or tutoring sessions.

All students pursuing an associate's degree at Lorain are required to take a one-credit orientation course. The college created special, enhanced sections of the course for Opening Doors students, which were smaller and offered more individualized attention. Because the Opening Doors version of the class was not required, and many students had taken the standard orientation class before entering the study, only a small proportion of the program group took the enhanced course.⁴

⁴Among the first three cohorts of program group members at Lorain, 8.9 percent took the course. This information is not available for the other two cohorts of program group members.

At Owens, Opening Doors students could also receive free one-on-one tutoring at the college's Learning Center. According to interviews with Opening Doors counselors at Owens, some students did receive tutoring as part of the program. The 12-month survey data, however, discussed below, do not show a difference between the frequency with which Owens program group and control group members reported receiving tutoring services.

At Owens, during the last year of the program, the Opening Doors counselors asked instructors for feedback on participating program group students' performance, including attendance information, whether students were currently passing the class, and whether the instructor recommended tutoring for students. Counselors sometimes used the information to guide their advising.

Opening Doors Stipend

In each of the two main program semesters, students in the Opening Doors program were eligible for a \$150 stipend that they could use for any purpose, for a total of \$300. The stipend did not affect students' financial aid packages. It provided some extra money to students, who all had family income below 250 percent of the federal poverty level when they entered the study. The primary purpose of the stipend, however, was to promote contact between students and their Opening Doors counselor — to provide an incentive for students to access the enhanced services. The stipend was paid in two installments each semester, after scheduled counseling meetings. The first meeting occurred just before the semester or early in the semester and triggered a \$100 payment. The second meeting, usually in the middle of the semester, triggered a \$50 payment.

Both colleges successfully developed and implemented systems to facilitate the meeting-triggered stipend payments. Opening Doors counselors (or administrative staff) scheduled meetings for program group students at the designated points in the semester. Once students attended the meeting, the program coordinator or administrative staff member compiled a list of the students who were eligible for the stipend payment. Approximately once a week, at Lorain, the list was shared with the college's financial aid office, whose staff then cut the stipend checks and mailed them to students. At Owens, the list was shared periodically with staff in the bursar's office, who cut and mailed the checks.⁵

Table 3.2 presents some information about the Opening Doors stipend, using data from the colleges. During the first program semester, 87.7 percent of the pooled program group members received a stipend payment, and 70.8 percent received the full \$150. During the

⁵During the first semester of the study at Owens, students had to pick up their stipend checks in the bursar's office.

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Table 3.2

Opening Doors Stipend Receipt Among the Program Group Members
Lorain County Community College and Owens Community College Report

Outcome	Program Group
<u>First program semester</u>	
Received one or more stipend payments (%)	87.7
Received full \$150	70.8
Average stipend amount received per recipient ^a (\$)	140
<u>Second program semester</u>	
Received one or more stipend payments (%)	60.1
Received full \$150	48.4
Average stipend amount received per recipient ^a (\$)	138
<u>Summary outcomes</u>^b	
Received one or more stipend payments (%)	89.3
Received full \$300	45.9
Average stipend amount received per recipient ^a (\$)	234
Sample size	1,073

SOURCES: MDRC calculations from Lorain County Community College and Owens Community College Opening Doors stipend data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

^aThe denominator in this outcome is stipend recipients rather than all program group members.

^bAfter the second program semester, 27 sample members (2.5 percent) received stipend payments. Summary outcomes include data through spring 2006.

second program semester, the proportion of students receiving the stipends dropped somewhat, likely reflecting that fewer students were registered for classes (see Chapter 4). During that semester, 60.1 percent of the program group members received a stipend payment, and 48.4 percent received the full \$150.

As shown at the bottom of Table 3.2, the vast majority — 89.3 percent — of the program group members in Ohio received at least one stipend payment during their time in the study, but less than half — 45.9 percent — received the full \$300.⁶ Among program group members who received at least one payment, the average total stipend amount was \$234.

⁶The summary outcomes include stipend payments through the spring 2006 semester.

Appendix Table C.2 shows information about the Opening Doors stipend for each college. A higher proportion of the program group members at Lorain received at least one stipend payment, compared with Owens, and a higher proportion at Lorain received the full \$300.

The program at Lorain had extra funds during its first year, so it offered an additional \$75 to students who enrolled in courses during the summer 2004 semester and attended a counseling session. In all, 18.2 percent of the full program group at Lorain received the extra \$75 during summer 2004 (not shown in Table C.2).⁷

The 12-month survey asked program group members how they used their Opening Doors stipend. Although the sample members reported using the money for a variety of purposes, the three most common responses were purchasing books and school supplies, paying bills, and buying gas or bus fare. Interviews with some program group students at Lorain suggested that although the stipend was appreciated, in general, it did not substantially improve students' finances.

Differences Between the Opening Doors Program and the Control Group Environment

This study compares the academic (and other) outcomes of students in the program group with outcomes of students in the control group, whose members had access to the standard services available at the colleges. Table 3.3 summarizes the key differences between the Opening Doors program at Lorain and Owens and the regular college environment that the control group members faced.

Students in the study's control group in Ohio had access to the colleges' regular counseling and advising staff. As already noted and as is typical in community colleges, the student-to-staff ratio at Lorain and Owens was more than 1,000 to 1. Regular counselors and advisers did not carry caseloads of students and typically did not initiate contact or follow up with students.⁸ The counseling tended to be short-term and focused on academic issues, rather than

⁷Because of the timing, only some of Lorain's program group members were eligible for the extra money during the summer 2004 semester: those who had been randomly assigned for the fall 2003 semester and the spring 2004 semester, and students who were assigned for the fall 2004 semester by the start of the summer. A total of 43.3 percent of the program group members from the fall 2003 and spring 2004 cohorts received the \$75 payment, as did 23.3 percent of the program group members from the fall 2004 cohort.

⁸At Lorain, academic advisers are generalists who work with newer students to assist them with scheduling, financial aid, and course placement. Counselors, who tend to specialize in certain areas of study at Lorain, are available to work with students who need help determining their career direction or who are further along in fulfilling their degree requirements. This report refers to the Opening Doors staff as counselors, but their work
(continued)

The Opening Doors Demonstration

Table 3.3

Key Differences Between the Opening Doors Program and Regular College Services Lorain County Community College and Owens Community College Report

Program Feature	Opening Doors Program	Regular College Services
Counseling and advising	<ul style="list-style-type: none"> • Student-to-counselor ratio averaged less than 160 to 1 • Students assigned to counselor, with whom they were expected to meet regularly • Counseling was personalized, intensive, and comprehensive • Designated contact in financial aid office • Program group members had average of 8 in-person or telephone contacts with Opening Doors counselor during study 	<ul style="list-style-type: none"> • Student-to-counselor ratio averaged more than 1,000 to 1 • Students not assigned to counselor, met with counselors as needed • Counseling tended to be short-term and focused on academic issues • No designated contact in financial aid office
Opening Doors stipend	<ul style="list-style-type: none"> • \$150 per semester for two semesters, for a total of \$300 • Paid after meetings with counselors to encourage contact • 89.3 percent of program group members received at least one stipend payment • 45.9 percent received full \$300 • Extra \$75 paid at Lorain during summer 2004 to some program group members 	<ul style="list-style-type: none"> • No Opening Doors stipend

SOURCE: MDRC field research data.

on a broader set of issues that could affect students' success in college. Furthermore, control group students were not eligible for the Opening Doors stipend.

As discussed above, both Lorain and Owens offered some additional services as part of Opening Doors beyond the enhanced counseling, but only a small subset of the program group members received those services. For the most part, the services were not available for the control group members.

Although the implementation analysis suggests that the Opening Doors program was somewhat more intensive at Lorain than at Owens — average caseloads were lower for Lorain's

encompasses the responsibilities of the college's advisers, as well. At Owens, advising and counseling duties are performed by the same staff members.

Opening Doors counselors, and program group students at Lorain received stipend payments at a higher rate and may have had more contact with their counselors — the difference between the program and the control group environment at the two colleges was much more substantial than the difference between the programs at the two colleges.

Students’ Experiences in the Opening Doors Program and the Control Group Environment

This section discusses some results from the Opening Doors 12-Month Survey about sample members’ experiences in college.⁹ Table 3.4 shows the proportion of the pooled Ohio program group and control group that reported receiving various student services at least three times during the year after they entered the study. If the Ohio Opening Doors program provided additional student services as intended, differences between the two research groups would be expected in most of these categories.

The Opening Doors Demonstration

Table 3.4

Sample Members’ Receipt of Student Services

Lorain County Community College and Owens Community College Report

Outcome (%)	Program Group	Control Group	Difference (Impact)	Standard Error
Attended 3 or more times during first year in study				
Academic advising	64.0	40.2	23.9 ***	2.3
Financial aid advising	49.2	40.4	8.8 ***	2.3
Tutoring on campus	34.4	28.8	5.6 **	2.2
Career counseling	23.9	13.6	10.3 ***	1.8
Job placement assistance	14.3	9.0	5.3 ***	1.5
Advising about transferring earned credits	16.8	12.4	4.4 ***	1.7
Sample size (total = 1,813)	910	903		

SOURCE: MDRC calculations from the Opening Doors 12-Month Survey.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Estimates are adjusted by cohort and college.

⁹See Appendix B for an analysis of the survey response rates and any implications for the analysis.

As described more fully in Box 3.1, Table 3.4 presents average outcomes for program group members and control group members, as well as the difference between the two groups' averages (the estimated impact of the program). One or more asterisks indicate that the estimated impact is statistically significant, meaning it is not likely to be due to chance.

As the table indicates, the Opening Doors program did, indeed, increase the receipt of student services. A total of 64.0 percent of the program group reported that they had at least three academic advising sessions during their first year in the study, compared with 40.2 percent of the control group — an estimated impact of 23.9 percentage points. A total of 49.2 percent of the program group said that they received advising about financial aid at least three times, compared with 40.4 percent of the control group. The program also increased the proportion of students who received tutoring, career counseling, job placement assistance, and advising about transferring credits at least three times.

Appendix Table C.3 shows the same survey outcomes separately for the research samples from Lorain and Owens. For the most part, the results are similar.

Table 3.5 (page 40) presents a few additional measures from the 12-month survey. Sample members were asked whether there was a staff member or instructor at the college to whom they could turn for support with personal or family issues or for guidance with their education and career goals. As the table shows, the program group members were more likely to say “yes” to those questions than were the control group members. Approximately two-thirds of the program group members reported having someone at the college to turn to, compared with less than half of the control group members.

The last two outcomes in Table 3.5 represent responses to questions that were asked only of sample members who reported that they had attended class at Lorain or Owens during their first year in the study.¹⁰ As discussed in Chapter 1, one theory about why Ohio's Opening Doors program might improve students' outcomes posits that more frequent contact with student services leads students to gain a stronger sense of integration and belonging at their college. The 12-month survey asked a series of questions to gauge students' sense of integration, and Table 3.5 presents a scale created from the questions. (Appendix D lists the questions used to create the scale.) As Table 3.5 shows, a year after students entered the study, there is no evidence that the program increased their sense of integration and belonging.

¹⁰Survey respondents were asked whether they had attended class at Lorain or Owens since random assignment; not all respondents said “yes.” There is not a statistically significant difference between the proportion of program group members and the proportion of control group members who reported attending class at an Opening Doors college during their first year in the study. This provides some evidence that the equivalence between the program and control groups has been maintained for this set of survey outcomes.

Box 3.1

How to Read the Impact Tables in This Report

Most tables in this report use a similar format. The abbreviated table below displays survey data and shows some educational outcomes for the program group and the control group. The first row, for example, shows that 64.0 percent of the program group members and 40.2 percent of the control group members attended academic advising three or more times during their first year in the study.

Because individuals were assigned randomly either to the program group or to the control group, the effects of the program can be estimated by the difference in outcomes between the two groups. The “Difference” column shows the differences between the two research groups’ outcomes — that is, the program’s estimated *impacts* on the outcomes. For example, the estimated impact on attending academic advising three or more times during the first year of the study can be calculated by subtracting 40.2 percent from 64.0 percent, yielding an increase, or estimated impact, of 23.9 percentage points. This difference represents the *estimated* impact rather than the *true* impact because, although study participants are randomly assigned to the program and control groups, differences can still occur by chance.

Differences marked with one or more asterisks are *statistically significant*, meaning that there is only a small probability that the observed difference occurred by chance. The number of asterisks indicates the probability of observing the same or larger differences if the program had no impact. One asterisk corresponds to a 10 percent probability; two asterisks, a 5 percent probability; and three asterisks, a 1 percent probability. For example, as shown in the first row below, the program’s estimated impact on attending academic advising three or more times is 23.9 percentage points. The three asterisks indicate that this difference is statistically significant at the 1 percent level, meaning that there is less than a 1 percent chance of observing a difference this large by chance (that is, if the program’s true impact is zero).

The statistical significance is calculated using the standard error of the impact estimate — a measure of uncertainty or variability around the impact estimate. There is about a 90 percent chance that the true impact is within plus or minus 1.65 standard errors of the estimated impact, roughly a 95 percent chance that the true impact is within plus or minus 1.96 standard errors of the estimated impact, and about a 99 percent chance that the true impact is within plus or minus 2.58 standard errors of the estimated impact. For example, in the first row of data below, there is roughly a 99 percent chance that the impact on students who attended academic advising three or more times during the first year of the study lies between 18.0 and 29.8 percentage points, calculated as $23.9 \pm (2.58 \times 2.3)$.

On survey tables that use scales to represent some outcomes, effect size is also given. The effect size provides a way to interpret the substantive significance of an effect. It is calculated as the impact divided by the standard deviation of the control group. The standard deviation is the measurement of the distribution of data about an average value. Thus, the effect size is a measure of the impact on a standardized scale.

Outcome (%)	Program Group	Control Group	Difference (Impact)		Standard Error
Attended 3 or more times during first year of study					
Academic advising	64.0	40.2	23.9	***	2.3
Financial aid advising	49.2	40.4	8.8	***	2.3
Tutoring on campus	34.4	28.8	5.6	**	2.2

The Opening Doors Demonstration

Table 3.5

College Experiences of Sample Members

Lorain County Community College and Owens Community College Report

Outcome (%)	Program Group	Control Group	Difference (Impact)	Standard Error
Can identify a staff member or instructor for support/guidance				
With personal or family issues	65.9	48.5	17.4 ***	2.3
With education and career goals	62.6	45.6	17.0 ***	2.3
Among those who attended an Opening Doors college during first year of study				
Integration and sense of belonging at school ^a				
Low	17.4	19.8	-2.5	2.0
High	17.8	15.0	2.8	1.9
Rated college experience good or excellent ^b	87.5	81.7	5.8 ***	1.8
Sample size (total = 1,813)	910	903		

SOURCE: MDRC calculations from the Opening Doors 12-Month Survey.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Estimates are adjusted by cohort and college.

^aEight-item scale about sense of integration with and belonging to the school community; response categories range from 1 = “strongly disagree” to 4 = “strongly agree.” “Low” is the percentage of sample members scoring one standard deviation below the mean; “high” is the percentage of sample members scoring one standard deviation above the mean. Standard deviation is the measurement of the distribution of data about an average value. It describes the amount of variation in the data on either side of the average value. Of the 1,813 survey respondents, 1,520 answered the questions that made up these scales.

^bOf the 1,813 survey respondents, 1,593 answered this question.

Table 3.5 does suggest, however, that the program increased students’ overall satisfaction with their college experience. Among survey respondents who had attended class at Lorain or Owens during their first year in the study, 87.5 percent of the program group members rated their college experience as either good or excellent, compared with 81.7 percent of the control group.

Appendix Table C.4 shows the outcomes in Table 3.5 for each college separately. The impacts at Lorain and Owens are not statistically distinguishable from one another.

Qualitative Findings from Lorain County Community College

MDRC interviewed some sample members at Lorain as part of a qualitative study at two of the colleges in the Opening Doors demonstration about factors that affected students’

ability to persist in school. (The other college in the qualitative study was Kingsborough Community College. Because Owens joined the Opening Doors demonstration a year after Lorain, it was not included in the study.) Program group students at Lorain rated their counseling experiences highly. They reported interacting more often and more intensively with counselors than the control group students who were interviewed. Most said that they could drop in on their Opening Doors counselor without an appointment, and others said they could call or e-mail and get quick responses.

Discussing the Opening Doors counseling services, one student who had been out of high school for a few years said:

I feel like if I had the kind of help they've given me when I tried to start right after high school, I might have already completed my degree. Maybe I just needed the counseling that I didn't know [how] to get.¹¹

Students reported that they received help from their Opening Doors counselor with academic issues, as well as personal problems that were interfering with their school performance. A program group student who had an acute health problem described the help she received:

I was in the hospital last semester.... I got put in ICU. [My Opening Doors counselor] went to all of my instructors and ... he just went over the top. If I hadn't been in this program, I might have had to drop out. And then I ended up with a 3.0 GPA.... I really felt appreciation for him.¹²

In sum, the 12-month survey and the interviews with sample members from Lorain provide evidence that the Opening Doors program positively affected at least some sample members' experiences in college.

Looking to the Report's Next Chapter

The results discussed in this chapter show that Lorain and Owens operated an Opening Doors program that provided services that were distinctly different from those that were available to the study's control group members. The counseling services were more intensive, comprehensive, and personalized than the colleges' standard services, and almost all of the program group members received at least one stipend payment. Furthermore, participating students expressed positive views about the Opening Doors services. The next question that this report addresses is whether the differences in services yielded substantial changes in students' academic and other outcomes. The following chapter discusses the answer to that question.

¹¹Gardenhire-Crooks, Collado, and Ray (2006), p. 17.

¹²Gardenhire-Crooks, Collado, and Ray (2006), p. 17.

Chapter 4

The Effects of Enhanced Student Services and a Modest Stipend

The Opening Doors program that was operated at Lorain County Community College and Owens Community College may have had a positive effect on a variety of outcomes in students' lives. Central among those outcomes is academic success. This chapter focuses primarily on the impacts of the Opening Doors program on educational outcomes as far as six semesters after students first enrolled in the study. Other outcomes that are considered include students' receipt of financial aid and their social, psychological, and health outcomes. These outcomes were measured using a variety of data sources collected after students were randomly assigned either to the program group (which was eligible to receive enhanced student services and a modest stipend) or to the control group (which received the college's standard services). Data sources include a survey conducted approximately 12 months after random assignment; transcript and financial aid data from the colleges; and data on student enrollment from a national clearinghouse, which allows the analysis to account for the fact that some students may have enrolled at schools other than Lorain or Owens during the follow-up period.¹

The key impact findings are:

- There is no evidence of meaningful program impacts on educational outcomes during the first program semester.
- There is strong evidence of positive program impacts on educational outcomes during the second program semester. Students in the program group outperformed their control group counterparts with respect to registration rates, average number of credits attempted, and average number of credits earned during this semester.
- There is evidence that the program increased registration rates during the first semester after the program ended. The positive impacts dissipated during the following three semesters, providing little evidence that the program had lasting long-term impacts on educational outcomes.
- There is little evidence that the program's impacts on educational outcomes were significantly different across the two colleges.

¹The data sources are described in detail in Chapter 2.

Unless otherwise noted, the results presented in this chapter are pooled across the two colleges to present the program's overall impact. Appendixes include college-specific impacts and estimates of whether the impacts are different across the two colleges. The chapter focuses on the pooled sample for several reasons: First, pooled results show, as simply as possible, whether the program worked overall. Second, although somewhat more intensive at Lorain on some measures, the implementation of the program was generally quite similar across the two colleges. Finally, there was very little detectable difference in impacts across the two colleges, so showing both sets of results complicates the story while not changing the general conclusions.

This chapter begins with a discussion of the program's impacts on educational outcomes, such as registration and credits earned, during the six semesters following random assignment for each sample member. This is followed by a discussion of analyses of educational outcomes by selected subgroups, including an assessment of whether the program's impacts on educational outcomes were different by college and gender. The discussion then turns to more general educational outcomes, including enrollment at institutions beyond Lorain and Owens, during the six semesters after random assignment. The final two sections of this chapter briefly discuss the program's impacts on financial aid and social, psychological, and health outcomes.

As described more fully in Box 3.1 in Chapter 3, the tables in this chapter present average outcomes for the students assigned to the program group and the control group, the difference between the two groups' averages (which represents the estimated impact of the program), and the standard error of the difference. The average outcomes are adjusted for each student's cohort, which reflects the point at which the student was randomly assigned to the program group or control group, and his or her college. No other covariates are included.² A description of the statistical model used in the impact analyses appears in an earlier MDRC report.³

Effects on Education Outcomes: Transcript Measures

Enhanced student services and a modest stipend may be an effective strategy to improve students' chances of achieving academic success at community colleges. Explored first in this section is whether the program had positive impacts during the two semesters when program group students were eligible to receive the enhanced student services and modest stipend (referred to as the "program semesters"). This is followed by analyses of whether the program had impacts during the four semesters *after* program group students were eligible for the Opening Doors services (referred to as the "postprogram semesters").

²Sensitivity analyses were conducted controlling for selected student baseline characteristics on which program and control group students differed at baseline. The results presented in this chapter are substantively the same when the impacts are adjusted.

³Brock and LeBlanc (2005), Appendix A.

