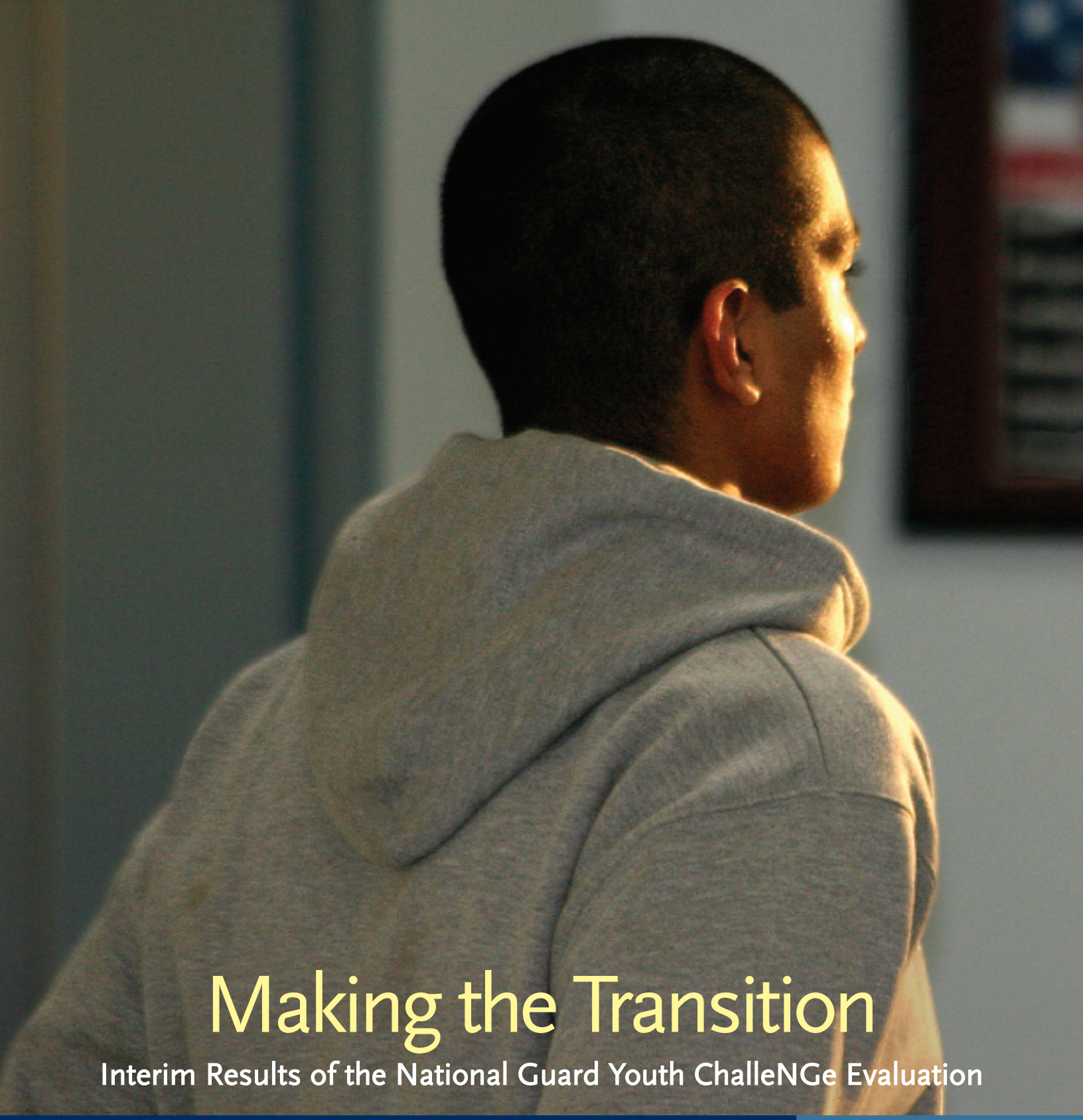

Making the Transition

Interim Results of the National Guard Youth ChalleNGe Evaluation

Megan Millenky
Dan Bloom
Colleen Dillon

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BUILDING KNOWLEDGE TO IMPROVE SOCIAL POLICY

MAY 2010

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Overview

Young people who drop out of high school face long odds of success in a labor market that increasingly values education and skills. This report presents interim results from a rigorous, ongoing evaluation of the National Guard Youth ChalleNGe Program, which aims to "reclaim the lives of at-risk youth" who have dropped out of high school. ChalleNGe is an intensive residential program that currently operates in more than half the states. More than 90,000 young people have completed the program since it was launched in the early 1990s. MDRC, a nonprofit, nonpartisan research organization, is conducting the evaluation in collaboration with the MacArthur Foundation Research Network on Transitions to Adulthood. Several private foundations and the U.S. Department of Defense are funding the evaluation.

The 17-month ChalleNGe program is divided into three phases: Pre-ChalleNGe, a demanding two-week orientation and assessment period; a 20-week Residential Phase built around eight core components designed to promote positive youth development; and a one-year Postresidential Phase featuring a structured mentoring program. During the first two phases, participants live at the program site, often on a military base. The environment is "quasi-military," though there are no requirements for military service.

The evaluation uses a random assignment design. Because there were more qualified applicants than slots, a lottery-like process was used to decide which applicants were admitted to the program. The young people who were admitted (the program group) are being compared over time with those who were not admitted (the control group); any significant differences that emerge between the groups can be attributed to ChalleNGe. About 3,000 young people entered the study in 10 ChalleNGe programs in 2005-2006.

Interim Results

A comprehensive survey was administered to about 1,200 young people in the program and control groups an average of 21 months after they entered the study. Key findings from the survey include:

- **The program group was much more likely than the control group to have obtained a high school diploma or a General Educational Development certificate (GED) and to have earned college credits.** For example, about 61 percent of the program group had earned a diploma or a GED, compared with 36 percent of the control group.
- **At the time of the survey, program group members were somewhat more likely to be engaged in productive activities.** For example, 72 percent of the program group were working, in school or training, or in the military, compared with 66 percent of the control group.
- **Young people in the two groups were equally likely to have been arrested in the year prior to the survey, but the program group was less likely to have been convicted of a crime or to have engaged in certain delinquent acts.**
- **There were few differences between groups in measures of physical or mental health.** Differences between groups that were measured at an earlier point in the study had disappeared by the 21-month point.

These interim results are impressive, but longer-term follow-up will be critical to understanding the full story of the program's effects. Results from a 36-month survey should be available by late 2010.

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Preface

High school dropout rates remain stubbornly high even as broad economic shifts continue to erode opportunities for workers without postsecondary education. Finding ways to reengage high school dropouts and help them move forward in education and the labor market is a pressing national priority. The National Guard Youth ChalleNGe program has served more than 90,000 young high school dropouts since it was created in the early 1990s. The program, which now operates in more than half the states, uses an unusual model that combines an intensive residential phase with military-style discipline, a comprehensive focus on activities thought to promote positive youth development, and a postresidential mentoring program.

The rigorous, random assignment evaluation of ChalleNGe described in this report is particularly timely, as the current administration has emphasized the importance of obtaining hard evidence on the effectiveness of federally funded programs. Early results from the evaluation, released in 2009, have already drawn attention to ChalleNGe, and Congress recently voted to increase the share of program costs that can be paid by the U.S. Department of Defense, a critical change for cash-strapped states.

The evaluation represents a true collaboration. It is funded by a group of private foundations and the Department of Defense, and is led by MDRC, working closely with scholars from the MacArthur Foundation Research Network on Transitions to Adulthood. Twelve state ChalleNGe programs agreed to participate, and 10 of them were eventually able to enroll about 3,000 young people into the study sample.

The interim results presented here are based on a survey administered to young people in the program and control groups an average of 21 months after they entered the study, when most were 18 or 19 years old. The program group members had completed the ChalleNGe program by that time. The survey found that young people who had access to ChalleNGe were much more likely than those in the control group to have obtained a high school diploma or a General Educational Development (GED) certificate. They were also somewhat more likely to be working, attending college, enlisted in the military, or engaging in other productive activities.

While encouraging, these interim results are not the final word on ChalleNGe. Another survey, administered about 36 months after young people entered the study, is nearing completion. It will be critical to see how the participants in the study have fared over a longer period, particularly because the survey was administered at a time when unemployment rates for disadvantaged youth have reached crisis levels. Those results should be available by the end of 2010.

Gordon Berlin
President

Acknowledgments

The ChalleNGe evaluation has been an immensely complex undertaking, and many people have contributed to its success to date.

Officials at the U.S. Department of Defense have provided ongoing support and assistance since the study's planning phase. In the Office of Secretary of Defense, we wish to thank former Deputy Assistant Secretary Jennifer Buck and Ernie Gonzales. In the National Guard Bureau, thanks to Anthony Kissick, Joe Padilla, and James Tinkham (now at the National Guard Youth Foundation).

Space does not permit us to list all of the state-level ChalleNGe program staff who have contributed to the study, but it would have been impossible without their dedication. We are especially indebted to the 12 program directors who made the difficult decision to open their programs to rigorous scrutiny in order to build knowledge about the program's effectiveness. Special thanks to the following current and former directors and staff: Arizona: Charles McCarty and Tom Fox; California: Nancy Baird and Suzy Elwell; Florida: Danny Brabham, James Ransom, and Tammy Russell; Georgia: Frank Williams and Janet Zimmerman; Illinois: Peter Thomas, Terry Downen, and Hattie Lenoir-Price; Michigan: Roger Allen, James Luce, and Ben Wallace; Mississippi: William Crowson and Kirri Martin; New Mexico: Arthur Longoria and Terry Luginbill; North Carolina: Edward Toler, Dale Autry, and Billy King. Texas: Peggy Baldwin, Mike Weir, and Grayling Alexander. Virginia: Thomas Early and Delphoney Nash; Wisconsin: Michael MacLaren and Michael Brown.

Pat Antosh of AOC Solutions provided guidance on the use of data from the ChalleNGe Data Management and Reporting System. Louise Hanson of Westat, Inc. has ably directed the surveys. Members of the MacArthur Research Network on Transitions to Adulthood, led by Frank Furstenberg, have been partners in the study from its inception. Special thanks to Network members Connie Flanagan, Wayne Osgood, and Jean Rhodes for their contributions to the analysis.

At MDRC, Gordon Berlin, Fred Doolittle, and Robert Ivry developed the study and Tom Brock led its early stages. John Martinez, Vanessa Martin, Donna Wharton-Fields, and David Butler served as liaisons to the programs. Joel Gordon and Galina Farberova designed the random assignment system. Jo Anna Hunter led the competition to select the survey firm, and Justin Preston and Beni Price have served as the primary liaisons to Westat. Gordon Berlin, David Butler, Fred Doolittle, Charles Michalopoulos, and John Hutchins reviewed drafts of the report. Johanna Walter provided technical advice on data management issues, and Ihno Lee and Asa Wilks assisted with programming. Margaret Bald edited the report, Stephanie Cowell prepared it for publication, and Joseph Broadus provided coordination and fact-checking assistance.

Finally, thanks to all the young people who contributed to the study by answering surveys and speaking with the research team during site visits.

The Authors

Executive Summary

Young people who drop out of high school face long odds of success in a labor market that increasingly values education and skills. Nationally, about 30 percent of high school freshmen do not graduate in four years; in the 50 largest U.S. cities, the dropout rate is closer to 50 percent.

This report presents interim results from a rigorous, ongoing evaluation of the National Guard Youth ChalleNGe Program, which aims to "reclaim the lives of at-risk youth" who have dropped out of high school and give them the skills and values to succeed as adults. ChalleNGe is an intensive residential program that currently operates in more than half the states. More than 90,000 young people have completed the program since it was launched in the early 1990s. MDRC, a nonprofit, nonpartisan research organization, is conducting the evaluation in collaboration with the MacArthur Foundation Research Network on Transitions to Adulthood. Several private foundations and the U.S. Department of Defense are funding the evaluation.

The ChalleNGe Program

The ChalleNGe approach grew out of a project by the Center for Strategic and International Studies (CSIS) in the late 1980s and early 1990s that sought to develop new approaches for out-of-school youth. Staff in the National Guard Bureau in the U.S. Department of Defense developed the specific program model. They had concluded that many existing programs for disadvantaged youth were "focused on the symptomatic behaviors without understanding and addressing the underlying causes" and "placed limited, if any, focus on the post-program phase." Thus, they designed ChalleNGe to be:

> …an intervention, rather than a remedial program. We would deal with the symptoms and underlying causes in a construct that fully embraced a "whole person" change and readied the students for the post-program environment. We would arm them with the skills and experiences necessary to succeed and we would ensure there was "a way back" to mainstream society.[1]

In 1993, Congress funded a 10-site pilot of ChalleNGe. Funding was made permanent in 1998, and today there are 32 ChalleNGe programs in 27 states and Puerto Rico.

States operate ChalleNGe programs under a Master Cooperative Agreement with the National Guard Bureau. Most states operate a single "100-bed" ChalleNGe program, serving a

[1]Donohue (2008).

total of about 200 participants per year in two class cycles. A few states operate multiple programs or larger programs. The funding level for ChalleNGe — about $14,000 per participant — has not changed since the early 1990s. The federal government currently pays 60 percent of the cost of the state programs, and states pay the remaining 40 percent.[2]

Although there is considerable room to tailor the program model to local conditions, the basic structure of the ChalleNGe program is the same in all states. The program is open to young people between the ages of 16 and 18 who have dropped out of (or been expelled from) school, are unemployed, drug-free, and not heavily involved with the justice system.[3] The program is open to both males and females, though about 80 percent of the participants are male. There are no income-based eligibility criteria.

The 17-month program is divided into three phases: the Pre-ChalleNGe Phase (two weeks), the Residential Phase (20 weeks), and the Postresidential Phase (one year). During the first two phases (totaling 22 weeks), the participants live at the program site, often on a military base.

The first phase, Pre-ChalleNGe, is a physically and psychologically demanding assessment and orientation period. Candidates are introduced to the program's rules and expectations; learn military bearing, discipline, and teamwork; and begin physical fitness training.

Candidates who complete Pre-ChalleNGe are formally enrolled in the program as "cadets" and move to the second phase. The curriculum for the 20-week Residential Phase is structured around eight core components that reflect current thinking about how to promote positive youth development: Leadership/Followership, Responsible Citizenship, Service to Community, Life-Coping Skills, Physical Fitness, Health and Hygiene, Job Skills, and Academic Excellence. Cadets spend the largest share of each day in the education component. Most programs help participants prepare for the GED exam, but a few of them can offer a high school diploma.

The program environment is described as "quasi-military": The cadets are divided into platoons and squads, live in barracks, have their hair cut short, wear uniforms, and are subject to military-style discipline. The daily schedule is highly structured with almost no "down time," and the cadets are closely supervised by staff at all times. While ChalleNGe uses

[2]The ChalleNGe legislation was amended in late 2009, raising the maximum federal share of program costs to 75 percent.

[3]In order to be eligible for ChalleNGe, candidates must be 16 to 18 years of age and enter the program before their nineteenth birthday; a high school dropout/expellee; a citizen or legal resident of the United States and a resident of the state in which the program is conducted; unemployed; not currently on parole or on probation for anything other than juvenile status offenses, not serving time or awaiting sentencing, not under indictment or charged, and not convicted of a felony or a capital offense; and drug-free.

military structure, discipline, facilities, and staff to accomplish its objectives, participation in the program is voluntary, and there are no requirements for military service during the program or afterward.

Toward the end of the Residential Phase, the cadets work with staff to arrange a post-residential "placement." Acceptable placements include employment, education, and military service.

The cadets who successfully complete the Residential Phase move into the one-year Postresidential Phase, which involves a structured mentoring program. The ChalleNGe mentoring program is unusual, in that young people nominate their own mentors during the application process. ChalleNGe initiates the mentoring relationship partway through the Residential Phase, after the staff screen and train the mentors. The staff then maintain contact with both the program's graduates and their mentors at least monthly during the Postresidential Phase to help solve problems and to monitor the youths' progress.

The ChalleNGe Evaluation

The National Guard Bureau collects extensive data on program participation and participants' outcomes. However, for some time, officials in the Department of Defense and many ChalleNGe program directors have been eager to obtain more rigorous data on what difference the program makes. The National Guard Bureau's outcome data do not address this question because there is no way to know to what extent the outcomes that program participants or graduates achieve are actually attributable to their participation in ChalleNGe; the program serves relatively motivated young people who were determined to make a change and thus might make progress without ChalleNGe. Thus, in 2004, the officials and directors began working with MDRC and the MacArthur Foundation Research Network on Transitions to Adulthood to explore the possibility of conducting a random assignment evaluation of the program. Ultimately, the Department of Defense agreed to fund 20 percent of the evaluation, and MDRC raised the remaining 80 percent from private foundations.

In 2005, 12 state ChalleNGe programs agreed to participate in the evaluation. These programs were not chosen randomly. Rather, there was an effort to identify programs that had stable staffing and that tended to receive more applicants than they could serve.

The evaluation uses a random assignment research design in which a group of young people who applied to ChalleNGe and were invited to participate (the program group) is being compared over time with a second group (the control group) who applied to ChalleNGe and were deemed acceptable, but were not invited to participate. Random assignment was

conducted only during class cycles in which there were substantially more applicants than program slots.

Because the study's participants were assigned to the program group or the control group through a random process, one can be confident that any significant differences that emerge between the groups over time — for example, differences in educational attainment or employment rates — suggest that ChalleNGe was effective. These differences are described as *impacts*.

Ultimately, random assignment was conducted for 18 class cycles across 10 programs in 2005 and 2006 (two of the sites that agreed to participate were unable to conduct random assignment because there were not substantially more qualified applicants than slots). About 3,000 young people entered the study.

A series of surveys is being administered to the program and control groups over time. The first survey, a very brief interview, was conducted about nine months after the young people entered the study — not long after participants in the program group had completed the residential phase of the program. The results from that survey, presented in an earlier report, were quite promising.

This report presents the results from the second survey, a much more extensive interview conducted an average of 21 months after participants entered the study, after the postresidential phase of the program had ended. Just under 1,200 young people were interviewed, and the response rate was 79 percent. Most respondents were either 18 or 19 years old when they were interviewed.