Program Semesters

Table 4.1 (page 47) shows some academic outcomes from the two program semesters. During the first program semester, program group students and control group students registered for courses at very similar rates; 89.9 percent and 88.6 percent, respectively, registered for at least one course. It is not surprising to observe nonsignificant differences in registration rates during the first program semester because registration occurred before the program group students received a significant portion of, and oftentimes any, program services. In contrast, the program might be expected to positively affect the number of credits earned; however, no significant program impact was observed on the total number of credits attempted or earned during the first program semester.

Whereas there was little evidence of meaningful program impacts during the first program semester, during the second program semester there was strong evidence of positive program impacts. Most notably, as shown in Table 4.1 during the second program semester, 65.3 percent of program group students registered for at least one class compared with only 58.3 percent of control group students. This difference reflects a 7.0 percentage point program impact on registration. The program's impact on second semester registration is likely primarily the lagged effect of program services offered during the first program semester, since registration usually occurs prior to the start of the semester.

Table 4.1 also shows that the registration pattern held true for the average number of credits attempted and earned. During the first program semester, no impacts were observed on the average number of credits attempted or earned, whereas during the second program semester, program group students, on average, attempted 0.7 more credit and earned 0.4 more credit than did their control group counterparts. Where significant impacts on average credits attempted and earned were observed, it is possible that the program's positive impact on registration was driving these results. In fact, there is evidence supporting this hypothesis.

One way to examine whether the program's impact on registration was driving the program's impact on average credits attempted and earned is to calculate the *expected* program impact on average credits attempted and earned given the program's impact on registration. Under the assumption that the program groups' *additional* registrants attempted and earned credits at the same rate as control group registrants, the expected program impacts on average credits attempted and earned would be 0.75 and 0.42, respectively.⁴ The actual observed

⁴The following calculation was made to obtain these numbers: Among the 58.3 percent of control group students *who registered* during the second program semester, the average number of credits attempted was 10.8 and the average number of credits earned was 6.1 (not shown in Table 4.1; tables present credits attempted and earned for the full sample, not just among those who registered). The program's estimated impact on registration was 6.95 percentage points (rounded to 7.0 in Table 4.1), representing an additional 74.6 ($0.0695 \times 1,073$)
(continued)

impacts were 0.72 and 0.41. While the calculation of the expected impacts is based upon the unverifiable assumption that additional program group registrants attempted and earned credits at the same rate as control group registrants, this analysis provides some evidence that the increases in credits attempted and earned were driven by increased registration rates during the second program semester.

This example highlights two interesting points. First, increased registration is an extremely important program impact since it is almost certain to affect most other key educational outcomes. Second, because of the relationship between registration and other outcomes of interest, it is difficult to disentangle the program's direct impact on credits earned from its indirect impact on credits earned that are a result of its impact on registration. Nevertheless, while the results are not independent, there is strong evidence that the Opening Doors program had a positive impact on registration, credits attempted, and credits earned during the second program semester.

Also of note is the fact that during both program semesters, program group students withdrew from at least one course at a higher rate than did control group students. While the other second semester impacts (increased registration, increased credits attempted, and increased credits earned) are positive program outcomes, the higher rate of withdrawing from any course among program group students is an ambiguous finding. It is possible that program group students were advised to withdraw from courses that were a mismatch for them or courses that they were on track to fail. Withdrawing from such courses might enable students to focus their energies on completing their other courses, an outcome that could be viewed as positive. However, it is also possible that the Opening Doors counselors successfully convinced students to attempt more credits than they could handle, leading to increased withdrawals among program group students, an outcome that could be viewed as negative. Finally, much as the average number of credits attempted and earned may be influenced by the program's impact on registration rates, the percentage of students who withdraw from any course is also likely to be influenced by the program's impact on registration rates. Notably, in the first program semester, there was no impact on registration, so in this semester the impact on withdrawals appears to be a direct result of the program, not an artifact of increased registration.

registrants as a result of the program — registrants who otherwise would have attempted and earned zero credits. If these additional registrants attempted and earned credits at the same rate as registered control group members, then the program group could expect an additional 805 (74.6×10.8) attempted credits and an additional 454 (74.6×6.1) earned credits as a result of increased registration rates alone. Averaging these additional credits across all program group students yields 0.75 ($805 \div 1,073$) additional credits attempted and 0.42 ($454 \div 1,073$) additional credits earned. (Numerical discrepancies are a result of rounding.)

The Opening Doors Demonstration

Table 4.1

Transcript Outcomes, First and Second Program Semesters

Lorain County Community College and Owens Community College Report

Outcome	Program Group	Control Group	Difference (Impact)	Standard Error
<u>First program semester</u>				
Registered for any courses (%)	89.9	88.6	1.3	1.3
Average number of credits attempted	9.8	9.7	0.2	0.2
Regular credits	6.2	6.3	-0.1	0.2
Developmental credits	3.5	3.3	0.2 *	0.1
Average number of credits earned	5.3	5.1	0.2	0.2
Regular credits	3.5	3.6	-0.1	0.2
Developmental credits	1.8	1.5	0.2 **	0.1
Passed all courses (%)	31.3	31.3	0.0	2.0
Withdrew from any courses (%)	30.0	26.2	3.8 **	1.9
Term GPA (%)				
0 to 1.9	34.9	34.3	0.7	2.0
2.0 or higher	44.1	43.0	1.0	2.1
No GPA ^a	21.0	22.7	-1.7	1.8
<u>Second program semester</u>				
Registered for any courses (%)	65.3	58.3	7.0 ***	2.1
Average number of credits attempted	7.0	6.3	0.7 ***	0.3
Regular credits	5.4	4.9	0.4 **	0.2
Developmental credits	1.6	1.3	0.3 **	0.1
Average number of credits earned	4.0	3.5	0.4 **	0.2
Regular credits	3.2	3.0	0.2	0.2
Developmental credits	0.7	0.5	0.2 **	0.1
Passed all courses (%)	24.2	22.0	2.2	1.8
Withdrew from any courses (%)	21.5	18.7	2.8 *	1.7
Term GPA (%)				
0 to 1.9	25.9	22.5	3.4 *	1.8
2.0 or higher	34.1	31.5	2.6	2.0
No GPA ^a	39.9	46.0	-6.1 ***	2.1
Sample size (total = 2,139)	1,073	1,066		

(continued)

Table 4.1 (continued)

SOURCES: MDRC calculations from Lorain County Community College and Owens Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Estimates are adjusted by cohort and college.

GPA = grade point average.

Grades earned in all courses except for developmental courses are used in the calculation of term GPA.

^aThe “No GPA” category includes students who did not enroll and students who took only developmental courses, which are not included in GPA calculations.

In sum, there is no significant evidence that the program produced positive educational outcomes during the first program semester. There is convincing evidence, however, that the program had a significant positive impact on retention during the second program semester.

Postprogram Semesters

Table 4.2 shows academic outcomes during the four postprogram semesters (that is, for the third, fourth, fifth, and sixth semesters after random assignment). During the first postprogram semester, 43.7 percent of program group members registered compared with 40.0 percent of control group members. While smaller in magnitude than the program’s second semester impact on registration, this 3.7 percentage point impact is statistically significant. Thus, in each of the semesters immediately following the Opening Doors services, program group students registered at a higher rate than their control group counterparts.

Given the finding of positive program impacts on registration rates during each of the two semesters immediately following the Opening Doors services, the next logical question is whether these impacts persisted into the future. Table 4.2 shows that, with respect to registration, statistically significant differences between the research groups disappeared after the first postprogram semester. In addition, with respect to credits attempted and earned, statistically significant differences between the research groups were generally not observed once the program services were no longer offered. Overall, it appears that the program’s positive impacts during the second program semester began to fade once the program was complete. In other words, there is no convincing evidence of long-term impacts from the Opening Doors program at Lorain and Owens.

The Opening Doors Demonstration

Table 4.2

Transcript Outcomes, First Through Fourth Postprogram Semesters
Lorain County Community College and Owens Community College Report

Outcome	Program Group	Control Group	Difference (Impact)	Standard Error
<u>First postprogram semester</u>				
Registered for any courses (%)	43.7	40.0	3.7 *	2.1
Average number of credits attempted	4.5	4.1	0.4	0.2
Regular credits	3.8	3.6	0.2	0.2
Developmental credits	0.7	0.5	0.1 *	0.1
Average number of credits earned	2.7	2.6	0.0	0.2
Regular credits	2.4	2.4	0.1	0.2
Developmental credits	0.3	0.3	0.0	0.0
Term GPA (%)				
0 to 1.9	15.0	12.6	2.5 *	1.5
2.0 and higher	25.3	25.3	0.0	1.9
No GPA ^a	59.6	62.1	-2.5	2.1
<u>Second postprogram semester</u>				
Registered for any courses (%)	34.5	32.3	2.2	2.0
Average number of credits attempted	3.4	3.3	0.2	0.2
Regular credits	3.1	3.0	0.1	0.2
Developmental credits	0.3	0.3	0.0	0.0
Average number of credits earned	2.1	2.1	0.0	0.2
Regular credits	2.0	2.0	0.0	0.2
Developmental credits	0.1	0.1	0.0	0.0
Term GPA (%)				
0 to 1.9	12.5	10.1	2.4 *	1.4
2.0 and higher	19.9	20.3	-0.3	1.7
No GPA ^a	67.5	69.6	-2.1	2.0
<u>Third postprogram semester</u>				
Registered for any courses (%)	28.9	25.9	3.0	1.9
Average number of credits attempted	2.9	2.4	0.4 **	0.2
Regular credits	2.6	2.3	0.4 *	0.2
Developmental credits	0.2	0.2	0.1	0.0

(continued)

Table 4.2 (continued)

Outcome	Program Group	Control Group	Difference (Impact)	Standard Error
Average number of credits earned	1.9	1.7	0.1	0.2
Regular credits	1.8	1.6	0.2	0.2
Developmental credits	0.1	0.1	0.0	0.0
Term GPA (%)				
0 to 1.9	8.6	6.1	2.5 **	1.1
2.0 and higher	18.3	18.3	0.0	1.7
No GPA ^a	73.1	75.6	-2.5	1.9
<u>Fourth postprogram semester^b</u>				
Registered for any courses (%)	24.4	23.2	1.3	1.8
Average number of credits attempted	2.3	2.1	0.2	0.2
Regular credits	2.2	1.9	0.3	0.2
Developmental credits	0.1	0.2	0.0	0.0
Sample size (total = 2,139)	1,073	1,066		

SOURCES: MDRC calculations from Lorain County Community College and Owens Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Estimates are adjusted by cohort and college.

GPA = grade point average.

^aThe “No GPA” category includes students who did not enroll and students who took only developmental courses, which are not included in GPA calculations.

^bThe fourth postprogram semester does not include data for credits earned or term GPA.

Cumulative Results

Table 4.3 shows some cumulative academic outcome measures from the first program semester through the third postprogram semester; registration data also include the fourth postprogram semester. The cumulative results suggest that over the course of three years, program group students registered in 0.2 more semester than did control group students. In addition, during the first two and a half years after random assignment, compared with control group students, program group students earned 0.4 more developmental credit. There was no strong evidence of positive program impacts on overall (regular plus developmental) cumulative credits earned, nor was there strong evidence of positive program impacts on students’ likelihood of earning a degree or certificate. Overall, it appears that the program’s positive impacts on educational outcomes are fairly limited.

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Table 4.3

**Cumulative Transcript Outcomes,
First Program Semester Through Third Postprogram Semester**

Lorain County Community College and Owens Community College Report

Outcome	Program Group	Control Group	Difference (Impact)	Standard Error
Registered for any courses ^a (%)	93.9	93.0	1.0	1.1
Average number of semesters registered ^a	3.3	3.1	0.2 **	0.1
Average number of credits earned	17.4	16.6	0.8	0.8
Regular credits	14.3	13.9	0.4	0.7
Developmental credits	3.1	2.7	0.4 **	0.2
Cumulative GPA (%)				
0 to 1.9	45.7	44.6	1.0	2.1
2.0 and higher	41.8	41.6	0.2	2.1
No GPA ^b	12.5	13.7	-1.2	1.5
Earned a degree/certificate (%)	1.6	2.5	-1.0	0.6
Sample size (total = 2,139)	1,073	1,066		

SOURCE: MDRC calculations from Lorain County Community College and Owens Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Estimates are adjusted by cohort and college.

GPA = grade point average.

^aOutcomes are from the first program semester through the fourth postprogram semester, and include summer semesters.

^bThe “No GPA” category includes students who did not enroll and students who took only developmental courses, which are not included in GPA calculations.

**Effects on Educational Outcomes for Selected Subgroups:
Transcript Measures**

This section presents (with accompanying tables in Appendix E) impacts on educational outcomes, by college and by gender. These analyses assess whether there were impacts for the selected subgroups of students (for example, students at Lorain County Community College) and whether there were differential impacts between subgroups of students (that is, whether the magnitude of the program’s impact at Lorain differed from the magnitude of the program’s impact at Owens). Differential impacts between subgroups might occur for a variety of reasons.

For example, one of the two studied colleges may have implemented the program more effectively than the other; or, the program itself may be a more effective strategy at boosting academic success for females than it is for males. Such possibilities are explored in this section.

Transcript Outcomes by College

Assessed here is whether the program's impact at Lorain County Community College differed from its impact at Owens Community College. The program's impacts could be different because, as noted in Chapter 2, the study participants at the two colleges were somewhat different. Sample members from Lorain were more likely to be women, older, married, and parents. They were less likely to be financially dependent on their own parents and more likely to be receiving government benefits. If the program was more or less effective for students with certain characteristics, then this could result in differential impacts by college. It is also possible that the program's impacts could be different at the two colleges because the program was not implemented in exactly the same way at each college. While the program was, by and large, implemented in a similar fashion across the two colleges, where differences existed, evidence indicates that Lorain's program was stronger than Owens's program. Such implementation differences are described in detail in Chapter 3 of this report.

Analyses indicate that the program's impacts at Lorain and the program's impacts at Owens were generally not significantly different from one another during the two program semesters. (See Appendix Table E.1.) Substantively, the results at the two colleges were also very similar: at neither college did the program generate statistically significant impacts on academic outcomes during the first program semester, but it did generate such impacts during the second program semester.

During the four postprogram semesters, the differences in impacts at Lorain and Owens were infrequently statistically significant. (See Appendix Table E.2.) Substantively, the results were fairly similar at the two colleges, with few consistent impacts during the postprogram semesters. One exception is that during the second and third postprogram semesters, the program group members at Lorain registered at a significantly higher rate than the control group members at the college, whereas there were no such impacts at Owens. However, the positive impacts of Lorain's program on registration during the second and third postprogram semesters did not translate into significant impacts on the average number of credits earned.

In general, the program's impacts at the two colleges were statistically indistinguishable from each other. Substantively, the impacts were also very similar, though there is some limited evidence that the program was more effective at boosting registration rates at Lorain.

Transcript Outcomes by Gender

Assessed here is whether the program's impact was different for women than for men. Policymakers may be interested to learn whether this program was more or less effective for females or males. Where differences exist between the two groups, evidence suggests that the program was more effective for women than it was for men. (See Appendix Tables E.4 through E.6.)

Effects on Enrollment, Including Other Institutions: Clearinghouse Data

The previous section examined academic outcomes using transcript data from the two Ohio Opening Doors institutions only. However, it is conceivable that the Opening Doors program could have influenced students to enroll at *other* institutions (either by transferring to another institution or via dual enrollment at either Lorain or Owens and another institution) at a higher rate than they would have in the absence of the Opening Doors program. If this were the case, then the program's impacts on retention could be larger than those presented in the previous section. Alternatively, it is possible that the Opening Doors program could have influenced students who otherwise would have transferred to other institutions to remain at their Opening Doors institution. If this were the case, then the program's impacts on retention may be smaller than those presented in the previous section. As a result, it is important to consider data from institutions beyond the Opening Doors colleges in order to fully understand the program's impact on student retention.

Table 4.4 presents results for a broader measure of educational attainment: persistence at any college as measured by enrollment at Lorain, Owens, or other postsecondary institutions. The registration and degree or certificate completion rates presented in Table 4.4 combine data from Lorain's and Owens's transcripts and the National Student Clearinghouse. While the Clearinghouse data offer broad coverage of postsecondary institutions, their measures of students' educational attainment are limited. Specifically, these data indicate only enrollment (by type of institution) and degree attainment.

In Table 4.4, the first row in each panel presents the percentage of students who registered at any college,⁵ and the second row presents the percentage of students who enrolled at the Opening Doors institution.⁶ The most notable finding from this table is that the inclusion of

⁵The percentage enrolled at any college uses the transcript data to determine whether a student was enrolled at his or her Opening Doors institution and uses the Clearinghouse data to determine whether the student was enrolled at any other institution.

⁶The percentage of students who enrolled at the Opening Doors institution comes from the Lorain and Owens transcript data only.

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Table 4.4

**Enrollment at Opening Doors Institutions and Other Institutions,
First Program Semester Through Fourth Postprogram Semester**

Lorain County Community College and Owens Community College Report

Outcome (%)	Program Group	Control Group	Difference (Impact)	Standard Error
<u>First program semester</u>				
Registered at any institution ^a	90.5	89.5	1.0	1.3
At student's Opening Doors college	89.9	88.6	1.3	1.3
At any 2-year institution ^b	0.6	0.5	0.1	0.3
At any 4-year institution	0.7	0.7	0.1	0.4
<u>Second program semester</u>				
Registered at any institution ^a	67.8	60.8	7.0 ***	2.0
At students' Opening Doors college	65.3	58.3	7.0 ***	2.1
At any 2-year institution ^b	1.6	1.0	0.6	0.5
At any 4-year institution	1.3	1.8	-0.5	0.5
<u>First postprogram semester</u>				
Registered at any institution ^a	48.3	44.3	4.0 *	2.2
At student's Opening Doors college	43.7	40.0	3.7 *	2.1
At any 2-year institution ^b	2.1	1.5	0.6	0.6
At any 4-year institution	2.5	3.1	-0.6	0.7
<u>Second postprogram semester</u>				
Registered at any institution ^a	39.4	37.4	2.0	2.1
At student's Opening Doors college	34.5	32.3	2.2	2.0
At any 2-year institution ^b	2.1	2.1	0.0	0.6
At any 4-year institution	3.1	3.5	-0.4	0.8
<u>Third postprogram semester</u>				
Registered at any institution ^a	34.7	31.8	2.9	2.0
At student's Opening Doors college	28.9	25.9	3.0	1.9
At any 2-year institution ^b	2.8	1.9	0.9	0.7
At any 4-year institution	3.2	4.7	-1.5 *	0.8

(continued)

Table 4.4 (continued)

Outcome (%)	Program Group	Control Group	Difference (Impact)	Standard Error
<u>Fourth postprogram semester</u>				
Registered at any institution ^a	30.5	29.0	1.5	2.0
At student's Opening Doors college	24.4	23.2	1.3	1.8
At any 2-year institution ^b	2.3	2.1	0.3	0.6
At any 4-year institution	4.0	4.2	-0.2	0.9
<u>Cumulative outcomes^c</u>				
Registered at any institution ^a	95.2	93.7	1.4	1.0
At student's Opening Doors college	93.9	93.0	1.0	1.1
At any 2-year institution ^b	6.5	5.3	1.2	1.0
At any 4-year institution	7.2	8.7	-1.6	1.2
Earned a degree or certificate from any institution ^d	1.8	2.8	-1.0	0.6
From student's Opening Doors college	1.6	2.5	-1.0	0.6
From any 2-year institution ^b	0.0	0.2	-0.2	0.1
From any 4-year institution	0.2	0.2	0.0	0.2
Sample size (total = 2,139)	1,073	1,066		

SOURCES: MDRC calculations using data from the StudentTracker service of the National Student Clearinghouse and transcript data from Lorain County Community College and Owens Community College.

NOTES: The Clearinghouse collects data from about 3,300 colleges that enroll 92 percent of U.S. college students. Students have the right to opt out of having their information sent. Records were found in the Clearinghouse file for 95 percent of the students randomly assigned at Lorain County Community College and Owens Community College.

A two-tailed t-test was applied to differences between the groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Missing values are not included in individual variable distributions.

Distributions may not add to 100 percent because of rounding.

^aDistributions may not add to the percent registered at any institution because of co-enrollment.

^bThis category excludes Lorain County Community College and Owens Community College.

^cSummer and winter semesters are not shown as relative semesters, but they are included in cumulative measures.

^dOutcomes include data from the first program semester through the third postprogram semester.

enrollments at other institutions does not change the program's impacts during any semester. That is, the program's impacts on registration at *any* school mimic the program's impacts on registration at the Opening Doors institutions alone: there are clear positive impacts during the second program semester and small impacts during the first postprogram semester, but the impacts do not persist during later semesters. These results suggest that students transferring to other institutions did not change the general findings regarding the program's impacts on student persistence.

As shown in the cumulative outcomes section of Table 4.4, in terms of degree or certificate attainment, the program offered no statistically detectable educational advantage. However, fewer than 3 percent of all students obtained a degree or certificate from any institution during the follow-up period, suggesting that it may be premature to expect impacts on this outcome.

Comparing the program's impacts on enrollment using the National Student Clearinghouse data for the Lorain and Owens samples yields similar results to those found using the transcript data alone. (See Appendix Table E.7.)

These analyses demonstrate that considering student transfers and/or dual enrollment at other institutions does not change the overall impacts of the Ohio Opening Doors program on student retention as measured by registration.