Results from the 21-Month Survey

- **The program group was much more likely than the control group to have earned a GED and somewhat more likely to have obtained a high school diploma; the program group was also more likely to have earned college credits.**

As shown in the top panel of Table ES.1, about 61 percent of the program group reported on the survey that they had earned a high school diploma or a GED. The corresponding figure for the control group was 36 percent. The asterisks show that the difference between groups — about 24 percentage points — was statistically significant, meaning that it is very unlikely to have arisen by chance. As expected given the program model, many more program group members had earned a GED than a high school diploma, and the program's impact was concentrated on GED receipt. Nevertheless, there was also a statistically significant increase in the percentage of sample members with a high school diploma. Program group members were

National Guard Youth ChalleNGe Program

Table ES.1

Impacts on Selected Outcomes from the 21-Month Survey

Outcome	Program Group	Control Group	Impact	P-Value[a]
Educational attainment (%)				
Earned high school diploma or GED certificate	60.5	36.4	24.1 ***	0.000
High school diploma	22.0	16.3	5.7 **	0.013
GED certificate	48.3	21.9	26.5 ***	0.000
Earned any college credit	24.8	9.6	15.1 ***	0.000
Current status				
Currently in (%)				
High school or GED prep	16.1	26.0	-9.9 ***	0.000
College courses	11.6	7.0	4.6 ***	0.009
Job training	7.2	6.5	0.7	0.648
Currently working (%)	55.0	50.1	4.9 *	0.093
Average weekly earnings ($)	209	169	39 ***	0.009
Currently enlisted in the military (%)	10.9	6.2	4.7 ***	0.004
Currently involved in any of the above activities[b] (%)	72.1	66.4	5.7 **	0.033
Has high school diploma or GED certificate and is currently involved in any of the above activities[b] (%)	45.5	23.1	22.4 ***	0.000
Crime and delinquency				
In the past 12 months				
Arrested (%)	26.3	25.4	0.9	0.719
Convicted (%)	8.9	13.2	-4.2 **	0.020
Any self-reported delinquency (%)	62.6	66.5	-3.9	0.168
Number of delinquent incidents	1.6	1.9	-0.3 **	0.014
Health (%)				
Overall health good or excellent	71.0	69.4	1.6	0.548
Obese[c]	9.8	11.3	-1.5	0.425
Serious psychological distress[d]	5.4	5.1	0.3	0.844
Sample size (total = 1,196)	736	460		

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Standard errors are presented in this report for all impacts with a p-value of 0.000. Following are the standard errors for all impacts with a p-value of 0.000 (presented in the order in which they appear on the table): 2.827, 2.773, 2.264, 2.358,and 2.734.

[b]This measure includes any employment, school or GED programs, vocational training, military activities, or any residential programs (not listed separately above).

[c]A person is defined as obese if his or her Body Mass Index (BMI) is 30 or higher.

[d]The K6 scale is the sum of the responses to six questions asking how often a respondent experienced symptoms of psychological distress. The scale ranges from 0 to 24. A score of 13 points or more on the K6 scale is considered an indication of serious psychological distress. http://www.hcp.med.harvard.edu/ncs/k6_scales.php.

more than twice as likely to report that they had earned at least one college credit, though relatively few people in either group reported that they were currently in college when interviewed (second panel).

- **Young people in the program group were more likely to be engaged in productive activities.**

The second panel of Table ES.1 describes sample members' activities at the point that they responded to the survey. The table shows that control group members were more likely to be in high school or a GED preparation program, and that program group members were more likely to be in college, working, or in the military.

Overall, about 72 percent of the program group was engaged in one of these productive activities, compared with 66 percent of the control group. A separate measure examined the percentage of each group that had completed a diploma or GED and was engaged in a productive activity, a rough indicator of progress in the transition to adulthood. The program group was about twice as likely to be in this status.

- **There was no significant difference between groups in the percentage arrested in the year prior to the survey; the program group, however, was less likely to have been convicted of a crime and to have engaged in certain types of delinquency.**

As shown in Table ES.1, relatively large percentages of both groups reported involvement with the criminal justice system or delinquent activities. For example, about one-fourth of each group reported being arrested in the previous 12 months, and almost two-thirds of each group reported that they had engaged in at least one of 13 specific delinquent activities (for the most part, the delinquent activities were relatively minor, such as fighting). Although there were no significant differences between groups in either of these measures, the program group was less likely to report a conviction and also reported fewer delinquent activities.

- **There were no systematic differences between the groups on measures of current physical or mental health; most respondents in both groups reported being in relatively good health.**

At the nine-month point, the program group reported better health and less obesity. However, as shown in Table ES.1, those differences were no longer evident at the 21-month point. There was also no difference between groups in a general measure of psychological distress. Other analyses, not shown in the table, found few differences in living arrangements or other measures of well-being.

Conclusions and Next Steps

The results presented here constitute the second chapter in the unfolding story of the ChalleNGe program's impacts. Twenty-one months after entering the study, at age 18 or 19, young people in the program group, who had access to ChalleNGe, were substantially more likely to have earned a high school diploma or a GED and were also more likely to be engaged in productive activities such as working or attending school. Those in the program group were also less likely to have been convicted of a crime and appeared to have engaged in few delinquent activities.

While quite promising, the 21-month results also suggest some reasons for caution. As might be expected, many of the differences measured between the groups at 21 months were smaller than the corresponding differences at the nine-month point. Moreover, because many members of the control group were attending high school or GED preparation classes when they were interviewed, the program group's advantage in high school completion may continue to narrow over time. Relatively few program group members were in college, so it is not yet clear how many ChalleNGe graduates will use their high school credentials to obtain further education or training that may qualify them for higher-paying jobs.

Results from the 36-month survey, scheduled for late 2010, will fill in the next chapter in this important story. The next report will also expand on analyses that are presented in preliminary form in this report — for example, analysis of the program's impacts on measures of psychosocial development, and an examination of the program's impacts for different types of youth or different ChalleNGe programs.

Introduction

Young people who drop out of high school face long odds of success in a labor market that increasingly values education and skills. Nationally, about 30 percent of high school freshmen do not graduate in four years; in the 50 largest U.S. cities, the dropout rate is closer to 50 percent.[1] Although many of those who drop out eventually graduate or, more often, earn a General Educational Development certificate (GED), a long delay may place them at a serious disadvantage in competing for jobs and going on to college.[2] Moreover, a significant number of young people become profoundly "disconnected" from both school and work. In 2007, before the current recession, only 60 percent of 16-to-24-year-old high school dropouts worked at all during the year. Almost one in 10 young male dropouts were incarcerated.[3]

This report presents interim results from an ongoing evaluation of the National Guard Youth ChalleNGe Program, which is designed to "reclaim the lives of at-risk youth" who have dropped out of high school and give them the skills and values to succeed as adults.[4] ChalleNGe is an intensive residential program that currently operates in more than half the states. About 90,000 young people have completed the program since it was launched in the early 1990s. MDRC, a nonprofit, nonpartisan research organization, is conducting the evaluation in collaboration with the MacArthur Foundation Research Network on Transitions to Adulthood. Several private foundations and the U.S. Department of Defense are funding the evaluation.[5]

Earlier Evaluations of Youth Programs and the Origins of ChalleNGe

During the last three decades, a number of rigorous evaluations have assessed programs targeting disadvantaged youth. Some studies tested programs that primarily served youth who were at risk but were still in the regular K-12 education system, while others studied "second-chance" programs for out-of-school youth, typically high school dropouts.

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[1]Swanson (2008). However, Roy and Mishel (2008) argue that graduation rates may be higher than reported in many recent studies.

[2]One national study tracked students who were in the eighth grade in 1988. About 20 percent of the students dropped out of high school at least once. Among the dropouts, 63 percent earned a high school diploma (19 percent) or a GED (44 percent) by 2000, eight years after their scheduled graduation date (Hurst, Kelly, and Princiotta, 2004).

[3]Sum, Khatiwanda, and McLaughlin (2009).

[4]Adapted from the National Guard Youth ChalleNGe Program's mission statement.

[5]The study is funded by Bill & Melinda Gates Foundation, Charles Stewart Mott Foundation, The Edna McConnell Clark Foundation, The John D. and Catherine T. MacArthur Foundation, The MCJ Foundation, The Robert Wood Johnson Foundation, and The William and Flora Hewlett Foundation.

The overall record from the studies of second-chance programs is mixed. On the one hand, several programs significantly increased the percentage of young people who earned a GED or another credential. In addition, some of the programs — particularly those that offered participants subsidized jobs — generated significant increases in employment or earnings in the short term. Others led to decreases in arrests or other measures of criminal justice involvement. On the other hand, however, none of the studies that followed participants for more than a couple of years found lasting improvements in economic outcomes. Some of the studies did not report or collect long-term data while, in other cases, early gains in earnings faded over time.[6]

In response to disappointing evaluation results in the 1980s, experts argued that youth programs should not just address problems or "deficits," but rather should promote "positive youth development." Specifically, they recommended that programs should go beyond education and training to expose young people to activities, settings, and relationships that are thought to promote healthy development. ChalleNGe, along with programs such as YouthBuild, is part of this movement.[7]

The ChalleNGe model grew out of a project by the Center for Strategic and International Studies (CSIS) in the late 1980s and early 1990s that sought to develop new approaches for out-of-school youths. The project's final report concluded that aspects of the military structure could be beneficial for disadvantaged youth.[8] Many others have made this argument, most recently in a report by the Brookings Institution, which concluded that "the United States military enjoys a well-deserved reputation for its ability to reach, teach, and develop young people who are rudderless, and for setting the pace among American institutions in advancing minorities."[9]

The CSIS report also concluded that the National Guard, with its strong community service mission, was well suited to operate a program for at-risk young people. Staff in the National Guard Bureau in the U.S. Department of Defense developed the program model for ChalleNGe. They had concluded that many existing programs for disadvantaged youth were "focused on the symptomatic behaviors without understanding and addressing the underlying causes" and "placed limited, if any, focus on the post-program phase." Thus, they designed ChalleNGe to be:

> …an intervention, rather than a remedial program. We would deal with the symptoms and underlying causes in a construct that fully embraced a "whole

[6]Bloom (2010).

[7]YouthBuild programs serve youth ages 16 to 24. Participants work toward their GED or high school diploma while learning skills by building affordable housing. For more information, see www.youthbuild.org.

[8]Cullinan, Eaves, McCurdy, and McCain (1992).

[9]Price (2007).

person" change and readied the students for the post-program environment. We would arm them with the skills and experiences necessary to succeed and we would ensure there was "a way back" to mainstream society.[10]

In 1993, Congress funded a 10-site pilot of ChalleNGe. Funding was made permanent in 1998, and today there are 32 ChalleNGe programs in 27 states and Puerto Rico.

The ChalleNGe Model

States operate ChalleNGe programs under a Master Cooperative Agreement with the National Guard Bureau. Most states operate a single "100-bed" ChalleNGe program, serving a total of about 200 participants per year in two class cycles (starting in January and July). A few states operate multiple programs or larger programs. For example, during the study period, Georgia operated two 200-bed programs, Illinois operated a single 400-bed program, and Mississippi operated a single 200-bed program.

The funding level for ChalleNGe — about $14,000 per participant — has not changed since the early 1990s (in real terms, per-participant funding has fallen by about a third during that time). Thus, the typical 100-bed program has an annual budget of about $3 million. Since 1998, the federal government has paid 60 percent of the cost of the state programs, and states have paid the remaining 40 percent.[11]

Programs typically assemble the state share of the funding from several different state and local sources. In some cases, a local school district supplies teachers. In some programs, small nonprofit organizations raise modest sums to support extra program activities, such as a graduation stipend, team uniforms, a graduation dinner dance, and a yearbook. In interviews, many program directors reported that state budget cuts in recent years had forced them to reduce enrollment targets, require staff to work uncompensated overtime, cut back on staff training, and eliminate program extras that could not be recovered from nonprofit or parent organizations.[12]

Although there is considerable room to tailor the program model to local conditions, the basic structure of the ChalleNGe program is the same in all states. The program is open to young people between the ages of 16 and 18 who have dropped out of (or been expelled from)

[10]Donohue (2008).

[11]The ChalleNGe legislation was amended in late 2009, raising the maximum federal share of program costs to 75 percent.

[12]The field research was mostly conducted in 2006, well before the current recession. States may be having more difficulty securing matching funds in the current economic environment.

school, are unemployed, drug-free, and not heavily involved with the justice system.[13] The program is open to both males and females, though about 80 percent of the participants are male. There are no income-based eligibility criteria.

As shown in Figure 1, the 17-month program is divided into three phases: the Pre-ChalleNGe Phase (two weeks), the Residential Phase (20 weeks), and the Postresidential Phase (one year). During the first two phases (totaling 22 weeks), the participants live at the program site, often on a military base.

The first phase, Pre-ChalleNGe, is a physically and psychologically demanding assessment and orientation period. Candidates are introduced to the program's rules and expectations; learn military bearing, discipline, and teamwork; and begin physical fitness training.

Candidates who complete Pre-ChalleNGe are formally enrolled in the program as "cadets" and move to the second phase. The curriculum for the 20-week Residential Phase is structured around eight core components that reflect current thinking about how to promote positive youth development: Leadership/Followership, Responsible Citizenship, Service to Community, Life-Coping Skills, Physical Fitness, Health and Hygiene, Job Skills, and Academic Excellence. Cadets spend the largest share of each day in the education component. Most programs help participants prepare for the GED exam, but a few of them can offer a high school diploma.

The structure of the residential part of the program is designed to minimize some of the potentially negative effects of placing many at-risk young people together in a program setting — sometimes referred to as "deviant peer influences" or "peer contagion."[14] The program environment is described as "quasi-military": The cadets are divided into platoons and squads, live in barracks, have their hair cut short, wear uniforms, and are subject to military-style discipline. The daily schedule is highly structured with almost no "down time," and the cadets are closely supervised by staff at all times. While ChalleNGe uses military structure, discipline, facilities, and staff to accomplish its objectives, participation in the program is voluntary, and there are no requirements for military service during the program or afterward.

Toward the end of the Residential Phase, the cadets work with staff to arrange a post-residential "placement." Acceptable placements include employment, education, and military service.

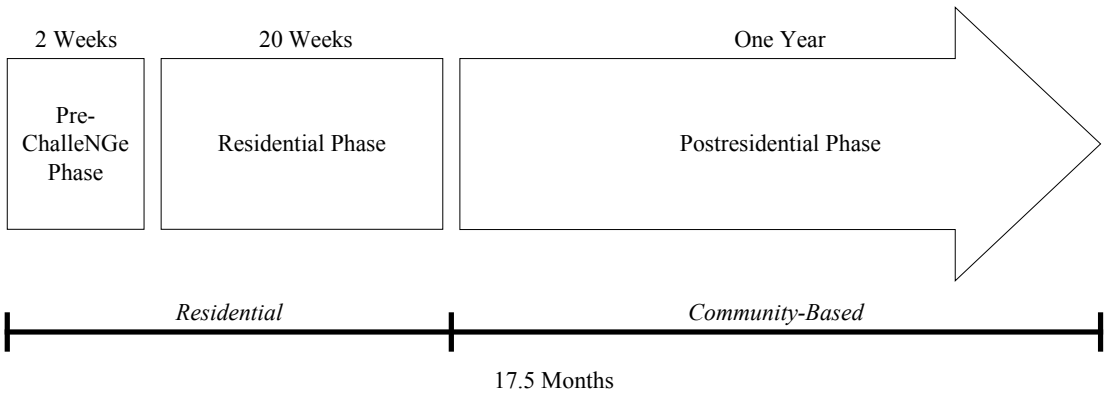
[13]In order to be eligible for ChalleNGe, candidates must be 16 to 18 years of age and enter the program before their nineteenth birthday; a high school dropout/expellee; a citizen or legal resident of the United States and a resident of the state in which the program is conducted; unemployed; not currently on parole or on probation for anything other than juvenile status offenses, not serving time or awaiting sentencing, not under indictment or charged, and not convicted of a felony or a capital offense; and drug-free.

[14]Dodge, Dishion, and Lansford (2007).

National Guard Youth ChalleNGe Program

Figure 1

ChalleNGe Program Phases



The cadets who successfully complete the Residential Phase move into the one-year Postresidential Phase, which involves a structured mentoring program. The ChalleNGe mentoring program is unusual, in that young people nominate their own mentors during the application process. ChalleNGe initiates the mentoring relationship partway through the Residential Phase, after the staff screen and train the mentors. The staff then maintain contact with both the program's graduates and their mentors at least monthly during the Postresidential Phase to help solve problems and to report on the youths' progress.

The structured Postresidential Phase distinguishes ChalleNGe from most residential programs for youth. The purpose of this phase is to help ChalleNGe participants with the difficult task of maintaining the new attitudes and behaviors they have learned in the Residential Phase when they return to their communities, families, and friends. Mentoring is a promising, low-cost strategy for providing guidance and support for young people.

The ChalleNGe Evaluation

The National Guard Bureau collects fairly extensive data on program participation and participants' outcomes. These data are used for program management and to inform an annual report to Congress. However, for some time, officials in the Department of Defense and many ChalleNGe program directors have been eager to obtain more rigorous data on what difference the program makes. The National Guard Bureau's outcome data do not address this question because there is no way to know to what extent the outcomes that program participants or

graduates achieve are attributable to their participation in ChalleNGe; the program serves relatively motivated young people who might make progress on their own, without ChalleNGe. Thus, in 2004, the officials and directors began working with MDRC and the MacArthur Foundation Research Network on Transitions to Adulthood to explore the possibility of conducting a random assignment evaluation of the program. Ultimately, the Department of Defense agreed to fund 20 percent of the evaluation, and MDRC raised the remaining 80 percent from private foundations.

In 2005, 12 state ChalleNGe programs (almost half the state programs in existence at the time) agreed to participate in the evaluation. These programs were not chosen randomly. Rather, there was an effort to identify programs that had stable staffing and that tended to receive more applicants than they could serve, a prerequisite for conducting a random assignment evaluation. Table 1 shows some basic information about each of the 12 programs that agreed to participate. In most states, the annual graduation goal for 2005 (the year the study began) was split across two class cycles.

Research Design

The ChalleNGe evaluation uses a random assignment research design in which a group of young people who applied to ChalleNGe and were invited to participate (the program group) is being compared over time with a second group (the control group) who applied to ChalleNGe and were deemed acceptable, but were not invited to participate.

Because the study's participants were assigned to one group or the other through a random process, one can be confident that any significant differences that emerge between the groups over time — for example, differences in educational attainment or employment rates — can be attributed to ChalleNGe. These differences are described as *impacts*.

Although random assignment is generally considered the most reliable way to assess the effectiveness of social programs, the design can cause ethical concerns if the creation of a control group reduces the number of people who receive program services. Thus, for the ChalleNGe evaluation, MDRC worked with the Department of Defense and the participating programs to develop a random assignment process that aimed to ensure that the evaluation would not reduce the number of young people who received ChalleNGe's services. MDRC's Institutional Review Board reviewed and approved the design.