Effects on Financial Aid

Financial aid services are one component of community colleges' student services. As part of the Opening Doors enhanced student services package, program group students were given access to a designated contact in the financial aid office. Control group students also had access to the financial aid office, but they did not have a designated contact. As described in Chapter 3, program group students indicated that they attended financial aid advising at a significantly higher rate than their control group counterparts, which may provide some evidence that this enhanced student service was utilized. Program group students may also have received additional financial aid advising from their Opening Doors counselor. In addition, program group students were eligible to receive a modest stipend (and typically did) that control group students were not eligible to receive. One possible consequence of these program components is an increase in the likelihood that students would receive financial assistance. Analyses of program impacts on financial aid are presented in Table 4.5. Financial aid data were obtained from Lorain and Owens.

The first panel of Table 4.5 assesses the program's impact on the receipt of financial assistance during the first program semester. No differences were detected between program group and control group students' rates of financial assistance receipt. Observing nonsignificant differences in receipt of financial assistance during the first program semester is not surprising, given that most applications for financial aid were completed prior to random assignment (that is, before program group students received any enhanced services).

During the second program semester and first postprogram semester, students in the program group were more likely to receive financial assistance (in general) and the federal Pell Grant (in particular) than students in the control group. These financial assistance impacts

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Table 4.5

Impacts on Sample Members' Financial Aid Exclusive of Opening Doors,
First Program Semester Through Third Postprogram Semester

Lorain County Community College and Owens Community College Report

Outcome	Program Group	Control Group	Difference (Impact)	Standard Error
<u>First program semester</u>				
Registered for any class (%)	89.9	88.6	1.3	1.3
Awarded financial assistance ^a (%)	88.1	87.2	0.8	1.4
Federal Pell Grant	83.8	81.1	2.6	1.6
Any other grants ^b	67.9	66.6	1.3	2.0
Subsidized loans	33.6	35.1	-1.5	2.0
Unsubsidized loans	20.2	22.6	-2.4	1.7
Federal Work-Study ^c	3.6	2.4	1.1	1.1
<i>Average financial assistance received per recipient (\$)</i>	<i>2,712</i>	<i>2,715</i>		
<u>Second program semester</u>				
Registered for any class (%)	65.3	58.3	7.0 ***	2.1
Awarded financial assistance ^a (%)	64.9	59.8	5.1 **	2.0
Federal Pell Grant	59.9	52.5	7.4 ***	2.1
Any other grants ^b	55.0	49.5	5.6 ***	2.1
Subsidized loans	24.6	25.1	-0.5	1.8
Unsubsidized loans	15.6	18.2	-2.6 *	1.6
Federal Work-Study ^c	4.0	2.2	1.8	1.2
<i>Average financial assistance received per recipient (\$)</i>	<i>2,681</i>	<i>2,689</i>		
<u>First postprogram semester</u>				
Registered for any class (%)	43.7	40.0	3.7 *	2.1
Awarded financial assistance ^a (%)	43.4	38.6	4.7 **	2.1
Federal Pell Grant	39.1	34.5	4.6 **	2.1
Any other grants ^b	34.9	31.7	3.2	2.0
Subsidized loans	18.5	18.0	0.4	1.7
Unsubsidized loans	12.8	12.9	-0.1	1.4
Federal Work-Study ^c	2.0	1.3	0.6	0.9
<i>Average financial assistance received per recipient (\$)</i>	<i>2,763</i>	<i>2,851</i>		

(continued)

Table 4.5 (continued)

Outcome	Program Group	Control Group	Difference (Impact)	Standard Error
<u>Second postprogram semester</u>				
Registered for any class (%)	34.5	32.3	2.2	2.0
Awarded financial assistance ^a (%)	33.7	31.8	1.9	2.0
Federal Pell Grant	30.0	27.4	2.7	1.9
Any other grants ^b	27.3	25.9	1.4	1.9
Subsidized loans	16.1	14.7	1.4	1.6
Unsubsidized loans	11.8	11.4	0.5	1.4
Federal Work-Study ^c	1.3	0.9	0.4	0.7
<i>Average financial assistance received per recipient (\$)</i>	<i>2,849</i>	<i>2,754</i>		
<u>Third postprogram semester</u>				
Registered for any class (%)	28.9	25.9	3.0	1.9
Awarded financial assistance ^a (%)	28.2	24.5	3.8 **	1.9
Federal Pell Grant	25.4	22.6	2.8	1.8
Any other grants ^b	19.8	18.6	1.1	1.7
Subsidized loans	15.3	13.4	1.9	1.5
Unsubsidized loans	11.4	10.1	1.2	1.3
Federal Work-Study ^c	1.1	0.7	0.4	0.6
<i>Average financial assistance received per recipient (\$)</i>	<i>3,120</i>	<i>3,166</i>		
<u>Summary outcomes</u>				
Registered for any class (%)	93.6	92.4	1.2	1.1
Awarded financial assistance ^a (%)	91.4	90.5	0.9	1.2
Federal Pell Grant	88.0	85.7	2.2	1.5
Any other grants ^b	78.2	77.0	1.2	1.8
Subsidized loans	46.2	46.1	0.1	2.1
Unsubsidized loans	32.0	33.0	-1.1	2.0
Federal Work-Study ^c	6.2	4.7	1.5	1.5
<i>Average financial assistance received per recipient (\$)</i>	<i>7,826</i>	<i>7,446</i>		
Sample size (total = 2,139)	1,073	1,066		

SOURCES: MDRC calculations from Lorain County Community College and Owens Community College financial aid and transcript data.

NOTES: Distributions may not add to 100 percent because of rounding.

A two-tailed t-test was applied to differences between the research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Italics indicate nonexperimental data. Significance tests are not calculated for nonexperimental data; thus, the cells for “Difference” and “Standard Error” are empty.

Estimates are adjusted by research group and cohort.

^aDistributions may not add to 100 percent because categories are not mutually exclusive.

^bThis includes all grants and scholarships excluding the Pell Grant.

^cOnly Lorain County Community College reported Federal Work-Study.

correspond with the program's impact on registration. It cannot be determined with certainty whether students chose to register because they would be able to receive financial assistance, or whether students obtained financial assistance once they decided to register for another semester.

While the program's generally positive impact on the receipt of financial assistance may be a result of its impact on registration, there is evidence that advising on financial matters made a difference above and beyond the program's impact on registration. Despite the fact that a higher percentage of program group students registered during the second program semester, they were actually *less* likely to be awarded unsubsidized loans. This can be viewed as a positive impact since, compared with other forms of financial assistance (grants and subsidized loans), unsubsidized loans are generally considered the least desirable form of financial assistance. So, there is some evidence that the program's enhanced advising on financial matters made a small impact.

The program's impacts on financial aid at Lorain and at Owens were generally similar. (See Appendix Table E.8.)

Effects on Social, Psychological, and Health Outcomes

The Opening Doors program discussed in this report was mainly intended to have a positive impact on students' chances of academic success. Positive program impacts on measures of academic success such as retention, earned credits, or college completion have the potential to influence broader life outcomes, such as improved social, psychological, and health outcomes.⁷ While impacts on these measures of well-being are more likely to occur over the longer term, data from the study's 12-month survey may indicate whether the program demonstrates any early impacts on students' well-being. Before considering the program's impacts on these measures of well-being, a descriptive profile of study participants' social, psychological, and health statuses at baseline (that is, at the point of random assignment) is provided.

Among study participants, more than half had a Body Mass Index (BMI) that places them in the overweight category according to standard weight-status categories. (See Appendix Table E.9.) In addition, over one-third of sample members considered themselves to be "current smokers" at baseline. Although being overweight and smoking are generally associated with poor health status, less than 1 in 13 sample members viewed themselves as being in fair or poor health. Nevertheless, at baseline this group appears to have had health challenges.

⁷For a detailed explanation of how positive impacts on education outcomes can influence broader life outcomes, see Scrivener et al. (2008), 73-76.

The results presented in Appendix Tables E.9 and E.10 of this report detail program impacts on social, psychological, and health outcomes. The tables indicate that there is no evidence that the program had an impact on these outcomes at the 12-month follow-up point. These findings are unsurprising given that the program was not intended to have a direct impact on students' well-being, and the hypothesized indirect program impacts on students' well-being are more likely to occur in the long term, not 12 months after the program began.

Chapter 5

Summary and Conclusions

Lorain County Community College and Owens Community College both implemented an Opening Doors program that provided enhanced student services and a modest stipend to help improve the likelihood that students would succeed academically. The implementation of the program at each of the two colleges was fairly robust — student services were offered (as designed) and strong qualitative and quantitative evidence demonstrated that program group students utilized student services at a greater rate than their control group counterparts. There are many practical restrictions on community college life, including limited staff time, budget constraints, busy student schedules, and a host of other priorities and challenges faced by college staff and students alike. Given this reality, the overall implementation of the program at Lorain and Owens was strong and what could reasonably be expected from a community college looking to enhance its student services.

Generally, the two colleges offered similar Opening Doors programs. Where differences in the implementation of the program existed, Lorain ran a slightly stronger program than Owens. Compared with the services at Owens, Lorain's Opening Doors counselors had smaller caseloads, their program group students met more frequently with counselors, and the program was more stable (because of less staff turnover than at Owens). The slightly stronger implementation of the program at Lorain corresponded with some limited evidence that the program there was more effective at boosting longer-term registration rates. That said, analyses generally did *not* detect statistically significant differences in the program's impacts across the two colleges.

Since implementation and impacts were generally very similar across the two colleges, the pooled analyses present a useful summary of the program's effectiveness at these two sites. As a result, the overall story was fairly straightforward: this was a well-implemented program with clear, positive impacts on student academic performance during the second program semester and a small impact on registration during the first postprogram semester; however, the program did not produce *lasting* meaningful positive impacts on educational outcomes in subsequent semesters.

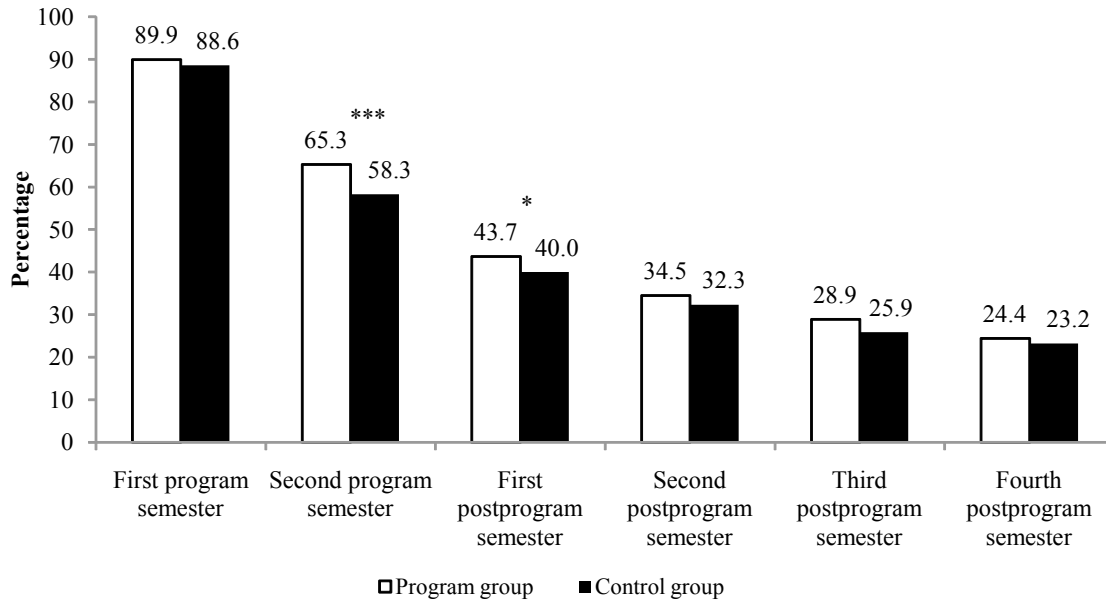
Figures 5.1 and 5.2 summarize the program's impacts on the primary outcomes of interest: registration and cumulative credits earned, respectively. The plot of registration rates shown in Figure 5.1 reflects a common trend in community colleges: there is an initial steep decline in registration rates during the first few semesters, followed by a gradual decline during later semesters. By comparing program group students with control group students, the figure shows that the Opening Doors program in Ohio had a significant positive impact on registration

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Figure 5.1

**Percentage of Sample Members Who Registered for Any Courses,
First Program Semester Through Fourth Postprogram Semester**

Lorain County Community College and Owens Community College Report



SOURCES: Lorain County Community College and Owens Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Estimates are adjusted by cohort and college.

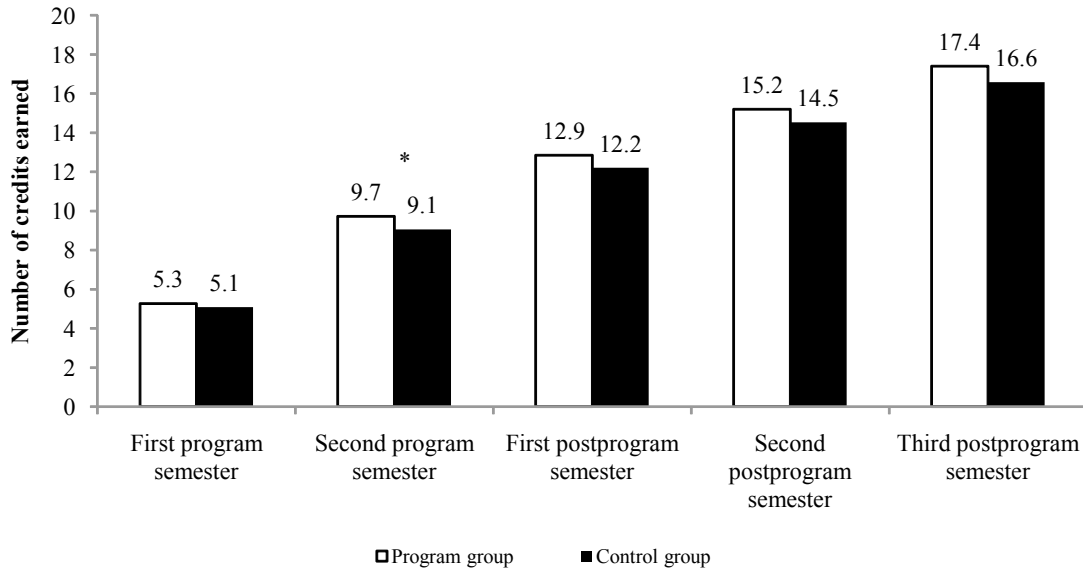
during the second program semester and the first postprogram semester; however, this impact was not sustained through the remaining postprogram semesters.

The plot of the average cumulative credits earned that is shown in Figure 5.2 shows a fairly steep increase during the initial semesters followed by a more gradual increase during later semesters. By comparing program group students with control group students, the figure shows that the program had a significant positive impact on cumulative credits earned by the

The Opening Doors Demonstration

Figure 5.2

Cumulative Credits Earned,
First Program Semester Through Third Postprogram Semester
Lorain County Community College and Owens Community College Report



SOURCES: Lorain County Community College and Owens Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Estimates are adjusted by cohort and college.

Data include summer semesters.

second program semester; however, the impact on cumulative credits earned was not statistically significant after that semester.¹

¹While the *magnitude* of this impact increased slightly from the second program semester onward (from 0.6 to 0.8), its statistical significance was detectable only during the second program semester. The reason for this is that the standard error of the estimated impact (along with the variance in cumulative credits earned) increased monotonically from temporal semester to semester; consequently, the magnitude of the minimal detectable impact also increased from semester to semester.

Interpreting the Program's Impacts

There are several important factors to consider when interpreting the program's impacts from this study.

First, this study looks at one enhanced student services program implemented at two community colleges. The randomized experimental design of this study leads MDRC to believe that the impact estimates have high internal validity.² That is, it can be said with confidence that, *at these specific locations*, the program services had a positive effect on registration and credits earned during the second program semester and a small positive effect on registration during the first postprogram semester — impacts that did not persist through later semesters. However, since the study was conducted at two colleges only, claims regarding how well this type of program might work *at other colleges* can be made only with low confidence and a fairly high degree of speculation — that is, the external validity, or generalizability, of this study is low.

As the number of rigorous studies on the effectiveness of enhanced student services at community colleges increases, so will the confidence with which findings can be generalized from this line of research. Currently, very few studies on community college student services use an experimental design, the gold standard for making causal claims about program effectiveness. Combining this fact with the fact that internal validity is a necessary (though not sufficient) precursor to external validity, the research presented here provides important evidence on the general effectiveness of enhanced student services, even though this evidence has a high degree of uncertainty. With this in mind, offered below are some interpretations, implications, and suggested ideas for future research, based on this study.

The main finding from this study is that the Opening Doors program that operated at Lorain County Community College and Owens Community College had positive impacts during the second program semester (and, to a lesser extent, during the first postprogram semester); however, these impacts were, for the most part, not maintained in later postprogram semesters. This result can be interpreted in at least two ways, both of which MDRC believes to be reasonable. One interpretation is that the Opening Doors program in Ohio did not work well. The initial positive effects of the program disappeared over time, and by the second postprogram semester, the academic success of the program group students and control group students was virtually indistinguishable. Furthermore, the program did not produce meaningful impacts on the cumulative academic outcomes measured over the three-year study period. This finding may suggest that while there is a perceived need for enhanced student services, the duration and/or set of services offered in the program at Lorain and Owens are not a useful policy lever for improving students' academic success at community colleges.

²Campbell and Stanley (1963).

An alternative interpretation of the study's results is that, given that the program boosted registration during the second semester in which the program services were provided, and, to some extent, during the semester after the program ended, it was successful. While the positive impacts were not sustained, the two-semester program could be considered successful as a first step toward longer-term academic success. The question then becomes: What, if anything, can be done in order to sustain or even increase the temporary positive program impacts? Here, speculation is the only option — speculation that presents interesting areas for future research on enhanced student services.

One explanation for the program's short-term success and lack of long-term success is that the one-year duration of the program was simply too short. Many who advocate for enhanced student services view them as an ongoing need, not a temporary, one- or two-semester need. It is plausible that in order for enhanced student services to lead to sustained impacts, program efforts must be sustained. Since the registration drop-off rate is so dramatic during the first year (as depicted in Figure 5.1), it was reasonable to wonder whether a strong one-year program might “nip in the bud” the persistence problem; however, such was not the case in this study. Given this finding, it seems reasonable to wonder whether a similar intervention that is implemented for a longer duration would lead to the desired long-term impacts.

While increasing the program's duration is one possible way to boost the program's long-term impacts, it may also be worth exploring more comprehensive approaches to enhanced student services. The program studied in Ohio was robust and implemented with good fidelity to the design; however, in order to see larger and more enduring impacts, more comprehensive student services strategies may be required. Although some additional services were provided, the studied program focused mainly on enhanced academic counseling, which is one of several key student services. While academic counseling may attempt to address some of the barriers to students' persistence, it alone may not be enough. A more comprehensive approach to enhanced student services could also include enhanced academic supports, like tutoring, remedial assistance, and time management and study skills training. A more comprehensive approach might also offer enhanced supplemental services, like on-campus child care and transportation assistance.

Still, it is important to consider that it is unlikely that enhanced student services alone can address all of the barriers to student academic success. Student services are unlikely to have a large impact on several areas that may be critical to students' academic success, such as financial assistance or the activities that go on within the college classroom. It is possible that in order for enhanced student services to have a substantial effect on community college students, they need to be offered in conjunction with other reforms that significantly reduce the financial burden of attending community college (that is, more considerable reforms than the modest

stipend offered as part of the Opening Doors program) or reforms that improve the pedagogical practices of instructors.

Finally, when considering the effectiveness of the program studied at Lorain and Owens, it is important to be mindful of the cost of the program. If funding is available, MDRC plans to conduct research measuring the cost of this intervention. In addition, MDRC hopes to assess the costs of the other Opening Doors programs (performance-based scholarships; learning communities, which group students in linked courses with mutually reinforcing themes and assignments in order to strengthen their college learning experience; and a college orientation course for students on academic probation). While this potential study is still in its earliest design phase, it is worth noting that the enhanced student services intervention studied here represents the “lightest touch” of the interventions tested as part of Opening Doors. (See Table 1.1 for a description of all the Opening Doors programs.) The other programs offered more program components, more intensive services, or both. Considered in this context, the modest short-term impacts of the Opening Doors program in Ohio suggest that the enhanced student services and a modest stipend could be an important component of a larger package to meaningfully improve student success at community colleges.

Appendix A

Supplementary Baseline Information

Appendix A includes three descriptive tables — one for the pooled sample and one for each of Lorain County Community College and Owens Community College separately. Tables were created separately for all three groups since impact analyses were conducted for the pooled sample as well as for Lorain and Owens separately. Each table shows selected characteristics of sample members at baseline for the full sample, as well as for the program and control groups separately. The full sample data provide a descriptive profile of the types of students who participated in the study. Separating these data into program and control groups is one way to assess the success of random assignment at creating statistically equivalent research groups at baseline. Since students were randomly assigned to the program and control groups, their characteristics should generally be similar at baseline. For example, the percentage of males in the program group should be about the same as the percentage of males in the control group.