Under this design, the participating ChalleNGe programs recruited and screened applicants more or less as usual and identified a pool of applicants who met all eligibility criteria

National Guard Youth ChalleNGe Program

Table 1

Information on Participating Programs

State	Location	First Year of Operation	Annual Graduation Target (2005)
Arizona	Queen Creek	1993	224
California	Camp San Luis Obispo	1998	212
Florida	Camp Blanding	2001	220
Georgia	Fort Gordon	2000	200
Illinois	Rantoul	1993	675
Michigan	Battle Creek	1999	200
Mississippi	Camp Shelby	1994	400
New Mexico	Roswell	2001	200
North Carolina	Salemburg	1994	200
Texas	Galveston	1999	200
Virginia	Camp Pendleton	1994	200
Wisconsin	Fort McCoy	1998	200

SOURCE: National Guard Bureau (2005).

and were considered acceptable.[15] Random assignment was conducted for a particular class cycle only if the number of acceptable applicants in the pool was at least 25 greater than the number of available program slots.[16] In other words, the programs would have had to turn away some applicants for these class cycles even without the evaluation. To facilitate the evaluation, states agreed to use a random process to decide which qualified applicants to accept (at least one state already used a random process but most did not). Also, to preserve the integrity of the design, applicants who were assigned to the control group were not allowed to reapply for later class cycles.

The original plan was to conduct random assignment for two class cycles per program and to obtain a sample size of about 2,500 youths (1,250 per group). As shown in Table 2, however, there were many class cycles in which the number of applicants was too small to allow random assignment to take place. For example, in the first class cycle of 2006, only six

[15]The Department of Defense authorized a modest amount of funding to support enhanced recruitment efforts by the programs that participated in the evaluation.

[16]Although the programs often refer to the number of available "beds," in fact, the number of available slots is often determined not by physical space but by funding for staff. Typically, the programs are funded and staffed to graduate a certain number of participants per cycle (100 in most programs). During the study period, program managers told MDRC how many applicants they needed to accept in order to meet the graduation target, assuming normal patterns of attrition. Random assignment was conducted if the number of qualified applicants was at least 25 greater than the number needed to meet the graduation goal.

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Table 2

Use of Random Assignment Across ChalleNGe Sites by Program, Year, and Class Cycle

	2005	2006		2007
Program	Cycle 2	Cycle 1	Cycle 2	Cycle 1
AZ		O	O	
CA		O	X	O
FL		X	X	
GA		X	X	
IL		X	X	
MI	X	X	X	
MS		O	X	X
NC		X	X	
NM		O	X	O
TX		X	X	
VA		O	O	
WI		O	X	O

SOURCE: MDRC random assignment database.

NOTES: "X" indicates that random assignment was conducted. "O" indicates that random assignment was attempted but not conducted because the number of applicants was too small.

of the 12 participating programs were able to conduct random assignment.[17] This occurred primarily because many programs tended to recruit only enough applicants to fill the available program slots.

Ultimately, random assignment was conducted for 18 class cycles across 10 programs. One program (Michigan) conducted random assignment three times, six programs conducted random assignment twice, and three programs conducted random assignment once. Two of the sites that agreed to participate (Arizona and Virginia) were unable to conduct random assignment because they did not have more qualified applicants than slots during the study period. The total sample size (3,074) exceeded the original goal but was more heavily weighted toward

[17]Only the Michigan program attempted to conduct random assignment in 2005. For the first cycle of 2007, only states that had previously conducted random assignment one time attempted to conduct it again. The six programs that had already conducted random assignment more than once were excluded, as were the two programs that had been unable to conduct random assignment.

the program group than originally intended (the sample includes 754 in the control group and 2,320 in the program group).[18]

Data Sources

The evaluation draws data from several sources:

- **Baseline questionnaire.** Just before they entered the study, the applicants completed a two-page questionnaire that was inserted into the ChalleNGe application packet in the study sites.[19] These data provide a snapshot of the study participants just before they were randomly assigned to the ChalleNGe program or to the control group.

- **Program participation data.** MDRC obtained information from the ChalleNGe Data Management and Reporting System (DMARS), the national Web-based program tracking system used by all ChalleNGe programs.

- **Site visits.** Members of the evaluation team conducted two-day visits to each of the 10 programs that conducted random assignment. Each visit included structured interviews with both program staff and participants. The study's earlier report provided detailed information on the program's implementation.

- **Follow-up surveys.** MDRC conducted a competition and selected Westat, Inc., to administer follow-up surveys for the study. Westat administered the first survey, a short questionnaire, by phone or in person an average of nine months after members of the program and control groups entered the study. Results from that survey were discussed in an earlier report. A more extensive survey was administered an average of 21 months after the young people entered the study; the results from that survey are presented in this report. A third survey wave, approximately 36 months after they entered the study, was completed in early 2010.

The 21-month survey, the focus of this report, was administered from July 2007 to August 2008. It targeted 1,507 sample members (916 in the program group and 592 in the control group). The sample was selected at differing rates across sites and random assignment status to

[18]Sample sizes in the individual sites are relatively small, so most of the analysis will pool results from all the sites. Technically, the pooled results do not represent the overall impact of ChalleNGe nationally because the study sites were not chosen randomly.

[19]The applicants also signed a consent form to participate in the study at this point. If they were under age 18, a parent or guardian also signed the form.

minimize the variance of estimated impacts when sites are weighted equally in the analysis. A total of 1,196 sample members (736 program group and 460 control group) completed the survey, for an overall response rate of 79 percent. On average, respondents were 18.5 years old when they responded to the survey.

A response bias analysis compared the baseline characteristics of those who completed the 21-month survey with the full research sample. A separate analysis compared the fielded survey sample with those who completed the survey. A few significant differences emerged in each of these cases. However, some differences are expected by chance, and tests predicting response or treatment status were consistent with there being chance differences as indicated by the test statistics. In addition, the respondent sample for this survey was compared with that of the earlier nine-month survey, in order to understand any comparisons of impacts between the two surveys. The two survey samples overlap sufficiently to make such comparisons. See Appendix A for more information on these analyses.

The analysis of the survey data presented in this report controls for a number of baseline characteristics of the survey sample, including age, gender, race, whether the sample member was interested in ChalleNGe because he or she wanted to join the military, whether he or she lived in a two-parent household, and highest grade completed. Weighting was used in the full sample and subgroups to adjust for site size (so each of the 10 sites contributes equally to the results), survey response rates, and program versus control ratios. Alternate weights were created for the full sample that did not incorporate response rates, but these did not produce any differences in key outcomes.

Characteristics of the Study's Participants

Table 3 presents selected information from the two-page survey that all sample members completed when they applied for ChalleNGe. These data provide a "snapshot" of the applicants as they entered the study. In general, the data indicate that ChalleNGe is serving a diverse group of high school dropouts.[20]

[20]Although ChalleNGe serves young people from 16 to 18 years old, the youngest applicants — those under age 16 and a half — were excluded from the evaluation; in other words, they were not subject to random assignment. Specifically, ChalleNGe applicants were excluded from random assignment if they would have been under 17 years old on the last day of the Residential Phase of the class cycle for which they applied. Owing to this rule, the characteristics of the participants in the study do not necessarily match those of all the young people who participated in the programs during the cycles when random assignment occurred.

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Table 3

Selected Characteristics of ChalleNGe Sample Members at the Time of Random Assignment, Full Sample

Characteristic (%)	All Sites
Gender	
Male	84.1
Female	15.9
Age in years	
16	36.8
17	52.2
18	11.0
Race/ethnicity[a]	
Hispanic	14.4
White	41.3
Black	40.1
Other	4.2
Lives with	
Both biological parents	23.3
Mother only	37.1
Father only	6.4
One parent and a stepparent	20.9
No parental figures	10.9
Other combination	1.6
Anyone in household receives public assistance	29.5
Highest grade completed	
8th grade or lower	14.2
9th grade	31.4
10th grade	38.2
11th grade	15.6
12th grade	0.6
Usual grades received in school	
Mostly As and Bs	4.0
Mostly Bs and Cs	17.2
Mostly Cs and Ds	39.5
Mostly Ds and Fs	48.7
Has/had Individual Education Plan (IEP)	30.4
Ever suspended from school	82.3
Ever arrested	31.1
Ever convicted	16.3
Sample size	3,074

(continued)

Table 3 (continued)

Characteristic (%)	All Sites
Who first suggested you should apply for ChalleNGe?	
Yourself	28.0
A relative	47.9
A school official	13.7
The justice system	6.3
Reasons for applying to ChalleNGe?	
Want a high school diploma/GED certificate	81.3
Want to go to college/get more training	44.5
Want to get a job	38.8
Want to join the military	30.7
Want to get life on track	76.9
Overall health very good or excellent	66.0
Taking any medication	20.8
Overweight (BMI 25-29)[b]	20.8
Obese (BMI 30+)[b]	11.8
Ever drink alcohol or use drugs	36.2
Sample size	3,074

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

NOTES: Calculations for this table used all available data for ChalleNGe sample members who completed a BIF.

Data for the "All Sites" column represent an average of all 3,074 sample members.

Missing values are not included in individual variable distributions.

Distributions may not add to 100 percent because of rounding.

Distributions may not add to 100 percent where categories are not mutually exclusive.

[a]Race/ethnicity categories were constructed by counting as Hispanic those who checked both Hispanic and black or white. None of these sample members are counted as multiracial and grouped in the "other" category.

[b]Body Mass Index (BMI) is a measure of body fat based on height and weight that applies to both adult men and women. BMI is calculated by dividing a person's weight by his or her height squared. A person is defined as overweight if his or her BMI is between 25 and 29.9. A person is defined as obese if his or her BMI is 30 or higher.

As shown in Table 3, most of the participants in the study were 17 years old at the point when they entered the study, and about 84 percent are male.[21] Roughly equal proportions described themselves as white (41 percent) or African-American/black (40 percent); most of the rest described themselves as Hispanic. Almost all are U.S. citizens and were born in the United States, and only about 3 percent reported having any children of their own (not shown in the table).

Only 23 percent of the sample members lived with both biological parents when they entered the study; another 21 percent lived with a parent and a stepparent. More than 40 percent lived in a single-parent household (most commonly with their mother), and about 11 percent lived with no parent or stepparent. Less than one-third of sample members reported that their household received any public assistance, indicating that the ChalleNGe population is not, in general, extremely low income (though it is possible that some sample members were not aware that their household received public assistance).

As expected, the participants in the study had not done well in school before leaving. About half reported that their grades had been mostly Ds and Fs, and more than 80 percent reported that they had been suspended from school at least once. Nearly one-third reported that they currently or previously had an Individual Education Plan, which indicates special education status.

About two-thirds of the study's participants characterized their health as very good or excellent. On the other hand, about one-third were either obese or overweight. About one-third reported that they had used drugs or alcohol, though sample members may have underreported their drug use if they believed that the baseline survey was actually part of the program's application process.

Summary of Earlier Findings

The evaluation's first report described the implementation of ChalleNGe in the study sites, discussed why young people had enrolled in the program, and presented results from a survey administered about nine months after sample members entered the study.[22]

[21]In some cycles, it was not possible to include female applicants in the random assignment pool, because the programs needed to accept all or nearly all female applicants, as female staff had already been hired to work with them. Thus, the percentage of females in the research sample is slightly lower than the percentage of females in the programs. Typically, about 20 percent of graduates nationwide are female.

[22]Bloom, Gardenhire-Crooks, and Mandsager (2009).

Program Implementation and Participation in ChalleNGe

Field research visits to all 10 of the participating programs highlighted significant variation across sites in the program environment, approaches to recruitment and discipline, and other elements of the program. In interviews, staff also highlighted a number of implementation challenges. For example, many programs reported that they were grappling with funding shortages and were dealing with the absence of experienced staff who were National Guard members deployed to Iraq or Afghanistan. Nevertheless, the basic structure of the program was quite similar from site to site, all of the programs were implementing all of the core elements of the program, and staff were generally highly committed and professional. Box 1 includes selected quotes from ChalleNGe participants who were interviewed by the research team (these quotes are drawn from the study's first report).

As shown in Table 4, data from the program's national management information system (MIS) show that about 83 percent of the young people who were assigned to the study's program group actually started the program (that is, they showed up and registered); others may have changed their mind about participating after they were invited or showed up to the program and failed a drug screen. Nearly 70 percent of the program group completed the pre-ChalleNGe phase and formally enrolled, and a little over half graduated from the residential phase. The graduation rate *among enrollees* was about 78 percent, close to the national average for this time period. According to the MIS, more than 80 percent of program graduates had contact with their mentor after completing the residential phase. On the 21-month survey, about 71 percent of respondents who were ever assigned a mentor reported that they were still in touch with their mentor, even though the formal program had ended by the time the interviews took place.[23]

In order to preserve the integrity of the random assignment research design, the impact analysis includes all program and control group members, including the program group members who did not participate in ChalleNGe or dropped out before completing the program. It also includes the small number of control group members who participated in ChalleNGe.[24]

Results from the Nine-Month Survey

The nine-month survey was quite brief, but the results were fairly striking. The program group was more than four times more likely than the control group to have a high school

[23]Owing to the program's unusual mentoring model, in which the young people nominated their own mentors during the application process, most of the sample members already knew their mentor before they enrolled in ChalleNGe. This may help to explain why such a large proportion of sample members were still in touch with their mentors well after the formal program had ended.

[24]A total of eight control group respondents (1.7 percent) enrolled in the ChalleNGe program.

Box 1

Selected Quotations from ChalleNGe Participants

Reasons for coming to ChalleNGe:

…I hated high school. Just everything about it. I just hated it. I hated the classes; I hated the people…The main reason I came here was to stop, like, all the partying scene and everything; I was getting really sick of that…I realized that there was nothing going for me there, so I needed a change.

About Pre-ChalleNGe:

It was hell. Yeah, it was rough, man. Right when they got in front of us, "Get off the bus! Get off the bus!" Yelling at us, getting our hair cut, screaming all the time. I was like "…Crap, I've got to get out of here!" But the sergeants helped me get through it…telling me, "You've got to stay! You've got to get through it. We'll get through it together."

After Pre-ChalleNGe I felt I accomplished something…I called my mom and I bursted out crying. I said, "Mom, I made it!" and Mom said, "I knew you had it in you. Don't give up!" "I won't, Mom." That made me feel great.

On discipline in ChalleNGe:

I used to get smoked a lot..before, when I wouldn't listen. I was hardheaded. I didn't listen to nobody. [The staff would say] "Get down [to do pushups]." [And I would say], "No"…but they're doing it so you could learn…I learned the hard way.

Contrasting ChalleNGe teachers to regular high school teachers:

"I'm getting my paycheck. If I teach you, I teach you. If you don't want to listen, then hey, I'm not going to try to help you." That's how it was. Now, it's like, "I can help you. I been reaching out to you. Like, just grab the string. I can help you; I'm going to pull you up. Just don't let go, because I'm going to help you make it to the top."

diploma or a GED. The program group was also significantly more likely to be working and to be in college, and less likely to have been arrested since entering the study. There were also statistically significant improvements in obesity, overall health, and self-efficacy.

Despite these very positive results, the report interpreted the findings cautiously. It pointed out that the survey had been conducted very early in the follow-up period — in fact, most program group respondents were still participating in the Postresidential Phase. Moreover,

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Table 4

Selected Graduation Data
Program Group Members, All Sites

Outcome (%)	Full Program Group	Among Those Registered	Among Those Enrolled
Registered	82.5	100.0	100.0
Enrolled	67.9	82.3	100.0
Graduated	52.7	63.9	77.7
Sample size (total = 2,320)	2,320	1,913	1,575

SOURCE: MDRC calculations using data from the ChalleNGe Data Management and Reporting System (DMARS).

the report noted that several earlier studies had cast doubt on the value of the GED in the labor market, finding that GED holders earn significantly less than high school graduates. Studies have shown that postsecondary education pays off as much for GED holders as for regular high school graduates, but that only a small minority of GED holders complete even one year of postsecondary education.[25] These data may help to explain why youth programs that substantially increased GED receipt did not lead to longer-term gains in employment or earnings.

For all of these reasons, the report noted that the results of later follow-up surveys — both the 21-month survey reported here and the 36-month survey that will be completed in 2010 — would be critical to understanding the full story of the program's impacts.

[25]Tyler (2005).

Results from the 21-Month Survey

This section uses data from the 21-month survey to examine the impacts of ChalleNGe on sample members' educational attainment and their current activities, including work, education, training, and military enlistment. As discussed earlier, two of the program's key goals are to help young people further their education and get a foothold in the labor market. Beyond education and job training, the program was designed to foster a "whole person change" and help youth find "a way back" to society. Thus, the survey also examined a wide range of measures of health, crime and delinquency, psychosocial development and civic engagement.

Education and Employment

Overall, the survey data suggest that, as a result of their participation in ChalleNGe, the program group had better educational and employment outcomes than the control group. Specifically, a greater proportion of the program group had earned a high school diploma or a General Educational Development certificate (GED), and the program group was more likely to be working full time, taking college courses, or enlisted in the military. Among the specific findings:

- **The program group was much more likely than the control group to have obtained a GED and somewhat more likely to have earned a high school diploma.**

As Table 5 shows, 61 percent of the program group reported having a high school diploma or a GED, compared with 36 percent of the control group. The difference of 24 percentage points is statistically significant, meaning that such a result would be very unlikely to have arisen from an ineffective program. The difference between groups was even larger — 36 percentage points — at the nine-month follow-up point. The impact on GED receipt remained fairly stable, but the impact on high school diploma attainment grew smaller between the two survey waves. Based on the significantly higher percentage of the control group reporting current enrollment in high school or GED preparation courses at the 21-month point (see Table 6), the gap between groups may shrink further over time.

Interestingly, as shown in Table 5, about 10 percent of the program group reported having both a high school diploma and a GED certificate. This is an unusual combination, since a GED is usually seen as an alternative to a high school diploma. Further analysis showed that the program group members who reported having both a diploma and a GED are concentrated in a

National Guard Youth ChalleNGe Program

Table 5

Impacts on Education and Training

Outcome (%)	Program Group	Control Group	Impact	P-Value[a]
Earned high school diploma or GED certificate	60.5	36.4	24.1 ***	0.000
High school diploma	22.0	16.3	5.7 **	0.013
GED certificate	48.3	21.9	26.5 ***	0.000
Both high school and GED certificate	9.7	1.7	7.9 ***	0.000
Earned any college credit	24.8	9.6	15.1 ***	0.000
Received college degree	0.3	0.0	0.3	0.280
Ever received vocational training	29.7	22.9	6.8 **	0.010
Received trade license/training certificate	19.1	15.8	3.3	0.150
Sample size (total = 1,196)	736	460		

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Standard errors are presented in this report for all impacts with a p-value of 0.000. Following are the standard errors for all impacts with a p-value of 0.000 (presented in the order in which they appear on the table): 2.827, 2.773, 1.441, and 2.264.

few ChalleNGe sites. One of those sites is an alternative high school, and in another, an arrangement with the state legislature allows young people who complete ChalleNGe and pass the GED exam to receive a state high school diploma.

Finally, Table 5 shows that the program group was more than twice as likely as the control group to have earned at least one college credit. The vast majority (80 percent) of sample members who had received college credit reported that it was outside of ChalleNGe or another residential program (not shown in the table). Therefore, the difference between the groups does not reflect only the college courses available at some of the ChalleNGe sites. There was no significant difference between groups in the percentage reporting that they had earned a vocational certificate.