Comparing Baseline Characteristics Across Research Groups

Pooled Sample

Appendix Table A.1 compares the baseline characteristics of program and control group students from the pooled sample (Lorain and Owens combined). For the most part, there is no evidence of statistically significant differences between program and control group members on their baseline characteristics (as indicated by the absence of asterisks in the right-hand column), though, in a few instances, program and control group students differed significantly on their baseline characteristics. For example, 19.0 percent of the program group lived in a household in public or Section 8 housing compared with 14.1 percent of the control group. The three asterisks in the right-hand column indicate that this difference is statistically significant, suggesting that program group members and control group members differed with respect to their probability of being in a household in public or Section 8 housing. Since such a large number of significance tests were calculated, occasional statistically significant differences between program and control group members are to be expected. Some other statistically significant differences are reflected in receipt of government benefits, likelihood of being ever employed, and having a language other than English spoken regularly at home, with program group members reporting these characteristics more often than control group members.

When examining Table A.1 for differences between the program and control groups, it is important to note that the table shows separate statistical tests for each gender, each age group, each racial/ethnic group, and each category of several other variables that are mutually exclusive — that is, students can report being only one gender or the other, only one racial/ethnic group or another, and so forth. Such tests are not independent since the categories, like percent male and percent female, are not independent. This should be taken into account when noting the number of observable characteristics that have statistically significant differences. Using “Region in

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Appendix Table A.1

Selected Characteristics of Sample Members at Baseline

Lorain County Community College and Owens Community College Report

Characteristic	Full Sample	Program Group	Control Group
Gender (%)			
Male	24.3	24.0	24.6
Female	75.7	76.0	75.4
Age in years (%)			
18-20	28.1	28.4	27.8
21-25	35.0	33.5	36.5
26-30	23.8	24.1	23.5
31-34	13.1	14.0	12.2
Average age (years)	24.3	24.4	24.2
Marital status (%)			
Married	19.9	19.0	20.9
Unmarried	80.1	81.0	79.1
Race/ethnicity (%)			
Hispanic/Latino ^a	10.9	11.2	10.5
Black, non-Hispanic	29.9	30.8	29.0
White, non-Hispanic	54.1	52.4	55.9
Asian or Pacific Islander	0.6	1.0	0.2 **
Other ^b	4.5	4.6	4.4
Has one child or more (%)	64.3	64.6	64.0
<i>Among sample members with children, average age of youngest child (years)</i>	3.2	3.4	3.1
Average household size, excluding roommates or boarders	3.4	3.4	3.4
Household receiving any of the following benefits ^c (%)			
Unemployment/Dislocated Worker benefits	4.8	5.0	4.5
Supplemental Security Income (SSI) or disability	10.0	10.9	9.1
Cash assistance or welfare (TANF)	14.1	14.6	13.6
Food stamps	36.0	37.8	34.3 *
None of the above	54.1	52.4	55.8
Household in public or Section 8 housing (%)	16.5	19.0	14.1 ***
Household receiving any government benefits (%)	48.3	50.6	46.0 **

(continued)

Appendix Table A.1 (continued)

Characteristic	Full Sample	Program Group	Control Group
Financially dependent on parents (%)	17.6	17.9	17.2
Ever employed (%)	98.3	98.9	97.7 **
Currently employed (%)	55.9	55.7	56.2
Highest grade completed (%)			
8th or lower	1.4	1.4	1.4
9th	3.8	3.9	3.7
10th	5.8	5.6	6.0
11th	8.5	8.0	8.9
12th	80.5	81.1	79.9
Diplomas/degrees earned ^d (%)			
High school diploma	75.7	75.4	76.0
General Educational Development (GED) certificate	22.9	22.5	23.2
Occupational/technical certificate	10.8	11.5	10.1
Date of high school graduation/GED certificate receipt (%)			
During the past year	21.5	21.6	21.3
Between 1 and 5 years ago	31.3	30.4	32.3
More than 5 years ago	47.2	48.0	46.4
Main reason for enrolling in college ^d (%)			
To complete a certificate program	9.8	10.6	8.9
To obtain an associate's degree	49.0	47.4	50.7
To transfer to a 4-year college/university	24.4	24.7	24.1
To obtain/update job skills	12.5	12.6	12.4
Other	7.2	7.3	7.1
Completed any college courses/credits (%)	43.6	45.1	42.1
<i>Among those who completed any college courses/credits, average number of courses completed</i>	3.7	3.8	3.5
First person in family to attend college (%)	35.9	35.8	36.0
Working personal computer in home (%)	64.2	65.1	63.4
Owns or has access to a working car (%)	88.3	89.1	87.5
Language other than English spoken regularly in home (%)	8.1	9.9	6.3 ***
U.S. citizen (%)	98.8	98.6	99.1
Region in which respondent was born (%)			
North America	96.9	96.0	97.9 **
Asia	0.4	0.6	0.3
Latin America and the Caribbean	1.0	1.0	1.1
Other ^e	1.6	2.5	0.8 ***

(continued)

Appendix Table A.1 (continued)

Characteristic	Full Sample	Program Group	Control Group
Region in which respondent's mother was born ^f (%)			
North America	94.0	92.6	95.4 ***
Asia	0.7	0.9	0.5
Latin America and the Caribbean	2.8	3.2	2.4
Other ^e	2.6	3.4	1.8 **
Sample size	2,139	1,073	1,066

SOURCE: MDRC calculations using Baseline Information Form (BIF) data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Estimates are adjusted by cohort and college.

TANF = Temporary Assistance for Needy Families.

To analyze whether baseline characteristics jointly predicted research group status, a likelihood ratio test was performed, which yielded a p-value of 0.12. Convention suggests that this probability is large enough that these potential differences can be ignored in the analyses.

Italics indicate nonexperimental data. Significance tests are not calculated for nonexperimental data.

^aRespondents who indicated that they are Hispanic and who chose a race are included only in the Hispanic/Latino category.

^b“Other race” includes American Indians/Alaskan Natives and those who marked “other race/ethnicity” or more than one racial category.

^cBenefits include Unemployment/Dislocated Worker benefits, Supplemental Security Income (SSI) or disability, cash assistance or welfare, food stamps, and Section 8 or public housing.

^dDistributions may not add to 100 percent because categories are not mutually exclusive.

^eThis category includes the Baltics, the Commonwealth of Independent States, eastern and western Europe, North Africa, Sub-Saharan Africa, the Near East, and Oceania. The Commonwealth of Independent States includes Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russia, Tajikistan, Turkmenistan (until August 2005), Ukraine, and Uzbekistan. Countries are grouped by region according to the U.S. Bureau of the Census, International Data Base.

^fThe majority of respondents reported that both parents were born in the same region as each other.

which respondent was born” as an example, program group members and control group members differed with respect to the percentage who were from North America *and* the percentage who were from other regions. However, this difference represents only one real difference, a difference with respect to the location of respondent’s birthplace. Similarly, the absence of differences between program group members and control group members with respect to the percentage who are males and the percentage who are females should only be thought of as one indication of the success of random assignment at creating equivalent groups.

In addition to the individual tests described above, an omnibus test was conducted to assess whether overall systematic differences in baseline characteristics were observed between the two research groups. In order to assess this possibility, a logistic regression model was used

to analyze whether students' baseline characteristics could jointly predict whether they were in the program group or the control group. The model's likelihood ratio test yielded a p-value of 0.12.¹ Convention suggests that this probability is large enough that these potential differences can be ignored in the analyses.

Lorain County Community College

Appendix Table A.2 compares the baseline characteristics of program and control group students from Lorain County Community College only. The table shows that there are few statistically significant differences between the research groups on their observable characteristics. To assess whether sample members' baseline characteristics jointly predicted their research group status, a likelihood ratio test was performed, yielding a p-value of 0.15. Convention suggests that this probability is large enough that these potential differences can be ignored in the analyses.

Owens Community College

Appendix Table A.3 compares the baseline characteristics of program and control group students from Owens Community College only. The table shows that there are several statistically significant differences between the research groups on their observable characteristics. To assess whether sample members' baseline characteristics jointly predicted their research group status, a likelihood ratio test was performed, yielding a p-value of 0.02. This analysis suggests that the program and control groups systematically differ on their baseline characteristics at Owens. As a result, when conducting impact analyses for Owens alone, several key variables on which program and control group members differed at baseline were controlled for. All such analyses yielded substantively similar results to analyses conducted without controls, so results presented do not control for any baseline characteristics.

¹The p-value is the probability of observing differences at least as extreme as those actually observed, assuming that there are no true differences in the program and control groups' *population* characteristics.

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Appendix Table A.2

Selected Characteristics of Sample Members at Baseline:
Lorain County Community College

Lorain County Community College and Owens Community College Report

Characteristic	Full Sample	Program Group	Control Group
Gender (%)			
Male	18.9	18.2	19.7
Female	81.1	81.8	80.3
Age in years (%)			
18-20	14.4	14.9	13.9
21-25	38.6	34.7	42.6 **
26-30	29.8	31.8	27.8
31-34	17.2	18.7	15.7
Average age (years)	25.7	25.9	25.5
Marital status (%)			
Married	27.3	27.4	27.3
Unmarried	72.7	72.6	72.7
Race/ethnicity (%)			
Hispanic/Latino ^a	14.4	14.4	14.3
Black, non-Hispanic	21.1	19.2	23.1
White, non-Hispanic	58.8	59.9	57.6
Asian or Pacific Islander	0.2	0.5	0.0
Other ^b	5.5	6.1	5.0
Has one child or more (%)	82.2	83.3	81.0
<i>Among sample members with children, average age of youngest child (years)</i>	3.4	3.6	3.2
Average household size, excluding roommates or boarders	3.5	3.4	3.5
Household receiving any of the following benefits ^c (%)			
Unemployment/Dislocated Worker benefits	5.4	6.4	4.3
Supplemental Security Income (SSI) or disability	9.4	9.5	9.2
Cash assistance or welfare (TANF)	15.8	15.5	16.0
Food stamps	42.2	43.9	40.6
None of the above	48.0	45.9	50.2
Household in public or Section 8 housing (%)	20.4	22.7	18.1 *
Household receiving any government benefits (%)	54.9	57.6	52.2

(continued)

Appendix Table A.2 (continued)

Characteristic	Full Sample	Program Group	Control Group
Financially dependent on parents (%)	9.6	10.0	9.2
Ever employed (%)	99.6	99.6	99.5
Highest grade completed (%)			
8th or lower	1.6	2.2	0.9
9th	4.5	4.7	4.3
10th	6.9	6.4	7.4
11th	11.0	9.3	12.7
12th	76.0	77.3	74.7
Diplomas/degrees earned ^d (%)			
High school diploma	70.7	70.1	71.4
General Educational Development (GED) certificate	27.7	27.5	28.0
Occupational/technical certificate	15.8	16.6	15.0
Date of high school graduation/GED certificate receipt (%)			
During the past year	12.9	13.1	12.7
Between 1 and 5 years ago	29.3	27.4	31.3
More than 5 years ago	57.8	59.5	56.0
Main reason for enrolling in college ^d (%)			
To complete a certificate program	11.0	12.2	9.8
To obtain an associate's degree	55.9	54.1	57.7
To transfer to a 4-year college/university	20.0	20.6	19.5
To obtain/update job skills	10.0	10.0	10.1
Other	5.6	5.3	5.8
Completed any college courses/credits (%)	43.5	44.3	42.7
<i>Among those who completed any college courses/credits, average number of courses completed</i>	3.2	3.0	3.3
First person in family to attend college (%)	37.0	38.8	35.2
Working personal computer in home (%)	65.6	67.7	63.4
Owns or has access to a working car (%)	90.3	90.3	90.3
Language other than English spoken regularly in home (%)	10.9	11.8	9.9
U.S. citizen (%)	98.8	98.5	99.1
Region in which respondent was born (%)			
North America	96.8	96.2	97.3
Asia	0.1	0.2	0.0
Latin America and the Caribbean	2.0	2.0	2.0
Other ^e	1.1	1.6	0.7

(continued)

Appendix Table A.2 (continued)

Characteristic	Full Sample	Program Group	Control Group
Region in which respondent's mother was born ^f (%)			
North America	91.8	90.2	93.4 *
Asia	0.3	0.2	0.5
Latin America and the Caribbean	5.6	6.5	4.8
Other ^e	2.3	3.1	1.4 *
Sample size	898	451	447

SOURCE: MDRC calculations using Baseline Information Form (BIF) data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Estimates are adjusted by cohort.

To analyze whether baseline characteristics jointly predicted research group status, a likelihood ratio test was performed, which yielded a p-value of 0.15. Convention suggests that this probability is large enough that these potential differences can be ignored in the analyses.

Italics indicate nonexperimental data. Significance tests are not calculated for nonexperimental data.

^aRespondents who indicated that they are Hispanic and who chose a race are included only in the Hispanic/Latino category.

^b“Other race” includes American Indians/Alaskan Natives and those who marked “other race/ethnicity” or more than one racial category.

^cBenefits include Unemployment/Dislocated Worker benefits, Supplemental Security Income (SSI) or disability, cash assistance or welfare, food stamps, and Section 8 or public housing.

^dDistributions may not add to 100 percent because categories are not mutually exclusive.

^eThis category includes the Baltics, the Commonwealth of Independent States, eastern and western Europe, North Africa, Sub-Saharan Africa, the Near East, and Oceania. The Commonwealth of Independent States includes Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russia, Tajikistan, Turkmenistan (until August 2005), Ukraine, and Uzbekistan. Countries are grouped by region according to the U.S. Bureau of the Census, International Data Base.

^fThe majority of respondents reported that both parents were born in the same region as each other.

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Appendix Table A.3

Selected Characteristics of Sample Members at Baseline:
Owens Community College

Lorain County Community College and Owens Community College Report

Characteristic	Full Sample	Program Group	Control Group
Gender (%)			
Male	28.1	28.1	28.1
Female	71.9	71.9	71.9
Age in years (%)			
18-20	38.0	38.1	37.8
21-25	32.4	32.6	32.2
26-30	19.5	18.7	20.3
31-34	10.2	10.6	9.7
Average age (years)	23.3	23.4	23.3
Marital status (%)			
Married	14.5	12.9	16.2
Unmarried	85.5	87.1	83.8
Race/ethnicity (%)			
Hispanic/Latino ^a	8.3	8.9	7.8
Black, non-Hispanic	36.4	39.3	33.4 **
White, non-Hispanic	50.7	46.9	54.6 ***
Asian or Pacific Islander	0.9	1.5	0.3 **
Other ^b	3.7	3.5	4.0
Has one child or more (%)	51.4	51.0	51.7
<i>Among sample members with children, average age of youngest child (years)</i>	3.0	3.1	2.9
Average household size, excluding roommates or boarders	3.4	3.4	3.3
Household receiving any of the following benefits ^c (%)			
Unemployment/Dislocated Worker benefits	4.3	3.9	4.7
Supplemental Security Income (SSI) or disability	10.5	11.9	9.0 *
Cash assistance or welfare (TANF)	12.8	13.9	11.8
Food stamps	31.5	33.3	29.7
None of the above	58.5	57.2	59.8
Household in public or Section 8 housing (%)	13.5	16.1	11.0 **
Household receiving any government benefits (%)	43.5	45.5	41.6

(continued)

Appendix Table A.3 (continued)

Characteristic	Full Sample	Program Group	Control Group
Financially dependent on parents (%)	23.4	23.7	23.0
Ever employed (%)	97.4	98.4	96.4 **
Highest grade completed (%)			
8th or lower	1.3	0.8	1.8
9th	3.3	3.4	3.3
10th	5.0	5.0	5.0
11th	6.6	7.0	6.2
12th	83.8	83.8	83.7
Diplomas/degrees earned ^d (%)			
High school diploma	79.3	79.3	79.3
General Educational Development (GED) certificate	19.3	18.9	19.7
Occupational/technical certificate	7.1	7.8	6.5
Date of high school graduation/GED receipt (%)			
During the past year	27.8	27.9	27.7
Between 1 and 5 years ago	32.8	32.6	33.0
More than 5 years ago	39.4	39.5	39.3
Main reason for enrolling in college ^d (%)			
To complete a certificate program	8.8	9.4	8.3
To obtain an associate's degree	44.0	42.4	45.5
To transfer to a 4-year college/university	27.5	27.6	27.4
To obtain/update job skills	14.3	14.5	14.1
Other	8.4	8.8	8.1
Completed any college courses/credits (%)	43.6	45.6	41.7
<i>Among those who completed any college courses/credits, average number of courses completed</i>	4.0	4.4	3.7
First person in family to attend college (%)	35.1	33.6	36.6
Working personal computer in home (%)	63.2	63.1	63.4
Owns or has access to a working car (%)	86.9	88.3	85.4
Language other than English spoken regularly in home (%)	6.1	8.6	3.6 ***
U.S. citizen (%)	98.9	98.7	99.0
Region in which respondent was born (%)			
North America	97.0	95.8	98.3 **
Asia	0.7	0.8	0.5
Latin America and the Caribbean	0.3	0.2	0.3
Other ^c	2.0	3.2	0.8 ***

(continued)

Appendix Table A.3 (continued)

Characteristic	Full Sample	Program Group	Control Group
Region in which respondent's mother was born ^f (%)			
North America	95.7	94.4	96.9 **
Asia	0.9	1.4	0.5
Latin America and the Caribbean	0.6	0.7	0.5
Other ^e	2.8	3.6	2.0
Sample size	1,241	622	619

SOURCE: MDRC calculations using Baseline Information Form (BIF) data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Estimates are adjusted by cohort.

To analyze whether baseline characteristics jointly predicted research group status, a likelihood ratio test was performed, which yielded a p-value of 0.02. This analysis suggests that the program and control groups systematically differ on their baseline characteristics at Owens.

Italics indicate nonexperimental data. Significance tests are not calculated for nonexperimental data.

^aRespondents who indicated that they are Hispanic and who chose a race are included only in the Hispanic/Latino category.

^b“Other race” includes American Indians/Alaskan Natives and those who marked “other race/ethnicity” or more than one racial category.

^cBenefits include Unemployment/Dislocated Worker benefits, Supplemental Security Income (SSI) or disability, cash assistance or welfare, food stamps, and Section 8 or public housing.

^dDistributions may not add to 100 percent because categories are not mutually exclusive.

^eThis category includes the Baltics, the Commonwealth of Independent States, eastern and western Europe, North Africa, Sub-Saharan Africa, the Near East, and Oceania. The Commonwealth of Independent States includes Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russia, Tajikistan, Turkmenistan (until August 2005), Ukraine, and Uzbekistan. Countries are grouped by region according to the U.S. Bureau of the Census, International Data Base.

^fThe majority of respondents reported that both parents were born in the same region as each other.

Appendix B
Survey Response Analysis

This appendix includes three sections. The first section discusses the final research sample for the study's 12-month survey at Lorain County Community College and Owens Community College and the survey response rate. The second section compares the baseline characteristics of survey respondents with the baseline characteristics of nonrespondents in order to assess whether the types of people who responded to the survey were similar to the types of people who did not respond to the survey. These analyses speak to whether the survey results are likely to generalize to the full sample. The third section compares the baseline characteristics of program group survey respondents with the baseline characteristics of control group survey respondents. These analyses assess whether program and control group equivalence is maintained among survey respondents.

Survey Sample and Survey Response Rate

The Opening Doors 12-Month Survey contained questions about a wide range of topics, including sample members' educational experiences, social relationships and supports, future outlook and identity, and health. Sample members who asked not to be contacted in the future, or who were ineligible, incarcerated, or incapacitated at the time of the survey fielding, were excluded from the final survey sample. Sample members were considered ineligible if they lived 50 miles beyond where the field interviewers were located and did not have a phone. Sample members were classified as incapacitated if they were in the military and deployed outside the United States, had moved outside the United States, or were seriously injured in an accident and unable to be interviewed during the interview period.

There were 897 sample members at Lorain County Community College and 1,241 sample members at Owens Community College, bringing the pooled sample size to 2,138 students.¹ Of these students, 21 sample members (less than 1 percent) were excluded because they were ineligible, incarcerated, or incapacitated, so that the final total sample size was 2,117 sample members. Of the 2,117 surveys fielded, 1,834 sample members (86.6 percent) responded to the survey. However, 21 sample members (1.1 percent) were dropped from the research sample because their interviews were conducted past the interview cut-off date. Many of the questions asked specifically about the respondent's life during the previous 12 months, and respondents who were interviewed more than 18 months after random assignment referred to periods that did not correspond to the time period of interest. This left a final research sample of 1,813 sample members, or 85.6 percent of the eligible sample members.

¹At the beginning of the study, one student at Lorain County Community College requested not to be contacted in the future.

Background Characteristics of Survey Respondents and Nonrespondents

Pooled Sample

In order to assess whether survey respondents systematically differ from nonrespondents, Appendix Table B.1 compares the baseline characteristics of survey respondents and nonrespondents for the pooled sample (Lorain and Owens combined). Survey respondents and nonrespondents differed significantly on a number of baseline characteristics. For example, 77.1 percent of respondents were females compared with 70.2 percent of nonrespondents. The asterisks in the right-hand column indicate that this difference is statistically significant, suggesting that respondents and nonrespondents differ with respect to their gender. Some other differences are reflected in marital status, receipt of any government benefits, first person in the family to attend college, and first person in the family to be a U.S. citizen, with respondents significantly more likely than nonrespondents to have these characteristics. Survey nonrespondents were more likely to report that a language other than English is regularly spoken in their home.

Though the table shows separate statistical tests for values in each of the mutually exclusive categories, such as age, race, highest grade completed, and student's birthplace, these variables are not independent from each other. Using "Region in which respondent was born" as an example, survey respondents and nonrespondents differed with respect to the percentage who were from North America *and* the percentage who were from other regions. However, this represents only one difference: student's birthplace. Similarly, the differences found between survey respondents and nonrespondents with respect to the region in which the student's mother was born should be thought of as one finding.

In addition to the individual tests described above, an omnibus test was conducted to assess whether there were systematic differences in observable characteristics between survey respondents and nonrespondents. In order to assess this, a logistic regression model was used to analyze whether students' baseline characteristics and their research group status could jointly predict whether they were respondents or nonrespondents. The resulting likelihood ratio test yielded a p-value of less than 0.01.² This analysis suggests that survey respondents and nonrespondents systematically differ on their baseline characteristics in the pooled sample, indicating that survey results may not generalize to study participants as a whole.

²The p-value is the probability of observing differences at least as extreme as those actually observed, assuming that there are no true differences in the respondents' and nonrespondents' *population* characteristics.

The Opening Doors Demonstration

Appendix Table B.1

Selected Characteristics of 12-Month Survey Respondents and Nonrespondents

Lorain County Community College and Owens Community College Report

Characteristic (%)	Full Sample	Respondents	Nonrespondents
Gender			
Male	23.9	22.9	29.8 ***
Female	76.1	77.1	70.2 ***
Age in years			
18-20	28.0	27.6	30.4
21-25	35.1	35.2	34.4
26-30	23.7	23.9	22.9
31-34	13.1	13.2	12.3
Marital status			
Married	20.0	20.9	14.7 **
Unmarried	80.0	79.1	85.3 **
Race/ethnicity ^a			
Hispanic/Latino	10.8	10.9	10.3
Black, non-Hispanic	30.0	29.8	31.2
White, non-Hispanic	54.0	54.4	52.0
Asian or Pacific Islander	0.6	0.6	0.6
Other ^b	4.5	4.3	6.0
Has one child or more	64.5	65.3	60.2 *
Household receiving any government benefits ^c	48.4	49.6	41.7 **
Financially dependent on parents	17.6	17.2	20.1
Ever employed	98.4	98.4	98.8
Currently employed	56.1	56.0	56.6
Highest grade completed			
8th or lower	1.4	1.3	2.1
9th	3.8	3.9	3.2
10th	5.9	6.1	4.6
11th	8.3	7.9	10.2
12th	80.6	80.7	79.7
Diplomas/degrees earned ^d			
High school diploma	75.8	75.8	75.6
General Educational Development (GED) certificate	22.8	22.7	23.3
Occupational/technical certificate	10.9	10.6	12.7

(continued)

Table B.1 (continued)

Characteristic (%)	Full Sample	Respondents	Nonrespondents
Date of high school graduation/GED certificate receipt			
During the past year	21.6	21.6	21.2
Between 1 and 5 years ago	31.4	30.5	36.7 **
More than 5 years ago	47.1	47.9	42.0 *
Main reason for enrolling in college ^d			
To complete a certificate program	9.8	9.7	10.6
To obtain an associate's degree	49.2	49.9	45.2
To transfer to a 4-year college/university	24.1	23.0	30.8 ***
To obtain/update job skills	12.5	12.6	11.9
Other	7.2	7.4	5.9
First person in family to attend college	36.0	37.1	29.2 ***
Completed any college courses/credits	43.6	43.7	43.0
Working personal computer in home	64.6	64.2	66.9
Owns or has access to a working car	88.6	88.8	87.2
Language other than English spoken regularly in home	8.1	7.4	12.5 ***
U.S. citizen	98.8	99.0	97.7 **
Region in which student was born			
North America	96.9	97.4	93.6 ***
Asia	0.4	0.4	0.7
Latin America and the Caribbean	1.0	0.9	1.8
Other ^e	1.7	1.3	3.9 ***
Region in which student's mother was born ^f			
North America	94.0	94.5	91.1 **
Asia	0.7	0.6	1.0
Latin America and the Caribbean	2.7	2.6	3.3
Other ^e	2.6	2.3	4.6 **
Sample size	2,117	1,813	304

(continued)

Table B.1 (continued)

SOURCE: MDRC calculations using Baseline Information Form (BIF) data.

NOTES: A two-tailed t-test was applied to differences between the groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Twenty-two of the 2,139 sample members (1 percent) in the Opening Doors sample were excluded from the final survey sample because they asked to not be contacted or were ineligible, incarcerated, or incapacitated at the time of the survey fielding, bringing the survey sample size to 2,117.

A separate test was conducted to determine whether baseline characteristics and research group status jointly predicted whether students responded to the survey. This likelihood ratio test yielded a p-value of less than 0.00. This analysis suggests that survey respondents and nonrespondents systematically differ on their baseline characteristics in the pooled sample.

Estimates are adjusted by college, research cohort, and research group.

Missing values are not included in individual variable distributions.

Distributions may not add to 100 percent because of rounding.

^aRespondents who indicated that they are Hispanic and who chose a race are included only in the Hispanic/Latino category.

^b“Other race” includes American Indians/Alaskan Natives and those who marked “other race/ethnicity” or more than one racial category.

^cBenefits include Unemployment/Dislocated Worker benefits, Supplemental Security Income (SSI) or disability, cash assistance or welfare, food stamps, and Section 8 or public housing.

^dDistributions may not add to 100 percent because categories are not mutually exclusive.

^eThis category includes the Baltics, the Commonwealth of Independent States, eastern and western Europe, North Africa, Sub-Saharan Africa, the Near East, and Oceania. The Commonwealth of Independent States includes Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russia, Tajikistan, Turkmenistan (until August 2005), Ukraine, and Uzbekistan. Countries are grouped by region according to the U.S. Bureau of the Census, International Data Base.

^fThe majority of respondents reported that both parents were born in the same region as each other.

Lorain County Community College

Appendix Table B.2 compares the baseline characteristics of respondents and nonrespondents from Lorain County Community College only. The table shows that there are several statistically significant differences between the two groups on their observable characteristics. An omnibus test was also conducted to assess whether there were systematic differences in observable characteristics between survey respondents and nonrespondents specifically at Lorain County Community College. To analyze whether students’ baseline characteristics and their research group status jointly predicted whether they responded to the survey, a likelihood ratio test was performed, yielding a p-value of less than 0.01. This analysis suggests that Lorain’s survey respondents and nonrespondents systematically differ on their baseline characteristics, indicating that survey results may not generalize to study participants at Lorain as a whole.

The Opening Doors Demonstration

Appendix Table B.2

Selected Characteristics of 12-Month Survey Respondents and Nonrespondents:
Lorain County Community College

Lorain County Community College and Owens Community College Report

Characteristic (%)	Full Sample	Respondents	Nonrespondents
Gender			
Male	18.7	18.1	22.9
Female	81.3	81.9	77.1
Age in years			
18-20	14.3	13.2	22.7 ***
21-25	38.8	39.7	32.4
26-30	29.7	29.8	29.0
31-34	17.2	17.3	15.9
Marital status			
Married	27.7	29.0	17.8 **
Unmarried	72.3	71.0	82.2 **
Race/ethnicity ^a			
Hispanic/Latino	14.2	14.0	15.5
Black, non-Hispanic	21.4	20.0	31.4 ***
White, non-Hispanic	58.6	60.3	46.1 ***
Asian or Pacific Islander	0.2	0.3	-0.1
Other ^b	5.6	5.4	6.9
Has one child or more	82.4	83.1	77.6
Household receiving any government benefits ^c	55.0	56.1	46.7 *
Financially dependent on parents	9.6	9.4	10.9
Ever employed	99.5	99.8	97.9 ***
Currently employed	54.5	54.8	52.2
Highest grade completed			
8th or lower	1.6	1.4	3.2
9th	4.4	4.8	1.2 *
10th	7.0	7.0	7.2
11th	11.0	10.5	15.1
12th	76.0	76.4	73.3
Diplomas/degrees earned ^d			
High school diploma	70.8	71.1	68.6
General Educational Development (GED) certificate	27.7	27.4	30.1
Occupational/technical certificate	15.9	15.3	20.3

(continued)

Table B.2 (continued)

Characteristic (%)	Full Sample	Respondents	Nonrespondents
Date of high school graduation/GED receipt			
During the past year	13.0	12.9	14.2
Between 1 and 5 years ago	29.4	28.6	35.0
More than 5 years ago	57.6	58.5	50.8
Main reason for enrolling in college ^d			
To complete a certificate program	11.1	10.7	14.5
To obtain an associate's degree	56.1	56.4	53.7
To transfer to a 4-year college/university	19.7	19.1	23.8
To obtain/update job skills	10.0	10.1	9.1
Other	5.6	6.0	3.1
First person in family to attend college	37.2	38.5	27.7 **
Completed any college courses/credits	43.3	42.9	46.4
Working personal computer in home	65.7	66.2	62.2
Owns or has access to a working car	90.5	91.3	84.7 **
Language other than English spoken regularly in home	10.8	10.1	16.0 *
U.S. citizen	98.8	99.1	96.1 **
Region in which student was born			
North America	96.7	97.5	91.0 ***
Asia	0.1	0.1	0.0
Latin America and the Caribbean	2.0	1.7	4.7 **
Other ^e	1.1	0.7	4.2 ***
Region in which student's mother was born ^f			
North America	91.8	92.4	87.5 *
Asia	0.3	0.4	0.1
Latin America and the Caribbean	5.6	5.3	7.3
Other ^e	2.3	1.9	5.1 **
Sample size	888	781	107

(continued)

Table B.2 (continued)

SOURCE: MDRC calculations using Baseline Information Form (BIF) data.

NOTES: A two-tailed t-test was applied to differences between the groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Ten of the 898 sample members (1.1 percent) in the Opening Doors sample were excluded from the final survey sample because they asked to not be contacted or were ineligible, incarcerated, or incapacitated at the time of the survey fielding, bringing the survey sample size to 888.

A separate test was conducted to determine whether baseline characteristics and research group status jointly predicted whether students responded to the survey. This likelihood ratio test yielded a p-value of less than 0.00. This analysis suggests that Lorain's survey respondents and nonrespondents systematically differ on their baseline characteristics.

Estimates are adjusted by research cohort and research group.

Missing values are not included in individual variable distributions.

Distributions may not add to 100 percent because of rounding.

^aRespondents who indicated that they are Hispanic and who chose a race are included only in the Hispanic/Latino category.

^b"Other race" includes American Indians/Alaskan Natives and those who marked "other race/ethnicity" or more than one racial category.

^cBenefits include Unemployment/Dislocated Worker benefits, Supplemental Security Income (SSI) or disability, cash assistance or welfare, food stamps, and Section 8 or public housing.

^dDistributions may not add to 100 percent because categories are not mutually exclusive.

^eThis category includes the Baltics, the Commonwealth of Independent States, eastern and western Europe, North Africa, Sub-Saharan Africa, the Near East, and Oceania. The Commonwealth of Independent States includes Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russia, Tajikistan, Turkmenistan (until August 2005), Ukraine, and Uzbekistan. Countries are grouped by region according to the U.S. Bureau of the Census, International Data Base.

^fThe majority of respondents reported that both parents were born in the same region as each other.

Owens Community College

Appendix Table B.3 compares the baseline characteristics of respondents and nonrespondents from Owens Community College only. The table shows that there are several statistically significant differences between the two groups on their observable characteristics. An omnibus test was also conducted to assess whether there were systematic differences in observable characteristics between survey respondents and nonrespondents. To analyze whether students' baseline characteristics and their research group status jointly predicted whether they responded to the survey, a likelihood ratio test was performed, yielding a p-value of 0.01. This analysis suggests that Owens's survey respondents and nonrespondents systematically differ on their baseline characteristics, indicating that survey results may not generalize to study participants at Owens as a whole.

The Opening Doors Demonstration

Appendix Table B.3

Selected Characteristics of 12-Month Survey Respondents and Nonrespondents:
Owens Community College

Lorain County Community College and Owens Community College Report

Characteristic (%)	Full Sample	Respondents	Nonrespondents
Gender			
Male	27.7	26.4	34.3 **
Female	72.3	73.6	65.7 **
Age in years			
18-20	37.9	38.1	37.1
21-25	32.5	32.1	34.6
26-30	19.4	19.6	18.6
31-34	10.2	10.3	9.7
Marital status			
Married	14.5	15.0	11.7
Unmarried	85.5	85.0	88.3
Race/ethnicity ^a			
Hispanic/Latino	8.3	8.6	6.8
Black, non-Hispanic	36.3	37.0	32.5
White, non-Hispanic	50.7	50.0	54.4
Asian or Pacific Islander	0.9	0.9	1.0
Other ^b	3.7	3.4	5.3
Has one child or more	51.6	52.3	47.6
Household receiving any government benefits ^c	43.7	44.8	37.9 *
Financially dependent on parents	23.5	22.9	26.5
Ever employed	97.6	97.4	99.0
Currently employed	57.2	56.8	59.3
Highest grade completed			
8th or lower	1.3	1.3	1.5
9th	3.4	3.2	4.2
10th	5.1	5.5	3.1
11th	6.3	6.2	7.1
12th	83.9	83.9	84.2
Diplomas/degrees earned ^d			
High school diploma	79.4	79.2	80.2
General Educational Development (GED) certificate	19.2	19.3	18.7
Occupational/technical certificate	7.2	7.1	7.6

(continued)

Table B.3 (continued)

Characteristic (%)	Full Sample	Respondents	Nonrespondents
Date of high school graduation/GED receipt			
During the past year	27.9	28.1	26.7
Between 1 and 5 years ago	32.8	31.8	37.9
More than 5 years ago	39.3	40.0	35.4
Main reason for enrolling in college ^d			
To complete a certificate program	8.9	9.0	8.3
To obtain an associate's degree	44.3	45.2	39.4
To transfer to a 4-year college/university	27.4	25.9	35.3 ***
To obtain/update job skills	14.3	14.3	13.9
Other	8.4	8.5	7.7
First person in family to attend college	35.1	36.1	30.0
Completed any college courses/credits	43.8	44.3	41.2
Working personal computer in home	63.7	62.6	69.4 *
Owns or has access to a working car	87.1	87.0	88.0
Language other than English spoken regularly in home	6.2	5.4	10.0 **
U.S. citizen	98.9	98.9	98.5
Region in which student was born			
North America	97.0	97.4	95.2
Asia	0.7	0.6	1.1
Latin America and the Caribbean	0.3	0.3	0.0
Other ^e	2.0	1.7	3.7 *
Region in which student's mother was born ^f			
North America	95.6	96.0	93.5
Asia	0.9	0.8	1.6
Latin America and the Caribbean	0.6	0.6	0.5
Other ^e	2.8	2.6	4.3
Sample size	1,229	1,032	197

(continued)

Table B.3 (continued)

SOURCE: MDRC calculations using Baseline Information Form (BIF) data.

NOTES: A two-tailed t-test was applied to differences between the groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Twelve of the 1,241 sample members (less than 1 percent) in the Opening Doors sample were excluded from the final survey sample because they were ineligible, incarcerated, or incapacitated at the time of the survey fielding, bringing the survey sample size to 1,229.

A separate test was conducted to determine whether baseline characteristics and research group status jointly predicted whether students responded to the survey. This likelihood ratio test yielded a p-value of 0.01. This analysis suggests that Owens's survey respondents and nonrespondents systematically differ on their baseline characteristics.

Estimates are adjusted by research cohort and research group.

Missing values are not included in individual variable distributions.

Distributions may not add to 100 percent because of rounding.

^aRespondents who indicated that they are Hispanic and who chose a race are included only in the Hispanic/Latino category.

^b"Other race" includes American Indians/Alaskan Natives and those who marked "other race/ethnicity" or more than one racial category.

^cBenefits include Unemployment/Dislocated Worker benefits, Supplemental Security Income (SSI) or disability, cash assistance or welfare, food stamps, and Section 8 or public housing.

^dDistributions may not add to 100 percent because categories are not mutually exclusive.

^eThis category includes the Baltics, the Commonwealth of Independent States, eastern and western Europe, North Africa, Sub-Saharan Africa, the Near East, and Oceania. The Commonwealth of Independent States includes Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russia, Tajikistan, Turkmenistan (until August 2005), Ukraine, and Uzbekistan. Countries are grouped by region according to the U.S. Bureau of the Census, International Data Base.

^fThe majority of respondents reported that both parents were born in the same region as each other.

Comparing Baseline Characteristics Across Research Groups Among Survey Respondents

Pooled Sample

Appendix Table B.4 compares the baseline characteristics of the program group survey respondents with the baseline characteristics of the control group survey respondents for the pooled sample. This analysis is done to assess whether respondents with certain baseline characteristics were more concentrated in one research group than the other. For example, the table shows that among survey respondents, program group sample members were more likely than control group sample members to report receiving any government benefits. As noted in the section above, about Table B.1, in cases of mutually exclusive categories such as age, race, and location of birthplace, separate cases of statistically significant differences should be thought of in broader terms instead of individual category differences. For example, among survey respondents, the program and control groups reported differences in race, region in which respondent was born, and region in which respondent's mother was born.

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Appendix Table B.4

Selected Characteristics of 12-Month Survey Respondents, by Research Group
Lorain County Community College and Owens Community College Report

Characteristic (%)	Full Sample	Program Group	Control Group
Gender			
Male	22.7	22.4	23.1
Female	77.3	77.6	76.9
Age in years			
18-20	27.3	27.1	27.5
21-25	35.3	33.7	37.0
26-30	24.1	24.5	23.7
31-34	13.3	14.8	11.8 *
Marital status			
Married	21.1	20.5	21.6
Unmarried	78.9	79.5	78.4
Race/ethnicity ^a			
Hispanic/Latino	10.9	11.6	10.2
Black, non-Hispanic	29.7	30.4	28.9
White, non-Hispanic	54.5	52.6	56.5 *
Asian or Pacific Islander	0.6	1.1	0.1 ***
Other ^b	4.3	4.3	4.3
Has one child or more	65.7	66.6	64.7
Household receiving any government benefits ^c	49.6	52.1	47.1 **
Financially dependent on parents	17.0	17.1	17.0
Ever employed	98.4	98.9	97.9
Currently employed	56.0	56.2	55.9
Highest grade completed (%)			
8th or lower	1.3	1.3	1.3
9th	3.9	3.8	3.9
10th	6.1	5.9	6.3
11th	8.0	7.9	8.1
12th	80.6	80.9	80.3
Diplomas/degrees earned ^d			
High school diploma	75.7	75.0	76.3
General Educational Development (GED) certificate	22.9	22.7	23.1
Occupational/technical certificate	10.7	11.3	10.1

(continued)

Table B.4 (continued)

Characteristic (%)	Full Sample	Program Group	Control Group
Date of high school graduation/GED receipt			
During the past year	21.4	21.5	21.3
Between 1 and 5 years ago	30.5	29.4	31.6
More than 5 years ago	48.1	49.1	47.1
Main reason for enrolling in college ^d			
To complete a certificate program	9.7	10.5	8.9
To obtain an associate's degree	50.1	48.4	51.8
To transfer to a 4-year college/university	22.8	22.7	22.9
To obtain/update job skills	12.6	13.2	12.0
Other	7.4	7.4	7.4
First person in family to attend college	37.1	37.0	37.1
Completed any college courses/credits	43.6	45.4	41.7
Working personal computer in home	64.1	64.4	63.8
Owns or has access to a working car	88.8	89.8	87.8
Language other than English spoken regularly in home	7.4	9.2	5.6 ***
U.S. citizen	99.0	99.0	99.0
Region in which respondent was born			
North America	97.4	96.6	98.2 **
Asia	0.4	0.6	0.2
Latin America and the Caribbean	0.9	0.8	1.0
Other ^e	1.3	2.0	0.6 ***
Region in which respondent's mother was born ^f			
North America	94.4	93.0	95.8 ***
Asia	0.6	0.8	0.5
Latin America and the Caribbean	2.7	3.1	2.2
Other ^e	2.3	3.1	1.5 **
Sample size	1,813	910	903

(continued)

Table B.4 (continued)

SOURCE: MDRC calculations using Baseline Information Form (BIF) data.

NOTES: A two-tailed t-test was applied to differences between the groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

A separate test was conducted to determine whether baseline characteristics jointly predicted research group status among survey respondents. This likelihood ratio test yielded a p-value of 0.03. This analysis suggests that program group survey respondents and control group survey respondents systematically differ on their baseline characteristics in the pooled sample.

Estimates are adjusted by college and research cohort.

Missing values are not included in individual variable distributions.

Distributions may not add to 100 percent because of rounding.

^aRespondents who indicated that they are Hispanic and who chose a race are included only in the Hispanic/Latino category.

^b“Other race” includes American Indians/Alaskan Natives and those who marked “other race/ethnicity” or more than one racial category.

^cBenefits include Unemployment/Dislocated Worker benefits, Supplemental Security Income (SSI) or disability, cash assistance or welfare, food stamps, and Section 8 or public housing.

^dDistributions may not add to 100 percent because categories are not mutually exclusive.