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Table 6

Impacts on Current Activities and Periods of Inactivity

Outcome	Program Group	Control Group	Impact	P-Value[a]
Current status				
Currently in (%)				
High school	6.5	13.1	-6.6 ***	0.000
GED prep	10.2	14.1	-3.9 **	0.042
College courses	11.6	7.0	4.6 ***	0.009
Job training	7.2	6.5	0.7	0.648
Currently involved in any of the above activities (%)	31.6	34.7	-3.1	0.262
Currently working (%)	55.0	50.1	4.9 *	0.093
Current hourly wage under $6	2.9	4.3	-1.4	0.208
Current hourly wage between $6 and $7.99	12.9	16.1	-3.2	0.123
Current hourly wage between $8 and $9.99	22.6	18.2	4.5 *	0.064
Current hourly wage $10 or more	9.1	6.2	2.8 *	0.078
Currently working full time (%)	43.7	38.8	4.9 *	0.090
Current average weekly earnings[c] ($)	209	169	39 ***	0.009
Currently enlisted in the military (%)	10.9	6.2	4.7 ***	0.004
Active Army	4.2	1.7	2.5 **	0.018
Army National Guard	4.1	1.7	2.4 **	0.021
Other	2.2	1.4	0.7	0.374
Currently involved in any of the above activities[b] (%)	72.1	66.4	5.7 **	0.033
Has high school diploma or GED certificate and is currently involved in any of the above activities[b] (%)	45.5	23.1	22.4 ***	0.000
Periods of inactivity (%)				
Since random assignment, idle for one or more months	46.1	52.4	-6.2 **	0.036
Idle for 1-2 months	20.4	16.0	4.5 *	0.054
Idle for 3-11 months	22.8	29.5	-6.7 ***	0.010
Idle for a year or more	2.9	6.9	-4.0 ***	0.001
Sample size (total = 1,196)	736	460		

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Standard errors are presented in this report for all impacts with a p-value of 0.000. Following are the standard errors for all impacts with a p-value of 0.000 (presented in the order in which they appear on the table): 1.688, 2.734.

[b]This measure includes any employment, school or GED programs, vocational training, military activities, or any residential programs (not listed separately above).

[c]Weekly earnings averages include zeroes for respondents who were not employed.

- **The program group was significantly more likely than the control group to be working full time, earning higher wages, and enlisted in the military.**

Table 6 describes sample members' current activities at the time of the interview. As noted earlier, the survey was completed in mid 2008, before the sharp rise in the unemployment rate nationally. It shows that about half of the entire sample reported that they were currently employed, either part or full time. However, there is a statistically significant difference between the program group and the control group in both overall employment and full-time employment.[1] Again, these differences are somewhat smaller than at the nine-month point.

Among those currently working for pay, the program group was earning significantly higher wages. As the salary categories in the middle of Table 6 illustrate, a higher percentage of the control group was earning close to the minimum wage, from $6 to $8 an hour, in their current job.[2] Meanwhile, the program group was more likely to be earning more than $8 per hour. Further reinforcing these differences in employment and wages, average weekly earnings at the time of the survey were $209 for the program group and $169 for the control group. Weekly earnings take into account the employment rates, total work hours, and hourly wages for both groups.[3] With a larger percentage of program group members working full time and a larger percentage earning somewhat higher hourly wages, the average difference of nearly $40 per week is consistent with the other employment outcomes.

In view of the National Guard sponsorship and quasi-military environment of ChalleNGe, it is not surprising that those who participated in the program were nearly twice as likely to be enlisted in the military at the time of the survey (10.9 percent versus 6.2 percent). The majority of enlisted sample members were either in the active Army or Army National Guard. However, it is worth noting that more than 30 percent of the research sample reported at baseline that they were interested in ChalleNGe in part because they wanted to join the military (see Table 3). In other words, an interest in possible military enlistment preceded any

[1]Full-time employment is defined here as 30 hours or more per week.

[2]The federal minimum wage during the time of the interviews was primarily $5.85/hour; it rose to $6.55/hour during the last month of interviews. For those receiving wages under $6/hour, the jobs appeared to be employment that includes tips, such as waiting tables, and has significantly lower minimum wages. If respondents were working in two jobs, the hourly wage data refer to the job in which they worked the most hours per week.

[3]This average weekly earnings calculation includes all reported current jobs by the sample member and includes earnings of zero dollars for those not currently working. Less than one percent of the entire sample reported weekly earnings of more than $1,000 and the majority of those working reported weekly earnings between $120 and $600. An analysis of weekly earnings was conducted, removing the questionably high reported earnings, and results were similar to those reported in Table 6.

active engagement with ChalleNGe for about a third of the sample. In addition, it is possible that military participation is underreported in the survey. The survey firm reported difficulty in completing interviews with sample members in the military, particularly those who were deployed. To address this, future reports on ChalleNGe will likely include analysis of additional data sources to further understand the military enlistment patterns and performance of this sample.

- **The control group was more likely to be in high school or a GED preparation course at the time of the survey, while the program group was more likely to be enrolled in college courses.**

Based on the higher rates of high school diploma or GED receipt in the program group, it is not surprising that the control group was more likely to be enrolled in high school or a GED preparation program. Similarly, it makes sense that a greater proportion of program group members have gone on to college course work. About 12 percent of the program group was currently enrolled in college courses, a statistically significant 4.6 percentage point increase over the control group. As noted earlier, however, there was a larger difference between the two groups in the percentage who had earned any college credits (see Table 5). It is also notable that the number currently in college is much smaller than the percentage who ever earned a credit. This suggests that many sample members may have started college and then left, a common pattern, particularly among community college students.[4]

- **The control group reported longer periods of inactivity since random assignment.**

At the time of survey, program group members were more likely to be engaged in a productive activity. For example, 72 percent of the program group was in school or training, working, or in the military, compared with 66 percent of the control group. A broader measure, designed to measure progress in the transition to adulthood, shows that 45 percent of the program group and 23 percent of the control group were engaged in a productive activity *and* had a high school diploma or a GED (this measure obviously reflects the large difference in high school completion discussed earlier).

In an attempt to further understand how sample members had been spending their time, the survey asked about time "basically not doing anything" since random assignment. The survey defined this inactivity (or "idleness") as time when the respondent was not working, in school, in a training program, or in the military. As shown in Table 6, approximately half the sample reported one or more months of inactivity since entering the study. However, the control

[4]Horn and Weko (2009).

group reported significantly more months of "doing nothing." This is illustrated by the higher percentages of the control group reporting inactivity for three or more months since random assignment. The program group was significantly more likely to report being idle for only one or two months (20 percent of the program group versus 16 percent of the control group). These reports of inactivity reinforce the higher rates of participation in "productive" activities and educational attainment by the program group.[5]

Crime and Delinquency

As noted earlier, high school dropouts (particularly males) are at high risk of becoming involved with the criminal justice system. Moreover, about one-third of the research sample reported at least one arrest or conviction prior to random assignment (see Table 3). By engaging young people and putting them on a more positive path, ChalleNGe hopes to reduce criminal activity in the future. The survey data suggest a small to moderate reduction in crime and delinquency attributable to the program, consistent across self-reports of both involvement in the criminal justice system and broader categories of delinquency. Specifically:

- **The program and control groups were equally likely to report being arrested and charged with a crime in the past year, but the control group was more likely to have been convicted of a crime.**

As shown in the top panel of Table 7, about a quarter of the survey sample — similar across groups — reported having been arrested and charged with a crime in the previous year. However, significantly more control group members reported being convicted of a crime. It is not clear what caused the lower conviction rates, but one hypothesis is that the program group had better contacts to help them navigate the judicial system and avoid conviction. For example, about 18 percent of the program group reported being charged with a public order offense (see Appendix Table B.1), with approximately a third (6 percent) ending in a conviction; for the control group, 13 percent reported a public order charge, with more than half (7 percent) ending in a conviction. In breaking down the convictions by type of offense, there was a significant difference between the two groups only in the category of property crime convictions.[6] Property offenses include burglary, larceny, motor vehicle theft, arson, fraud, forgery, embezzlement, and others.

[5]The survey also asked whether sample members in both groups had been in "residential youth programs" (other than ChalleNGe). About 10 percent of each group reported that they had participated in such a program, with the Job Corps mentioned most frequently.

[6]For categorization of offenses, see Langan and Levin (2002).

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Table 7

Impacts on Delinquency and Criminal Activity in the Last 12 Months

Outcome	Program Group	Control Group	Impact	P-Value
Self-reported arrests/convictions (%)				
Arrested	26.3	25.4	0.9	0.719
Charged with any crime	25.0	24.7	0.3	0.917
Convicted of any crime[a]	8.9	13.2	-4.2 **	0.020
Convicted of a violent crime	1.4	1.2	0.2	0.748
Convicted of a property crime	1.5	4.1	-2.6 ***	0.005
Convicted of a drug crime	1.4	1.9	-0.5	0.536
Convicted of a public order crime	5.6	6.7	-1.1	0.428
Self-reported delinquency[b]				
Any incidents (%)	62.6	66.5	-3.9	0.168
Any violent incidents (%)	54.0	57.3	-3.3	0.263
Any property incidents (%)	27.2	35.1	-7.9 ***	0.004
Number of incidents	3.3	4.1	-0.8 ***	0.003
Number of violent incidents	2.0	2.3	-0.4 **	0.035
Number of property incidents	0.9	1.3	-0.4 ***	0.005
Sample size (total = 1,196)	736	460		

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Conviction categories from Langan and Levin (2002).