^eThis category includes the Baltics, the Commonwealth of Independent States, eastern and western Europe, North Africa, Sub-Saharan Africa, the Near East, and Oceania. The Commonwealth of Independent States includes Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russia, Tajikistan, Turkmenistan (until August 2005), Ukraine, and Uzbekistan. Countries are grouped by region according to the U.S. Bureau of the Census, International Data Base.

^fThe majority of respondents reported that both parents were born in the same region as each other.

In addition to the individual tests described above, an omnibus test was conducted to assess whether there were systematic differences in observable characteristics between program and control group survey respondents. To assess whether survey respondents’ baseline characteristics jointly predicted their research group status, a likelihood ratio test was performed, yielding a p-value of 0.03. This analysis suggests that program group survey respondents and control group survey respondents systematically differ on their baseline characteristics in the pooled sample. As a result, when conducting impact analyses on the pooled survey data, statistical adjustments were made for several key variables on which program and control group members differed at baseline. All such analyses yielded substantively similar results to analyses conducted without controls, so results presented do not control for any baseline characteristics.

Lorain County Community College

Appendix Table B.5 compares the baseline characteristics of program group survey respondents to control group survey respondents from Lorain County Community College only. The table shows that there are several statistically significant differences between the two groups on their observable characteristics. To assess whether survey respondents’ baseline characteristics jointly predicted their research group status specifically at Lorain County Community

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Appendix Table B.5

Selected Characteristics of 12-Month Survey Respondents, by Research Group:
Lorain County Community College

Lorain County Community College and Owens Community College Report

Characteristic (%)	Full Sample	Program Group	Control Group
Gender			
Male	18.1	17.4	18.8
Female	81.9	82.6	81.2
Age in years			
18-20	13.1	12.6	13.6
21-25	39.7	35.6	43.9 **
26-30	29.9	31.9	27.8
31-34	17.3	19.9	14.7 *
Marital status			
Married	29.0	29.3	28.7
Unmarried	71.0	70.7	71.3
Race/ethnicity ^a			
Hispanic/Latino	13.9	14.5	13.2
Black, non-Hispanic	20.0	18.2	21.9
White, non-Hispanic	60.5	60.9	60.1
Asian or Pacific Islander	0.3	0.5	0.0
Other ^b	5.3	5.9	4.7
Has one child or more	83.1	84.7	81.4
Household receiving any government benefits ^c	55.9	58.3	53.4
Financially dependent on parents	9.4	9.3	9.4
Ever employed	99.7	99.7	99.7
Currently employed	55.1	56.6	53.4
Highest grade completed			
8th or lower	1.4	2.0	0.8
9th	4.7	5.0	4.5
10th	7.0	6.8	7.3
11th	10.5	9.6	11.5
12th	76.3	76.6	76.0
Diplomas/degrees earned ^d			
High school diploma	70.9	69.1	72.8
General Educational Development (GED) certificate	27.5	28.2	26.9
Occupational/technical certificate	15.2	16.0	14.4

(continued)

Table B.5 (continued)

Characteristic (%)	Full Sample	Program Group	Control Group
Date of high school graduation/GED receipt			
During the past year	12.9	13.1	12.6
Between 1 and 5 years ago	28.6	26.4	30.9
More than 5 years ago	58.5	60.5	56.5
Main reason for enrolling in college ^d			
To complete a certificate program	10.8	12.1	9.4
To obtain an associate's degree	56.5	54.8	58.2
To transfer to a 4-year college/university	19.0	18.8	19.1
To obtain/update job skills	10.2	10.6	9.9
Other	6.0	5.8	6.3
First person in family to attend college	38.4	39.7	37.1
Completed any college courses/credits	42.7	43.6	41.8
Working personal computer in home	66.1	66.4	65.9
Owns or has access to a working car	91.3	90.9	91.6
Language other than English spoken regularly in home	10.2	11.5	8.7
U.S. citizen	99.1	99.0	99.2
Region in which respondent was born			
North America	97.4	97.0	97.9
Asia	0.1	0.3	0.0
Latin America and the Caribbean	1.7	1.5	1.9
Other ^e	0.8	1.3	0.3
Region in which respondent's mother was born ^f			
North America	92.4	90.7	94.2 *
Asia	0.4	0.3	0.5
Latin America and the Caribbean	5.3	6.0	4.5
Other ^e	1.9	3.0	0.8 **
Sample size	781	398	383

(continued)

Table B.5 (continued)

SOURCE: MDRC calculations using Baseline Information Form (BIF) data.

NOTES: A two-tailed t-test was applied to differences between the groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

A separate test was conducted to determine whether baseline characteristics jointly predicted research group status among survey respondents. This likelihood ratio test yielded a p-value of 0.19. Convention suggests that this likelihood is large enough that these potential differences between program group respondents and control group respondents can be ignored in the analyses.

Estimates are adjusted by research cohort.

Missing values are not included in individual variable distributions.

Distributions may not add to 100 percent because of rounding.

^aRespondents who indicated that they are Hispanic and who chose a race are included only in the Hispanic/Latino category.

^b“Other race” includes American Indians/Alaskan Natives and those who marked “other race/ethnicity” or more than one racial category.

^cBenefits include Unemployment/Dislocated Worker benefits, Supplemental Security Income (SSI) or disability, cash assistance or welfare, food stamps, and Section 8 or public housing.

^dDistributions may not add to 100 percent because categories are not mutually exclusive.

^eThis category includes the Baltics, the Commonwealth of Independent States, eastern and western Europe, North Africa, Sub-Saharan Africa, the Near East, and Oceania. The Commonwealth of Independent States includes Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russia, Tajikistan, Turkmenistan (until August 2005), Ukraine, and Uzbekistan. Countries are grouped by region according to the U.S. Bureau of the Census, International Data Base.

^fThe majority of respondents reported that both parents were born in the same region as each other.

College, a likelihood ratio test was performed, yielding a p-value of 0.19. Convention suggests that this likelihood is large enough that these potential differences between program group respondents and control group respondents can be ignored in the analyses.

Owens Community College

Appendix Table B.6 compares the baseline characteristics of program group survey respondents with control group survey respondents from Owens Community College only. The table shows that there are several statistically significant differences between the two groups on their observable characteristics. To assess whether survey respondents’ baseline characteristics jointly predicted their research group status specifically at Owens Community College, a likelihood ratio test was performed, yielding a p-value of 0.02. This analysis suggests that Owens’s program group survey respondents and control group survey respondents systematically differ on their baseline characteristics.

The Opening Doors Demonstration

Appendix Table B.6

Selected Characteristics of 12-Month Survey Respondents, by Research Group:
Owens Community College

Lorain County Community College and Owens Community College Report

Characteristic (%)	Full Sample	Program Group	Control Group
Gender			
Male	26.3	26.2	26.4
Female	73.7	73.8	73.6
Age in years			
18-20	38.0	38.1	37.9
21-25	32.1	32.2	31.9
26-30	19.7	18.8	20.6
31-34	10.3	10.9	9.6
Marital status			
Married	15.0	13.8	16.2
Unmarried	85.0	86.2	83.8
Race/ethnicity ^a			
Hispanic/Latino	8.6	9.4	7.9
Black, non-Hispanic	37.0	39.9	34.2 *
White, non-Hispanic	50.0	46.2	53.7 **
Asian or Pacific Islander	0.9	1.6	0.2 **
Other ^b	3.5	3.0	4.0
Has one child or more	52.4	52.9	51.9
Household receiving any government benefits ^c	44.9	47.5	42.4 *
Financially dependent on parents	22.9	23.0	22.7
Ever employed	97.4	98.2	96.5 *
Currently employed	56.8	55.8	57.7
Highest grade completed			
8th or lower	1.3	0.8	1.7
9th	3.2	3.0	3.5
10th	5.5	5.3	5.6
11th	6.1	6.7	5.6
12th	83.9	84.3	83.6
Diplomas/degrees earned ^d			
High school diploma	79.2	79.6	78.9
General Educational Development (GED) certificate	19.3	18.5	20.1
Occupational/technical certificate	7.2	7.7	6.8

(continued)

Table B.6 (continued)

Characteristic (%)	Full Sample	Program Group	Control Group
Date of high school graduation/GED receipt			
During the past year	28.0	28.0	28.0
Between 1 and 5 years ago	31.9	31.7	32.2
More than 5 years ago	40.1	40.3	39.8
Main reason for enrolling in college ^d			
To complete a certificate program	8.9	9.3	8.5
To obtain an associate's degree	45.2	43.5	46.9
To transfer to a 4-year college/university	25.8	25.7	25.9
To obtain/update job skills	14.5	15.2	13.7
Other	8.5	8.7	8.3
First person in family to attend college	36.0	34.9	37.1
Completed any college courses/credits	44.3	46.8	41.7 *
Working personal computer in home	62.5	62.9	62.2
Owns or has access to a working car	86.9	88.9	85.0 *
Language other than English spoken regularly in home	5.4	7.5	3.3 ***
U.S. citizen	98.9	99.0	98.8
Region in which respondent was born			
North America	97.4	96.3	98.4 **
Asia	0.6	0.8	0.4
Latin America and the Caribbean	0.3	0.2	0.4
Other ^e	1.7	2.7	0.8 **
Region in which respondent's mother was born ^f			
North America	96.0	94.8	97.2 *
Asia	0.8	1.2	0.4
Latin America and the Caribbean	0.6	0.8	0.4
Other ^e	2.6	3.1	2.0
Sample size	1,032	512	520

(continued)

Table B.6 (continued)

SOURCE: MDRC calculations using Baseline Information Form (BIF) data.

NOTES: A two-tailed t-test was applied to differences between the groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

A separate test was conducted to determine whether baseline characteristics jointly predicted research group status. This likelihood ratio test yielded a p-value of 0.02. This analysis suggests that Owens's program group survey respondents and control group survey respondents systematically differ on their baseline characteristics.

Estimates are adjusted by research cohort.

Missing values are not included in individual variable distributions.

Distributions may not add to 100 percent because of rounding.

^aRespondents who indicated that they are Hispanic and who chose a race are included only in the Hispanic/Latino category.

^b"Other race" includes American Indians/Alaskan Natives and those who marked "other race/ethnicity" or more than one racial category.

^cBenefits include Unemployment/Dislocated Worker benefits, Supplemental Security Income (SSI) or disability, cash assistance or welfare, food stamps, and Section 8 or public housing.

^dDistributions may not add to 100 percent because categories are not mutually exclusive.

^eThis category includes the Baltics, the Commonwealth of Independent States, eastern and western Europe, North Africa, Sub-Saharan Africa, the Near East, and Oceania. The Commonwealth of Independent States includes Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russia, Tajikistan, Turkmenistan (until August 2005), Ukraine, and Uzbekistan. Countries are grouped by region according to the U.S. Bureau of the Census, International Data Base.

^fThe majority of respondents reported that both parents were born in the same region as each other.

Conclusion

Survey responses were collected from 85.6 percent of the eligible research sample at both Lorain County Community College and Owens Community College; these response rates are remarkable for a student population that traditionally is mobile and difficult to track. The data presented in Table B.1 and the likelihood ratio tests indicate that there is evidence of differences between survey respondents and nonrespondents for the pooled sample. Thus, the selective survey response analyses indicate that the outcomes drawn from the 12-month survey may not generalize to the full research sample. Additionally, the data presented in Table B.4 and the likelihood ratio tests performed suggest that there are differences between program group survey respondents and control group survey respondents for the pooled sample. As a result of these differences, additional sensitivity analyses were conducted that adjusted for some key baseline characteristics. These analyses yielded qualitatively similar results to those presented in this report.

Appendix C

Supplementary Tables for Chapter 3

The Opening Doors Demonstration

Appendix Table C.1

**Opening Doors Counseling Sessions Among the Program Group Members, by College
Lorain County Community College and Owens Community College Report**

Outcome	Lorain Program Group	Owens Program Group
<u>First program semester</u>		
Had one or more contacts with counselor (%)	98.4	91.3
Number of contacts (%)		
0	1.6	8.7
1-2	15.1	36.5
3-5	40.8	43.2
6 or more	42.6	11.6
Average number of contacts	5.6	3.0
<u>Second program semester</u>		
Had one or more contacts with counselor (%)	85.4	61.3
Number of contacts (%)		
0	14.6	38.7
1-2	24.6	36.3
3-5	34.8	19.6
6 or more	25.9	5.3
Average number of contacts	4.1	1.7
<u>Summary outcomes^a</u>		
Had one or more contacts with counselor (%)	99.8	92.3
Number of contacts (%)		
0	0.2	7.7
1-2	2.7	21.5
3-5	10.0	33.1
6 or more	87.1	37.6
Average number of contacts	12.7	4.9
Sample size (total = 1,073)	451	622

SOURCES: MDRC calculations from Lorain County Community College and Owens Community College Opening Doors counseling data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

“Contact” includes all contact between students and counselors determined to be in person or over the telephone.

^aAfter the second program semester, 155 sample members from Lorain (34.4 percent) and 29 sample members from Owens (4.7 percent) had contact with a counselor. Summary outcomes include data through spring 2006.

The Opening Doors Demonstration

Appendix Table C.2

**Opening Doors Stipend Receipt Among the Program Group Members, by College
Lorain County Community College and Owens Community College Report**

Outcome	Lorain Program Group	Owens Program Group
<u>First program semester</u>		
Received one or more stipend payments (%)	91.8	84.7
Received full \$150	81.2	63.3
Average stipend amount received per recipient ^a (\$)	144	136
<u>Second program semester</u>		
Received one or more stipend payments (%)	68.1	54.3
Received full \$150	61.6	38.7
Average stipend amount received per recipient ^a (\$)	145	132
<u>Summary outcomes^b</u>		
Received one or more stipend payments (%)	93.1	86.5
Received full \$300	59.9	35.7
Average stipend amount received per recipient ^a (\$)	251	220
Sample size (total = 1,073)	451	622

SOURCES: MDRC calculations from Lorain County Community College and Owens Community College Opening Doors stipend data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

^aThe denominator in this outcome is stipend recipients rather than all program group members.

^bEleven sample members from Lorain (2.4 percent) and 16 sample members from Owens (2.6 percent) received stipend payments after the second program semester. Summary outcomes include data through spring 2006.

The Opening Doors Demonstration

Appendix Table C.3

Receipt of Student Services, by College

Lorain County Community College and Owens Community College Report

Outcome (%)	Lorain County Community College				Owens Community College				Difference Between Colleges
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error	
Attended 3 or more times during first year in study									
Academic advising	63.1	40.4	22.7 ***	3.5	64.8	40.0	24.8 ***	3.0	
Financial aid advising	52.1	39.4	12.8 ***	3.5	47.0	41.2	5.8 *	3.1	
Tutoring on campus	29.1	20.1	8.9 ***	3.1	38.4	35.4	3.0	3.0	
Career counseling	25.2	12.6	12.5 ***	2.8	22.8	14.3	8.6 ***	2.4	
Job placement assistance	12.1	6.2	5.9 ***	2.1	16.0	11.2	4.8 **	2.1	
Advising about transferring earned credits	12.0	12.5	-0.6	2.4	20.5	12.4	8.1 ***	2.3	†††
Sample size (total = 1,813)	398	383			512	520			

SOURCE: MDRC calculations from the Opening Doors 12-Month Survey.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

A two-tailed t-test was applied to differences of impacts between colleges. Statistical significance levels are indicated as: ††† = 1 percent; †† = 5 percent; † = 10 percent.

Estimates are adjusted by cohort.

The Opening Doors Demonstration

Appendix Table C.4

College Experiences of Sample Members, by College

Lorain County Community College and Owens Community College Report

Outcome (%)	Lorain County Community College				Owens Community College				Difference Between Colleges
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error	
Can identify a staff member or instructor for support/guidance									
With personal or family issues	70.8	53.7	17.1 ***	3.4	62.2	44.6	17.6 ***	3.1	
With education and career goals	67.2	49.8	17.4 ***	3.5	59.0	42.4	16.7 ***	3.1	
Among those who attended an Opening Doors college during first year of study									
Integration and sense of belonging at school ^a									
Low	16.0	20.6	-4.6	3.0	18.4	19.2	-0.8	2.7	
High	16.9	11.5	5.5 **	2.7	18.4	17.7	0.7	2.6	
Rated college experience good or excellent ^b	88.3	84.5	3.9	2.6	86.8	79.5	7.3 ***	2.5	
Sample size (total = 1,813)	398	383			512	520			

SOURCE: MDRC calculations from the Opening Doors 12-Month Survey.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

A two-tailed t-test was applied to differences of impacts between colleges. Statistical significance levels are indicated as: ††† = 1 percent; †† = 5 percent; † = 10 percent.

Estimates are adjusted by cohort.

^a8-item scale about sense of integration with and belonging to the school community; response categories range from 1 = “strongly disagree” to 4 = “strongly agree.” “Low” is the percentage of sample members scoring one standard deviation below the mean; “high” is the percentage of sample members scoring one standard deviation above the mean. Standard deviation is the measurement of the distribution of data about an average value. It describes the amount of variation in the data on either side of the average value. At Lorain County Community College 670 of the 781 survey respondents answered the questions that made up this scale. At Owens Community College, 850 of the 1,032 survey respondents answered these questions.

^bAt Lorain County Community College, 701 of the 781 survey respondents answered this question. At Owens Community College, 892 of the 1,032 survey respondents answered this question.

Appendix D

Description of Scales Presented in Chapters 3 and 4

Classroom and College Experiences

Integration and Sense of Belonging at School (10-item scale, Cronbach's Alpha = 0.80)

1. This is an unfriendly place. [responses were reversed in order to calculate the scale score]
2. I do not feel that I fit in or belong at this campus. [responses were reversed]
3. The instructors and staff understand who I am, where I am coming from.
4. It is difficult to make good friends with other students. [responses were reversed]
5. The other students do not understand who I am, where I am coming from. [responses were reversed]
6. This campus has the feeling of a community, where many people share the same goals and interests.
7. Many people on this campus know me by name.
8. I do not feel I am a part of campus life. [responses were reversed]
9. I know my way around this place.
10. I am proud to be a student here.

Response categories: Strongly disagree (1)
 Disagree (2)
 Agree (3)
 Strongly agree (4)

Responses were summed and averaged. Scores range from 1 to 4.

Social and Psychological Outcomes

Outlook and Identity

Optimism (6-item scale, Cronbach's Alpha = 0.72)

1. In uncertain times, I usually expect the best.
2. If something can go wrong for me, it will. [responses were reversed in order to calculate the scale score]
3. I am always optimistic about my future.

4. I hardly ever expect things to go my way. [responses were reversed]
5. I rarely count on good things happening to me. [responses were reversed]
6. Overall, I expect more good things to happen to me than bad.

Response categories: Strongly disagree (1)
 Somewhat disagree (2)
 Somewhat agree (3)
 Strongly agree (4)

Responses were summed and averaged. Scores range from 1 to 4.

Goal Orientation (3-item scale, Cronbach's Alpha = 0.65)

1. I don't think much about my long-term goals. [responses were reversed in order to calculate the scale score]
2. I have many long-term goals that I will work to achieve.
3. It is important for me to take time to plan out where I'm going in life.

Response categories: Strongly disagree (1)
 Somewhat disagree (2)
 Somewhat agree (3)
 Strongly agree (4)

Responses were summed and averaged. Scores range from 1 to 4.

Life Engagement (6-item scale, Cronbach's Alpha = 0.78)

1. There is not enough purpose in my life. [responses were reversed in order to calculate the scale score]
2. I don't care very much about the things I do. [responses were reversed]
3. To me, the things I do are all worthwhile.
4. I have lots of reasons for living.
5. Most of what I do seems trivial and unimportant to me. [responses were reversed]
6. I value my activities a lot.

Response categories: Strongly disagree (1)
 Somewhat disagree (2)
 Somewhat agree (3)
 Strongly agree (4)

Responses were summed and averaged. Scores range from 1 to 4.

Self-Esteem (4-item scale, Cronbach's Alpha = 0.69)

1. I am able to do things as well as most other people.
2. I feel that I'm a person of worth, or at least on an equal basis with others.
3. I feel that I have a number of good qualities.
4. I take a positive attitude toward myself.

Response categories: Strongly disagree (1)
 Somewhat disagree (2)
 Somewhat agree (3)
 Strongly agree (4)

Responses were summed and averaged. Scores range from 1 to 4.

Sense of Self (13-item scale, Cronbach's Alpha = 0.86)

1. Your goals in life are becoming clearer.
2. People know they can count on you to "be there" for them.
3. You have a clear sense of your beliefs and values.
4. There is at least one person who knows "the real you."
5. You have a good deal of freedom to explore things in life that interest you.
6. You feel respected by others as an adult.
7. There is at least one person with whom you can talk about anything.
8. You feel that you are important, that you "matter," to other people.
9. You have a pretty good sense of the path you want to take in life and the steps to take to get there.
10. You can envision the kind of person you'd like to become.
11. You feel your life is filled with meaning, a sense of purpose.
12. It is easy for you to make close friends.
13. People often seek your advice and support.

Response categories: Strongly disagree (1)
 Somewhat disagree (2)
 Somewhat agree (3)
 Strongly agree (4)

Responses were summed and averaged. Scores range from 1 to 4.

Social Support and Civic Engagement

General Social Support (8-item scale, Cronbach's Alpha = 0.80)

1. There are people I know will help me if I need it.
2. There is no one I feel comfortable talking about problems with. [responses were reversed in order to calculate the scale score]
3. I am with a group of people who think the same way I do about things.
4. If something went wrong, no one would help me. [responses were reversed]
5. I have a trustworthy person to turn to if I have problems.
6. I do not think that other people respect what I do. [responses were reversed]
7. There is no one who likes to do the things I do. [responses were reversed]
8. There are people who value my skills and abilities.

Response categories: Strongly disagree (1)
 Disagree (2)
 Agree (3)
 Strongly agree (4)

Responses were summed and averaged. Scores range from 1 to 4.

Friends Value Education (5-item scale, Cronbach's Alpha = 0.91)

Among your friends, how important is it to...

1. Go to college?
2. Get good grades?
3. Complete a college degree or training program?
4. Use a college degree or program certificate to get a better job?
5. Pursue advanced study after college?

Response categories: Not very (1)
 Somewhat (2)
 Quite a bit (3)
 Extremely (4)

Responses were summed and averaged. Scores range from 1 to 4.

Civic Engagement (4-item summative scale, Cronbach's Alpha = 0.54)

1. Are you registered to vote?
2. Did/do you plan to vote in the 2004 presidential election?¹
3. Since [date of random assignment], have you donated your time or money to a political campaign?
4. Since [date of random assignment], have you attended a political speech, rally, or march?

Each item has two response categories (1 = Yes and 0 = No). The four items are added together and divided by 4. Response range is 0 to 1.

Health Outcomes

Mental Health

Stress (4-item scale, Cronbach's Alpha = 0.71)

During the past 30 days, about how often did you feel...

1. That you were unable to control the important things in your life?
2. Confident about your ability to handle your personal problems? [responses were reversed in order to calculate the scale score]
3. That things were going your way? [responses were reversed]
4. That difficulties were piling up so high that you could not overcome them?

Response categories: Never (1)
 Almost never (2)
 Sometimes (3)
 Fairly often (4)
 Very often (5)

Responses were summed and averaged. Scores range from 1 to 5.

¹Some sample members were surveyed before the election and some were surveyed afterwards.

Psychological Distress (6-item summative scale, Cronbach's Alpha = 0.80)

During the past 30 days, about how often did you feel...

1. Nervous?
2. Hopeless?
3. Restless or fidgety?
4. So depressed that nothing could cheer you up?
5. That everything was an effort?
6. Worthless?

Response categories: None of the time (0)
 A little of the time (1)
 Some of the time (2)
 Most of the time (3)
 All of the time (4)

Responses were summed and averaged. Scores range from 0 to 24, with a cut-off point of 13 to determine nonspecific psychological distress.

Appendix E

Supplementary Tables for Chapter 4

The Opening Doors Demonstration

Appendix Table E.1

Transcript Outcomes, by College, First and Second Program Semesters
Lorain County Community College and Owens Community College Report

Outcome	Lorain County Community College				Owens Community College				Difference Between Colleges
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error	
<u>First program semester</u>									
Registered for any courses (%)	89.6	87.5	2.1	2.1	90.2	89.5	0.7	1.7	
Average number of credits attempted	8.8	8.8	0.0	0.3	10.5	10.3	0.3	0.3	
Regular credits	6.1	6.3	-0.3	0.3	6.3	6.2	0.0	0.3	
Developmental credits	2.8	2.5	0.3	0.2	4.1	3.9	0.2	0.2	
Average number of credits earned	5.0	5.1	0.0	0.3	5.5	5.1	0.3	0.3	
Regular credits	3.5	3.7	-0.3	0.3	3.6	3.4	0.1	0.2	
Developmental credits	1.6	1.3	0.2	0.2	1.9	1.7	0.2	0.2	
Passed all courses (%)	34.2	33.3	0.9	3.2	29.3	29.9	-0.6	2.6	
Withdrew from any courses (%)	42.8	38.7	4.0	3.3	20.7	17.1	3.6	2.2	
Term GPA (%)									
0 to 1.9	27.3	28.4	-1.2	3.0	40.5	38.5	2.0	2.8	
2.0 and higher	53.0	51.7	1.3	3.3	37.6	36.8	0.8	2.7	
No GPA ^a	19.7	19.9	-0.2	2.7	21.9	24.7	-2.9	2.4	
<u>Second program semester</u>									
Registered for any courses (%)	68.5	59.9	8.6 ***	3.2	62.9	57.1	5.8 **	2.7	
Average number of credits attempted	6.8	6.1	0.7 *	0.4	7.2	6.5	0.7 **	0.3	
Regular credits	5.3	5.0	0.3	0.3	5.4	4.9	0.5 *	0.3	
Developmental credits	1.5	1.1	0.4 ***	0.1	1.7	1.5	0.2	0.2	

(continued)

Appendix Table E.1 (continued)

Outcome	Lorain County Community College				Owens Community College				Difference Between Colleges
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error	
Average number of credits earned	3.9	3.6	0.3	0.3	4.0	3.5	0.5 *	0.3	
Regular credits	3.2	3.0	0.2	0.3	3.3	3.0	0.3	0.3	
Developmental credits	0.7	0.6	0.2 *	0.1	0.7	0.5	0.2 *	0.1	
Passed all courses (%)	27.1	23.2	3.8	2.9	22.2	21.2	1.0	2.3	
Withdrew from any courses (%)	29.7	28.6	1.1	3.0	15.6	11.6	4.0 **	1.9	
Term GPA (%)									
0 to 1.9	22.6	16.5	6.1 **	2.6	28.3	26.8	1.5	2.5	
2.0 and higher	39.5	38.5	1.0	3.2	30.2	26.5	3.8	2.5	
No GPA ^a	37.9	45.0	-7.1 **	3.3	41.4	46.7	-5.3 *	2.8	
Sample size (total = 2,139)	451	447			622	619			

SOURCES: MDRC calculations from Lorain County Community College and Owens Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

A two-tailed t-test was applied to differences of impacts between colleges. Statistical significance levels are indicated as: ††† = 1 percent; †† = 5 percent; † = 10 percent.

Estimates are adjusted by cohort.

GPA = grade point average.

Grades earned in all courses except for developmental courses are used in the calculation of term GPA.

^aThe “No GPA” category includes students who did not enroll and students who took only developmental courses, which are not included in GPA calculations.

The Opening Doors Demonstration

Appendix Table E.2

Transcript Outcomes, by College, First Through Fourth Postprogram Semesters

Lorain County Community College and Owens Community College Report

Outcome	Lorain County Community College				Owens Community College				Difference Between Colleges
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error	
<u>First postprogram semester</u>									
Registered for any courses (%)	47.4	43.0	4.5	3.3	41.0	37.9	3.1	2.8	
Average number of credits attempted	4.4	4.1	0.3	0.4	4.6	4.1	0.5	0.3	
Regular credits	3.7	3.6	0.1	0.3	3.9	3.6	0.3	0.3	
Developmental credits	0.7	0.5	0.1	0.1	0.7	0.5	0.1	0.1	
Average number of credits earned	2.6	2.4	0.2	0.3	2.8	2.8	0.0	0.3	
Regular credits	2.3	2.1	0.1	0.2	2.5	2.5	0.0	0.2	
Developmental credits	0.3	0.3	0.0	0.1	0.2	0.3	-0.1	0.1	
Term GPA (%)									
0 to 1.9	14.2	13.2	1.0	2.3	15.6	12.1	3.5 *	2.0	
2.0 and higher	28.6	26.6	1.9	3.0	23.0	24.4	-1.4	2.4	
No GPA ^a	57.2	60.2	-3.0	3.3	61.4	63.5	-2.1	2.7	
<u>Second postprogram semester</u>									
Registered for any courses (%)	39.9	34.2	5.7 *	3.2	30.6	31.0	-0.4	2.6	
Average number of credits attempted	3.7	3.2	0.5	0.3	3.2	3.3	-0.1	0.3	
Regular credits	3.3	2.9	0.5	0.3	3.0	3.1	-0.1	0.3	
Developmental credits	0.4	0.3	0.1	0.1	0.3	0.2	0.0	0.1	

(continued)

Appendix Table E.2 (continued)

Outcome	Lorain County Community College				Owens Community College				Difference Between Colleges	
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error		
Average number of credits earned	2.4	2.0	0.4	0.3	1.9	2.2	-0.3	0.2	†	
Regular credits	2.2	1.9	0.3	0.2	1.9	2.1	-0.2	0.2		
Developmental credits	0.2	0.1	0.1	0.1	0.0	0.1	-0.1 *	0.0	†	
Term GPA (%)										
0 to 1.9	9.8	9.6	0.2	2.0	14.5	10.5	4.0 **	1.9		
2.0 and higher	26.4	21.9	4.5	2.8	15.3	19.1	-3.8 *	2.1	††	
No GPA ^a	63.8	68.5	-4.6	3.2	70.2	70.5	-0.2	2.6		
<u>Third postprogram semester</u>										
Registered for any courses (%)	34.6	28.0	6.6 **	3.1	24.8	24.4	0.4	2.4		
Average number of credits attempted	3.2	2.5	0.7 **	0.3	2.6	2.4	0.2	0.3		
Regular credits	3.0	2.3	0.7 **	0.3	2.4	2.2	0.2	0.3		
Developmental credits	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.1		
Average number of credits earned	2.0	1.7	0.3	0.2	1.8	1.8	0.0	0.2		
Regular credits	1.9	1.6	0.3	0.2	1.7	1.7	0.0	0.2		
Developmental credits	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0		
Term GPA (%)										
0 to 1.9	7.8	5.4	2.4	1.7	9.2	6.6	2.6 *	1.5		
2.0 and higher	23.5	20.8	2.7	2.8	14.5	16.5	-2.0	2.0		
No GPA ^a	68.7	73.8	-5.1 *	3.0	76.3	76.9	-0.6	2.4		

(continued)

Appendix Table E.2 (continued)

Outcome	Lorain County Community College				Owens Community College				Difference Between Colleges
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error	
Fourth postprogram semester^b									
Registered for any courses (%)	29.5	24.8	4.7	3.0	20.8	21.9	-1.2	2.3	
Average number of credits attempted	2.7	2.3	0.5	0.3	2.0	2.0	0.1	0.2	
Regular credits	2.6	2.1	0.5 *	0.3	1.9	1.8	0.1	0.2	
Developmental credits	0.2	0.2	0.0	0.1	0.1	0.1	-0.1	0.0	
Sample size (total = 2,139)	451	447			622	619			

SOURCES: MDRC calculations from Lorain County Community College and Owens Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

A two-tailed t-test was applied to differences of impacts between colleges. Statistical significance levels are indicated as: ††† = 1 percent; †† = 5 percent; † = 10 percent.

Estimates are adjusted by cohort.

GPA = grade point average.

^aThe “No GPA” category includes students who did not enroll and students who took only developmental courses, which are not included in GPA calculations.

^bThe fourth postprogram semester does not include data for credits earned or term GPA.

The Opening Doors Demonstration

Appendix Table E.3

Cumulative Transcript Outcomes, by College,
First Program Semester Through Third Postprogram Semester

Lorain County Community College and Owens Community College Report

Outcome	Lorain County Community College				Owens Community College				Difference Between Colleges
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error	
Registered for any courses ^a (%)	93.8	92.6	1.2	1.7	94.1	93.2	0.8	1.4	
Average number of semesters registered ^a	3.6	3.2	0.4 **	0.2	3.0	2.9	0.1	0.1	
Average number of credits earned	17.8	16.4	1.4	1.2	17.1	16.7	0.4	1.1	
Regular credits	14.7	13.9	0.8	1.1	14.0	14.0	0.1	1.0	
Developmental credits	3.2	2.5	0.6 **	0.3	3.1	2.8	0.3	0.2	
Cumulative GPA (%)									
0 to 1.9	38.6	39.6	-1.0	3.3	50.8	48.3	2.5	2.8	
2.0 and higher	48.8	47.2	1.5	3.3	36.8	37.6	-0.8	2.7	
No GPA ^b	12.6	13.2	-0.6	2.2	12.4	14.1	-1.7	1.9	
Earned a degree/certificate (%)	1.5	1.8	-0.3	0.9	1.6	3.1	-1.5 *	0.9	
Sample size (total = 2,139)	451	447			622	619			

SOURCE: MDRC calculations from Lorain County Community College and Owens Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

A two-tailed t-test was applied to differences of impacts between colleges. Statistical significance levels are indicated as: ††† = 1 percent; †† = 5 percent; † = 10 percent.

Estimates are adjusted by cohort.

GPA = grade point average.

^aOutcomes are from the first program semester through the fourth postprogram semester, and include summer semesters.

^bThe “No GPA” category includes students who did not enroll and students who took only developmental courses, which are not included in GPA calculations.

The Opening Doors Demonstration

Appendix Table E.4

Transcript Outcomes, by Gender, First and Second Program Semesters
Lorain County Community College and Owens Community College Report

Outcome	Male Subgroup				Female Subgroup				Difference Between Subgroups
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error	
<u>First program semester</u>									
Registered for any courses (%)	88.3	88.5	-0.2	2.8	90.4	88.7	1.7	1.5	
Average number of credits attempted	10.2	10.1	0.1	0.4	9.7	9.5	0.2	0.2	
Regular credits	6.6	6.6	0.0	0.4	6.0	6.2	-0.1	0.2	
Developmental credits	3.4	3.4	0.1	0.3	3.6	3.3	0.3 *	0.2	
Average number of credits earned	4.8	5.1	-0.3	0.4	5.4	5.1	0.3	0.2	
Regular credits	3.6	3.8	-0.2	0.4	3.5	3.5	0.0	0.2	
Developmental credits	1.2	1.3	-0.1	0.2	1.9	1.6	0.3 ***	0.1	†
Passed all courses (%)	22.9	26.4	-3.4	3.8	33.9	33.0	0.8	2.3	
Withdrew from any courses (%)	29.5	23.0	6.4 *	3.7	30.3	27.1	3.2	2.2	
Term GPA (%)									
0 to 1.9	41.2	41.2	0.0	4.3	32.8	32.1	0.6	2.3	
2.0 and higher	34.5	37.1	-2.6	4.2	47.1	45.0	2.1	2.4	
No GPA ^a	24.3	21.6	2.6	3.7	20.1	22.9	-2.8	2.0	
<u>Second program semester</u>									
Registered for any courses (%)	57.5	52.0	5.5	4.3	67.8	60.3	7.5 ***	2.3	
Average number of credits attempted	6.3	6.1	0.2	0.5	7.2	6.3	0.9 ***	0.3	
Regular credits	4.9	4.8	0.0	0.5	5.5	4.9	0.6 **	0.2	
Developmental credits	1.4	1.2	0.2	0.2	1.7	1.4	0.3 **	0.1	

(continued)

Appendix Table E.4 (continued)

Outcome	Male Subgroup				Female Subgroup				Difference Between Subgroups
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error	
Average number of credits earned	3.4	3.2	0.2	0.4	4.1	3.7	0.5 *	0.2	
Regular credits	2.9	2.9	0.0	0.4	3.4	3.1	0.3	0.2	
Developmental credits	0.5	0.3	0.2 *	0.1	0.8	0.6	0.2 **	0.1	
Passed all courses (%)	16.4	16.3	0.1	3.3	26.7	23.9	2.8	2.2	
Withdrawn from any courses (%)	21.7	15.7	6.0 *	3.4	21.6	19.7	1.9	2.0	
Term GPA (%)									
0 to 1.9	23.2	22.3	0.8	3.7	26.8	22.5	4.3 **	2.1	
2.0 and higher	26.6	24.7	1.9	3.8	36.6	33.7	2.9	2.3	
No GPA ^a	50.3	53.0	-2.7	4.4	36.6	43.8	-7.2 ***	2.4	
Sample size (total = 2,139)	257	262			816	804			

SOURCES: MDRC calculations from Lorain County Community College and Owens Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

A two-tailed t-test was applied to differences of impacts between subgroups. Statistical significance levels are indicated as: ††† = 1 percent; †† = 5 percent; † = 10 percent.

Estimates are adjusted by cohort and college.

GPA = grade point average.

Grades earned in all courses except for developmental courses are used in the calculation of term GPA.

^aThe “No GPA” category includes students who did not enroll and students who took only developmental courses, which are not included in GPA calculations.

The Opening Doors Demonstration

Appendix Table E.5

Transcript Outcomes, by Gender, First Through Fourth Postprogram Semesters

Lorain County Community College and Owens Community College Report

Outcome	Male Subgroup				Female Subgroup				Difference Between Subgroups
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error	
<u>First postprogram semester</u>									
Registered for any courses (%)	33.2	33.5	-0.3	4.2	47.0	42.3	4.7 *	2.5	
Average number of credits attempted	3.5	3.6	-0.1	0.5	4.8	4.3	0.5 *	0.3	
Regular credits	3.1	3.1	0.0	0.5	4.1	3.7	0.3	0.3	
Developmental credits	0.4	0.5	-0.1	0.1	0.7	0.6	0.2 **	0.1	†
Average number of credits earned	2.0	2.4	-0.4	0.4	2.9	2.7	0.2	0.2	
Regular credits	1.9	2.2	-0.3	0.4	2.6	2.4	0.2	0.2	
Developmental credits	0.1	0.2	-0.1	0.1	0.3	0.3	0.0	0.1	
Term GPA (%)									
0 to 1.9	10.0	10.8	-0.9	2.7	16.6	13.1	3.5 *	1.8	
2.0 and higher	18.6	22.3	-3.7	3.6	27.4	26.4	1.0	2.2	
No GPA ^a	71.5	66.9	4.6	4.1	56.0	60.4	-4.4 *	2.4	†
<u>Second postprogram semester</u>									
Registered for any courses (%)	24.0	24.5	-0.5	3.8	37.8	34.9	2.9	2.4	
Average number of credits attempted	2.5	2.6	-0.1	0.4	3.7	3.5	0.3	0.3	
Regular credits	2.3	2.5	-0.2	0.4	3.4	3.2	0.2	0.2	
Developmental credits	0.2	0.1	0.1	0.1	0.3	0.3	0.0	0.1	

(continued)

Appendix Table E.5 (continued)

Outcome	Male Subgroup				Female Subgroup				Difference Between Subgroups
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error	
Average number of credits earned	1.5	1.7	-0.2	0.3	2.3	2.3	0.1	0.2	
Regular credits	1.5	1.6	-0.2	0.3	2.2	2.1	0.1	0.2	
Developmental credits	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	
Term GPA (%)									
0 to 1.9	9.9	9.0	0.9	2.6	13.3	10.5	2.8 *	1.6	
2.0 and higher	12.9	15.3	-2.4	3.1	22.2	21.9	0.3	2.0	
No GPA ^a	77.2	75.8	1.5	3.8	64.5	67.6	-3.1	2.3	
<u>Third postprogram semester</u>									
Registered for any courses (%)	17.2	20.9	-3.7	3.5	32.7	27.4	5.3 **	2.3	††
Average number of credits attempted	1.8	1.8	-0.1	0.4	3.2	2.6	0.6 ***	0.2	
Regular credits	1.6	1.8	-0.1	0.3	3.0	2.4	0.6 **	0.2	†
Developmental credits	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	
Average number of credits earned	1.2	1.4	-0.2	0.3	2.1	1.8	0.3	0.2	
Regular credits	1.2	1.3	-0.1	0.3	2.0	1.8	0.3	0.2	
Developmental credits	0.0	0.1	-0.1	0.0	0.1	0.1	0.0	0.0	
Term GPA (%)									
0 to 1.9	5.4	4.3	1.1	1.9	9.6	6.7	2.9 **	1.4	
2.0 and higher	10.2	15.6	-5.3 *	3.0	20.9	19.1	1.8	2.0	††
No GPA ^a	84.4	80.2	4.2	3.4	69.5	74.2	-4.7 **	2.2	††

(continued)

Appendix Table E.5 (continued)

Outcome	Male Subgroup				Female Subgroup				Difference Between Subgroups
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error	
Fourth postprogram semester^b									
Registered for any courses (%)	14.9	14.7	0.2	3.2	27.5	25.8	1.7	2.2	
Average number of credits attempted	1.4	1.2	0.1	0.3	2.6	2.4	0.3	0.2	
Regular credits	1.3	1.1	0.2	0.3	2.5	2.2	0.3	0.2	
Developmental credits	0.1	0.1	0.0	0.1	0.1	0.2	0.0	0.0	
Sample size (total = 2,139)	257	262			816	804			

SOURCES: MDRC calculations from Lorain County Community College and Owens Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

A two-tailed t-test was applied to differences of impacts between subgroups. Statistical significance levels are indicated as: ††† = 1 percent; †† = 5 percent; † = 10 percent.

Estimates are adjusted by cohort and college.

GPA = grade point average.

^aThe “No GPA” category includes students who did not enroll and students who took only developmental courses, which are not included in GPA calculations.

^bThe fourth postprogram semester does not include data for credits earned or term GPA.

The Opening Doors Demonstration

Appendix Table E.6

Cumulative Transcript Outcomes, by Gender,
First Program Semester Through Third Postprogram Semester

Lorain County Community College and Owens Community College Report

Outcome	Male Subgroup				Female Subgroup				Difference Between Subgroups
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error	
Registered for any courses ^a (%)	92.9	91.4	1.5	2.4	94.3	93.5	0.8	1.2	
Average number of semesters registered ^a	2.6	2.6	0.1	0.2	3.5	3.2	0.3 **	0.1	
Average number of credits earned	14.1	14.6	-0.5	1.6	18.4	17.2	1.2	0.9	
Regular credits	12.0	12.5	-0.6	1.5	15.0	14.4	0.6	0.9	
Developmental credits	2.1	2.1	0.0	0.3	3.4	2.8	0.6 ***	0.2	
Cumulative GPA (%)									
0 to 1.9	51.9	50.3	1.6	4.4	43.7	42.8	0.8	2.5	
2.0 and higher	31.7	35.3	-3.6	4.2	45.0	43.8	1.2	2.4	
No GPA ^b	16.4	14.5	1.9	3.2	11.3	13.4	-2.0	1.6	
Earned a degree/certificate (%)	0.8	2.7	-1.9 *	1.2	1.8	2.5	-0.7	0.7	
Sample size (total = 2,139)	257	262			816	804			

SOURCE: MDRC calculations from Lorain County Community College and Owens Community College transcript data.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

A two-tailed t-test was applied to differences of impacts between subgroups. Statistical significance levels are indicated as: ††† = 1 percent; †† = 5 percent; † = 10 percent.

Estimates are adjusted by cohort and college.

GPA = grade point average.

^aOutcomes are from the first program semester through the fourth postprogram semester, and include summer semesters.

^bThe “No GPA” category includes students who did not enroll and students who took only developmental courses, which are not included in GPA calculations.

The Opening Doors Demonstration

Appendix Table E.7

Enrollment at Opening Doors Institutions and Other Institutions, by College,
First Program Semester Through Fourth Postprogram Semester

Lorain County Community College and Owens Community College Report

Outcome (%)	Lorain County Community College				Owens Community College				Difference Between Colleges
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error	
<u>First program semester</u>									
Registered at any institution ^a	89.8	88.4	1.5	2.1	91.0	90.3	0.7	1.6	
At student's Opening Doors college	89.6	87.5	2.1	2.1	90.2	89.5	0.7	1.7	
At any 2-year institution ^b	0.4	0.7	-0.2	0.5	0.6	0.3	0.3	0.4	
At any 4-year institution	0.2	0.2	0.0	0.3	1.1	1.0	0.2	0.6	
<u>Second program semester</u>									
Registered at any institution ^a	70.1	61.5	8.6	3.1 ***	66.1	60.2	5.9	2.7 **	
At student's Opening Doors college	68.5	59.9	8.6	3.2 ***	62.9	57.1	5.8	2.7 **	
At any 2-year institution ^b	1.3	1.1	0.2	0.7	1.8	1.0	0.8	0.7	
At any 4-year institution	0.4	0.9	-0.4	0.5	1.9	2.4	-0.5	0.8	
<u>First postprogram semester</u>									
Registered at any institution ^a	50.3	45.4	4.9	3.3	46.8	43.4	3.4	2.8	
At student's Opening Doors college	47.4	43.0	4.5	3.3	41.0	37.9	3.1	2.8	
At any 2-year institution ^b	1.8	1.1	0.7	0.8	2.4	1.8	0.6	0.8	
At any 4-year institution	1.1	2.0	-0.9	0.8	3.5	3.9	-0.3	1.1	
<u>Second postprogram semester</u>									
Registered at any institution ^a	43.9	37.8	6.1	3.3 *	36.2	37.1	-0.9	2.7	†
At student's Opening Doors college	39.9	34.2	5.7	3.2 *	30.6	31.0	-0.4	2.6	
At any 2-year institution ^b	2.0	1.8	0.2	0.9	2.1	2.3	-0.2	0.8	
At any 4-year institution	2.0	2.5	-0.5	1.0	3.9	4.2	-0.3	1.1	

(continued)

Appendix Table E.7 (continued)

Outcome (%)	Lorain County Community College				Owens Community College				Difference Between Colleges
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error	
<u>Third postprogram semester</u>									
Registered at any institution ^a	38.1	32.2	5.9	3.2 *	32.2	31.5	0.7	2.6	
At student's Opening Doors college	34.6	28.0	6.6	3.1 **	24.8	24.4	0.4	2.4	
At any 2-year institution ^b	1.3	1.1	0.2	0.7	3.9	2.4	1.4	1.0	
At any 4-year institution	2.2	3.8	-1.6	1.1	3.9	5.3	-1.5	1.2	
<u>Fourth postprogram semester</u>									
Registered at any institution ^a	33.9	28.6	5.3	3.1 *	28.0	29.2	-1.2	2.6	
At student's Opening Doors college	29.5	24.8	4.7	3.0	20.8	21.9	-1.2	2.3	
At any 2-year institution ^b	2.0	0.9	1.1	0.8	2.6	2.9	-0.3	0.9	
At any 4-year institution	2.9	3.8	-1.0	1.2	4.8	4.5	0.3	1.2	
<u>Cumulative measures^c</u>									
Registered at any institution ^a	95.1	92.8	2.3	1.6	95.2	94.3	0.8	1.3	
At student's Opening Doors college	93.8	92.6	1.2	1.7	94.1	93.2	0.8	1.4	
At any 2-year institution ^b	5.3	3.6	1.7	1.4	7.4	6.6	0.8	1.5	
At any 4-year institution	5.1	5.8	-0.7	1.5	8.7	10.8	-2.1	1.7	
Earned a degree or certificate from any institution	1.5	2.2	-0.7	0.9	1.9	3.2	-1.3	0.9	
From student's Opening Doors college	1.5	1.8	-0.3	0.9	1.6	3.1	-1.5	0.9 *	
From any 2-year institution ^b	0.0	0.4	-0.4	0.3	0.0	0.0	0.0	0.0	
From any 4-year institution	0.0	0.2	-0.2	0.2	0.3	0.2	0.2	0.3	
Sample size (total = 2,139)	451	447			622	619			

(continued)

Appendix Table E.7 (continued)

SOURCES: MDRC calculations using data from the StudentTracker service of the National Student Clearinghouse and transcript data from Lorain County Community College and Owens Community College.

NOTES: The Clearinghouse collects data from about 3,300 colleges that enroll 92 percent of U.S. college students. Students have the right to opt out of having their information sent. Records were found in the Clearinghouse file for 95 percent of the students randomly assigned at Lorain County Community College and Owens Community College.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

A two-tailed t-test was applied to differences of impacts between colleges. Statistical significance levels are indicated as: ††† = 1 percent; †† = 5 percent; † = 10 percent.

Missing values are not included in individual variable distributions.

Distributions may not add to 100 percent because of rounding.

^aDistributions may not add to the percent registered at any institution because of co-enrollment.

^bThis category excludes Lorain County Community College and Owens Community College.

^cSummer and winter semesters are not shown as relative semesters, but they are included in cumulative measures.

^dOutcomes include data from the first program semester through the third postprogram semester.

The Opening Doors Report

Appendix Table E.8

Impacts on Sample Members' Financial Aid Exclusive of Opening Doors, by College,
First Program Semester Through Third Postprogram Semester

Lorain County Community College and Owens Community College Report

Outcome	Lorain County Community College				Owens Community College				Difference Between Colleges
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error	
First program semester									
Registered for any courses (%)	89.6	87.5	2.1	2.1	90.2	89.5	0.7	1.7	
Awarded financial assistance ^a (%)	92.5	91.3	1.2	1.8	84.9	84.3	0.6	2.0	
Federal Pell Grant	88.5	84.8	3.7	2.3	80.4	78.5	1.9	2.3	
Any other grants ^b	68.6	68.6	0.0	3.0	67.4	65.1	2.3	2.7	
Subsidized loans	18.2	20.2	-2.0	2.6	44.7	45.9	-1.2	2.8	
Unsubsidized loans	9.1	10.3	-1.2	2.0	28.3	31.5	-3.2	2.6	
Federal Work-Study ^c	3.6	2.4	1.1	1.1	N/A	N/A			
<i>Average financial assistance received per recipient (\$)</i>	<i>2,240</i>	<i>2,252</i>			<i>3,083</i>	<i>3,078</i>			
Second program semester									
Registered for any courses (%)	68.5	59.9	8.6	3.2 ***	62.9	57.1	5.8	2.7 **	
Awarded financial assistance ^a (%)	73.3	69.3	4.0	2.9	58.9	52.9	5.9	2.8 **	
Federal Pell Grant	67.0	58.4	8.6	3.2 ***	54.7	48.3	6.4	2.8 **	
Any other grants ^b	62.9	61.4	1.5	3.1	49.4	40.8	8.5	2.8 ***	†
Subsidized loans	16.4	19.0	-2.7	2.5	30.6	29.6	1.0	2.6	
Unsubsidized loans	9.5	11.7	-2.2	2.0	19.9	22.9	-3.0	2.3	
Federal Work-Study ^c	4.0	2.2	1.8	1.2	N/A	N/A			
<i>Average financial assistance received per recipient (\$)</i>	<i>2,305</i>	<i>2,319</i>			<i>3,028</i>	<i>3,030</i>			

(continued)

Appendix Table E.8 (continued)

Outcome	Lorain County Community College				Owens Community College				Difference Between Colleges	
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error		
<u>First postprogram semester</u>										
Registered for any courses (%)	47.4	43.0	4.5	3.3	41.0	37.9	3.1	2.8		
Awarded financial assistance ^a (%)	51.9	46.3	5.6	3.3 *	37.2	33.1	4.1	2.7		
Federal Pell Grant	45.4	40.7	4.7	3.3	34.6	30.0	4.5	2.7 *		
Any other grants ^b	43.7	40.2	3.5	3.3	28.5	25.5	3.0	2.5		
Subsidized loans	14.8	13.9	0.9	2.3	21.1	21.0	0.1	2.3		
Unsubsidized loans	8.4	10.1	-1.7	1.9	15.9	14.9	1.1	2.0		
Federal Work-Study ^c	2.0	1.3	0.6	0.9	N/A	N/A				
<i>Average financial assistance received per recipient (\$)</i>	<i>2,231</i>	<i>2,343</i>			<i>3,302</i>	<i>3,365</i>				
<u>Second postprogram semester</u>										
Registered for any courses (%)	39.9	34.2	5.7	3.2 *	30.6	31.0	-0.4	2.6		
Awarded financial assistance ^a (%)	41.5	36.9	4.6	3.3	28.0	28.1	-0.1	2.5		
Federal Pell Grant	37.1	31.7	5.3	3.2 *	24.9	24.2	0.7	2.4		
Any other grants ^b	34.6	31.3	3.3	3.1	22.0	22.0	0.1	2.4		
Subsidized loans	14.6	11.4	3.2	2.2	17.2	17.1	0.1	2.1		
Unsubsidized loans	10.6	8.5	2.1	2.0	12.7	13.4	-0.7	1.9		
Federal Work-Study ^c	1.3	0.9	0.4	0.7	N/A	N/A				
<i>Average financial assistance received per recipient (\$)</i>	<i>2,363</i>	<i>2,213</i>			<i>3,338</i>	<i>3,300</i>				
<u>Third postprogram semester</u>										
Registered for any courses (%)	34.6	28.0	6.6	3.1 **	24.8	24.4	0.4	2.4		

(continued)

Appendix Table E.8 (continued)

Outcome	Lorain County Community College				Owens Community College				Difference Between Colleges	
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error		
Awarded financial assistance ^a (%)	36.1	27.7	8.4	3.1 ***	22.5	22.1	0.4	2.4	††	
Federal Pell Grant	32.2	25.5	6.7	3.0 **	20.6	20.5	0.1	2.3	†	
Any other grants ^b	24.7	21.0	3.7	2.8	16.3	16.9	-0.7	2.1		
Subsidized loans	13.7	8.5	5.2	2.1 **	16.4	16.9	-0.5	2.1	†	
Unsubsidized loans	9.7	5.8	3.9	1.8 **	12.6	13.2	-0.7	1.9	†	
Federal Work-Study ^c	1.1	0.7	0.4	0.6	N/A	N/A				
<i>Average financial assistance received per recipient (\$)</i>	<i>2,401</i>	<i>2,288</i>			<i>3,856</i>	<i>4,063</i>				
<u>Summary outcomes</u>										
Registered for any courses (%)	93.4	91.7	1.6	1.8	93.7	92.9	0.8	1.4		
Awarded financial assistance ^a (%)	95.1	94.0	1.1	1.5	88.8	88.0	0.7	1.8		
Federal Pell Grant	92.5	89.9	2.5	1.9	84.7	82.7	2.0	2.1		
Any other grants ^b	80.7	80.5	0.2	2.6	76.4	74.5	1.9	2.4		
Subsidized loans	30.3	29.3	1.0	3.1	57.7	58.3	-0.6	2.8		
Unsubsidized loans	21.9	20.0	2.0	2.7	39.2	42.5	-3.2	2.8		
Federal Work-Study ^c	6.2	4.7	1.5	1.5	N/A	N/A				
<i>Average financial assistance received per recipient (\$)</i>	<i>7,124</i>	<i>6,585</i>			<i>8,368</i>	<i>8,112</i>				
Sample size (total = 2,139)	451	447			622	619				

SOURCES: MDRC calculations from Lorain County Community College and Owens Community College financial aid and transcript data.

NOTES: Distributions may not add to 100 percent because of rounding.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent, ** = 5 percent, * = 10 percent.

A two-tailed t-test was applied to differences of impacts between colleges. Statistical significance levels are indicated as: ††† = 1 percent; †† = 5 percent; † = 10 percent.

Italics indicate nonexperimental data. Significance tests are not calculated for nonexperimental data; thus, the cells for “Difference” and “Standard Error” are empty.

Estimates are adjusted by college and cohort.

^aDistributions may not add to 100 percent because categories are not mutually exclusive.

^bThis includes all grants and scholarships excluding the Pell Grant.

The Opening Doors Demonstration

Appendix Table E.9

Social, Psychological, and Health Measures of Sample Members at Baseline

Lorain County Community College and Owens Community College Report

Measure	Full Sample	Program Group	Control Group	Difference	Standard Error	Effect Size
General social support ^a	3.22	3.24	3.21	0.03	0.02	0.05
Perceived stress ^b	2.42	2.42	2.42	0.00	0.03	0.01
K6 score for psychological distress ^c	5.18	5.29	5.08	0.21	0.18	0.05
Indicator of high psychological distress ^d (%)	6.8	6.8	6.7	0.2	1.1	0.01
Health status fair or poor (%)	7.0	7.6	6.4	1.1	1.1	0.05
Body mass index (BMI) ^e	27.64	27.75	27.53	0.22	0.31	0.03
Overweight or obese (BMI ≥ 25) ^f (%)	56.6	56.3	56.9	-0.6	2.2	-0.01
Current smoker (%)	34.6	31.7	37.5	-5.7 ***	2.1	-0.12
Sample size	2,133	1,070	1,063			

SOURCE: MDRC calculations from the Opening Doors Baseline Survey.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Estimates are adjusted by cohort and college.

^a8-item scale about the presence of social support; response categories range from 1 = “strongly disagree” to 4 = “strongly agree.” Items are averaged.

^b4-item scale about feelings of social stress; response categories range from 1 = “none of the time” to 5 = “all of the time.” Items are averaged.

^c6-item scale about nonspecific psychological distress; response categories range from 0 = “none of the time” to 4 = “all of the time.” Items are summed.

^dIndicator if the K6 Screening Scale measure of psychological distress exceeds 12.

^eBMI = weight in kilograms divided by height in meters squared.

^fStandard weight-status categories associated with BMI ranges for adults: underweight < 18.5; normal weight = 18.5 to 24.9; overweight = 25.0 to 29.9; and obese = 30 or greater.

The Opening Doors Demonstration

Appendix Table E.10

Social and Psychological Outcomes

Lorain County Community College and Owens Community College Report

Outcome	Program Group	Control Group	Difference (Impact)	Standard Error	Effect Size
<u>Outlook and identity</u>					
Optimism ^a	3.02	3.04	-0.02	0.03	-0.03
Goal orientation ^b	3.55	3.54	0.01	0.02	0.03
Life engagement ^c	3.51	3.51	0.00	0.02	0.01
Self-esteem ^d	3.51	3.50	0.01	0.02	0.01
Sense of self ^e	3.53	3.55	-0.02	0.02	-0.06
<u>Social support and civic engagement</u>					
General social support ^f	3.30	3.30	0.00	0.02	0.00
Friends value education ^g	2.94	2.92	0.02	0.04	0.02
Did unpaid volunteer or community work in the past year (%)	30.4	31.0	-0.6	2.2	0.0
Civic engagement ^h	0.43	0.43	0.00	0.01	0.01
<u>Antisocial behavior</u> (%)					
Spent time in reform school or prison in past year	4.0	4.9	-0.9	1.0	0.0
Close friend spent time in reform school or prison in past year	28.3	29.2	-1.0	2.1	0.0
Sample size (total = 1,813)	910	903			

(continued)

Appendix Table E.10 (continued)

SOURCE: MDRC calculations from the Opening Doors 12-Month Survey.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Estimates are adjusted by cohort and college.

^a6-item scale about feelings of optimism; response categories range from 1 = “strongly disagree” to 4 = “strongly agree.” The six items are averaged.

^b3-item scale about feeling focused on one’s goals; response categories range from 1 = “strongly disagree” to 4 = “strongly agree.” The three items are averaged.

^c6-item scale about feelings that life is purposeful and worthwhile; response categories range from 1 = “strongly disagree” to 4 = “strongly agree.” The six items are averaged.

^d4-item scale about feelings of self-esteem; response categories range from 1 = “strongly disagree” to 4 = “strongly agree.” The four items are averaged.

^e13-item scale about feeling a strong sense of who one is, who one wants to be, and connections to others; response categories range from 1 = “strongly disagree” to 4 = “strongly agree.” The 13 items are averaged.

^f8-item scale about the presence of social support; response categories range from 1 = “strongly disagree” to 4 = “strongly agree.” The eight items are averaged.

^g5-item scale about the importance of education to friends; response categories range from 1 = “not very” to 4 = “extremely.” The five items are averaged.

^h4-item scale of activities indicative of civic engagement (registered to vote; voted in presidential election; donated time or money to a political campaign; attended a political speech, rally, or march). Each item is coded as a 0 (“no”) or 1 (“yes”), and the four items are averaged.

The Opening Doors Demonstration

Appendix Table E.11

Health Outcomes

Lorain County Community College and Owens Community College Report

Outcome	Program Group	Control Group	Difference (Impact)	Standard Error	Effect Size
Perceived stress ^a	2.20	2.17	0.02	0.04	0.03
K6 score for psychological distress ^b	5.51	5.28	0.23	0.20	0.05
Indicator of high psychological distress (%) ^c	6.7	7.1	-0.4	1.2	-0.01
Health status fair or poor (%)	17.5	15.1	2.3	1.7	0.06
Body mass index ^d (BMI)	27.70	27.37	0.32	0.33	0.05
Overweight or obese ^e (BMI ≥ 25) (%)	57.6	57.4	0.2	2.4	0.00
Current smoker (%)	36.0	38.9	-2.9	2.3	-0.06
Sample size (total = 1,813)	910	903			

SOURCE: MDRC calculations from the Opening Doors 12-Month Survey.

NOTES: Rounding may cause slight discrepancies in sums and differences.

A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Estimates are adjusted by cohort and college.

^a4-item scale about feelings of social stress; response categories range from 1 = “none of the time” to 5 = “all of the time.” Items are averaged.

^b6-item scale about nonspecific psychological distress; response categories range from 0 = “none of the time” to 4 = “all of the time.” Items are summed.

^cIndicator if the K6 Screening Scale measure of psychological distress (see note b) exceeds 12.

^dBMI = weight in kilograms divided by height in meters squared.

^eStandard weight-status categories associated with BMI ranges for adults: underweight < 18.5; normal weight = 18.5 to 24.9; overweight = 25.0 to 29.9; and obese = 30 or greater.

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About MDRC

MDRC is a nonprofit, nonpartisan social policy research organization dedicated to learning what works to improve the well-being of low-income people. Through its research and the active communication of its findings, MDRC seeks to enhance the effectiveness of social and education policies and programs.

Founded in 1974 and located in New York City and Oakland, California, MDRC is best known for mounting rigorous, large-scale, real-world tests of new and existing policies and programs. Its projects are a mix of demonstrations (field tests of promising new program approaches) and evaluations of ongoing government and community initiatives. MDRC's staff bring an unusual combination of research and organizational experience to their work, providing expertise on the latest in qualitative and quantitative methods and on program design, development, implementation, and management. MDRC seeks to learn not just whether a program is effective but also how and why the program's effects occur. In addition, it tries to place each project's findings in the broader context of related research — in order to build knowledge about what works across the social and education policy fields. MDRC's findings, lessons, and best practices are proactively shared with a broad audience in the policy and practitioner community as well as with the general public and the media.

Over the years, MDRC has brought its unique approach to an ever-growing range of policy areas and target populations. Once known primarily for evaluations of state welfare-to-work programs, today MDRC is also studying public school reforms, employment programs for ex-offenders and people with disabilities, and programs to help low-income students succeed in college. MDRC's projects are organized into five areas:

- Promoting Family Well-Being and Child Development
- Improving Public Education
- Promoting Successful Transitions to Adulthood
- Supporting Low-Wage Workers and Communities
- Overcoming Barriers to Employment

Working in almost every state, all of the nation's largest cities, and Canada and the United Kingdom, MDRC conducts its projects in partnership with national, state, and local governments, public school systems, community organizations, and numerous private philanthropies.