[b]See full list of types of delinquency in Box 2.

Comparing these findings with the earlier survey wave is difficult. At the time of the nine-month survey, arrest and conviction rates were lower overall, and the control group members were significantly more likely to have been arrested or convicted since random assignment. However, this represented a shorter time span (an average of nine months versus a full year). In addition, a large percentage of the program group had spent much of that nine-month period in the ChalleNGe residential program, where they were closely monitored and tightly scheduled.

- **A majority of respondents in both groups reported being involved in some form of delinquency in the previous year; the program group reported committing fewer total acts of delinquency.**

The second panel of Table 7 refers to 13 survey questions that asked if the sample member had committed a series of specific delinquent acts in the past 12 months.[7] These activities ranged widely in severity and type of offense; see Box 2 for a full list of the items and response categories and Appendix B for detailed information on which offenses sample members reported. While there is likely overlap between these questions and offenses that may have resulted in arrests and convictions discussed above, these questions give a broader view of the potential delinquency of the sample. Overall, Appendix B shows that fewer than 10 percent of

Box 2

Types of Self-Reported Delinquent and Criminal Behavior

Survey respondents were asked how often they had committed a variety of offenses in the last 12 months, with the option of refusing to answer or answering "never," "once," "twice," "three or four times," "five or more times," or "don't know." The types of self-reported offenses are listed below.

Property incidents

- Deliberately damaged property
- Stole something worth more than $50
- Stole something worth less than $50
- Entered a house he or she was not supposed to enter in order to steal something
- Drove a car without owner's permission
- Bought, sold, or held stolen property
- Used someone else's credit card/bank card without permission
- Deliberately wrote a bad check

Violent incidents

- Got into a serious physical fight
- Got into a fight with another group
- Hurt someone badly enough to need medical attention
- Used or threatened to use a weapon to get something

Other incidents

- Sold marijuana or other drugs

SOURCE: Haynie (2001).

[7]Haynie (2001).

respondents reported committing most of the offenses listed in Box 2. However, about half reported that they had been in a serious physical fight, and about one in four reported that they had hurt someone badly enough that the person needed bandages or medical treatment.

The control group was somewhat more likely to report engaging in at least one of the delinquent activities (67 percent versus 63 percent), though the difference between groups is not quite statistically significant. However, the control group reported a significantly greater number of incidents than the program group, an average of 4.1 incidents versus 3.3 incidents, respectively.

In an effort to further understand the types of offenses being reported and compare them with the conviction categories in the top panel, the self-reported offenses were divided into two categories. The first category includes eight questions that represent property offenses, ranging from "deliberately damaged property" to "stole something." The second category, violent offenses, includes four questions about fighting, mainly, and the use of a weapon (see Box 2). In line with the differences in convictions in the top panel, a significantly higher percentage of control group members (35 percent versus 27 percent) reported at least one property-related incident. The control group also reported a greater number of violent incidents. As noted earlier, incidents categorized as violent were overwhelmingly related to fighting, rather than use of a weapon, so it is not clear whether they would have led to the arrests or convictions in the top panel of Table 7.

Health and Other Outcomes

- **No clear health differences emerged between the two groups.**

Table 8 shows that there were no statistically significant differences between groups in measures of health and sexual activity. Most respondents in both groups reported that they were in good or excellent health, and only about 10 percent of each group were obese (defined as having a Body Mass Index (BMI) of 30 or higher).[8] About 5 percent of each group were experiencing serious psychological distress according to a widely used six-question scale.

At the time of the nine-month survey, statistically significant differences were seen both for the self-rating of overall health and for obesity. The healthier scores for the program group at that time were likely attributable to the physical activity and the diet in the recently completed ChalleNGe residential program.

[8]The BMI is a measure of body fat based on height and weight that applies to both adult men and women. It is calculated by dividing a person's weight by his or her height squared. A person is considered overweight if his or her BMI is between 25 and 29.9. Obesity is defined as a BMI of 30 or higher.

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Table 8

Impacts on Health, Sexual Activity, and Use of Substances

Outcome	Program Group	Control Group	Impact	P-Value
Physical and mental health				
Overweight[a] (%)	25.8	24.8	1.0	0.698
Obese[a] (%)	9.8	11.3	-1.5	0.425
Overall health either excellent or good (%)	71.0	69.4	1.6	0.548
Psychological distress score[b]	4.9	5.1	-0.2	0.358
Serious psychological distress[b] (%)	5.4	5.1	0.3	0.844
Sexual activity (%)				
Sexually active	88.8	86.1	2.7	0.159
Always uses birth control	53.3	52.9	0.3	0.918
Uses birth control sometimes or most of the time	28.2	25.7	2.5	0.347
Never uses birth control	10.3	11.1	-0.7	0.682
Drug and alcohol use (%)				
Binge drinking (5 or more drinks in a row) in the last 14 days	2.8	4.7	-2.0 *	0.076
Frequent marijuana use (10 or more occasions) in the last 12 months	22.5	25.2	-2.7	0.282
Ever used other illegal drugs[c]	24.1	23.1	1.0	0.684
Frequent illegal drug use (6 or more occasions) in the last 12 months	5.6	4.4	1.3	0.327
Sample size (total = 1,196)	736	460		

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Body Mass Index (BMI) is a measure of body fat based on height and weight that applies to both adult men and women. BMI is calculated by dividing a person's weight by his or her height squared. A person is defined as overweight if his or her BMI is between 25 and 29.9. A person is defined as obese if his or her BMI is 30 or higher.

[b]The K6 scale is the sum of the responses to six questions asking how often a respondent experienced symptoms of psychological distress. The scale ranges from 0 to 24. A score of 13 points or more on the K6 scale is considered an indication of serious psychological distress. http://www.hcp.med.harvard.edu/ncs/k6_scales.php.

[c]"Other illegal drugs" refers to drugs other than marijuana. Examples given in the survey question included: LSD or other psychedelic drugs, cocaine, crystal meth, amphetamines, barbiturates, heroin, and performance-enhancing substances like anabolic steroids.

- **There is mixed evidence about the program's impacts on substance abuse.**

In the last panel of Table 8, there is evidence of a small beneficial program effect on binge drinking. However, for both groups the reported rates are lower than might be expected for this age group. The binge drinking rates for the general population are reported in the Monitoring the Future study as 8 percent for eighth-graders, 16 percent for tenth-graders, and 25 percent for twelfth-graders.[9] Unlike binge drinking, rates of marijuana and other illegal drug use are higher in the ChalleNGe sample than in the general population. For example, more than 20 percent of the survey sample reported frequent marijuana use, while less than 4 percent of twelfth-graders reported this type of marijuana usage in Monitoring the Future.[10] However, the rates of marijuana and other illegal drug use are comparable for the program and control groups.

- **Program group members were more likely to be living on their own and also more likely to be a parent (or pregnant).**

The survey also measured rates of marriage, parenthood, and living independently, all potentially related to the transition to adulthood. As shown in Table 9, somewhat more than half of each group reported living with their parents at the time of the survey; at the nine-month point, about three-quarters of each group reported living with their parents.

Program group members were somewhat more likely to be living in their own home or apartment at the 21-month point (19 percent versus 15 percent). However, the two groups were about equally likely to be married or living with a partner. Program members were somewhat more likely to report being pregnant or having one or more biological children. This result is somewhat puzzling since there were no impacts on measures of sexual activity or use of birth control. Moreover, there is no evidence that program group members were more likely to be living on their own with a child.

Life-Coping, Leadership, and Group Interaction Skills

Cultivating interpersonal and coping skills necessary to deal with the challenges of the transition to adulthood, as well as leadership and group interaction abilities, are shared objectives of ChalleNGe programs — a part of daily life and a focus of many specific activities. All

[9]Johnston, O'Malley, Bachman, and Schulenberg (2008).

[10]Johnston, O'Malley, Bachman, and Schulenberg (2008). Students in the Monitoring the Future survey were asked how frequently they had used marijuana over various periods of time. A total of 3.6 percent of those surveyed reported using marijuana 10 to 19 times over the previous year.

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Table 9

Impacts on Living, Marital, and Parental Status

Outcome (%)	Program Group	Control Group	Impact	P-Value
Living and marital status				
Living at parents' home	57.8	60.5	-2.7	0.346
Living in own home or apartment	19.0	15.0	4.0 *	0.073
Living in someone else's home	17.4	19.8	-2.5	0.283
Other living arrangement[a]	5.8	4.5	1.3	0.315
Never married and not living with partner	85.4	83.8	1.6	0.459
Married or living with a partner	13.6	15.4	-1.8	0.391
Divorced or separated	1.0	0.8	0.2	0.718
Parental status				
Has at least one child or is pregnant	17.2	13.6	3.6 *	0.091
Has a child	15.9	12.6	3.3	0.113
Pregnant	1.5	1.5	-0.1	0.93
Sample size (total = 1,196)	736	460		

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]"Other living arrangement" includes: living in a group home or homeless shelter, not living anywhere (homeless), or any other arrangement not specifically listed.

of these qualities are thought to be important for growth and healthy adaptation during young adulthood and the years beyond.

The 21-month survey included a series of questions on psychosocial development that were either selected or adapted from existing measures or were unique items developed and piloted by the MacArthur Research Network on Transitions to Adulthood. This section focuses on a subset of those questions addressing life-coping, leadership, and group skills.

Table 10 reports on a preliminary analysis with single questions selected because they were: (1) directly salient to the core components of ChalleNGe and (2) had existing comparative data from other research/evaluations (see Appendix C for comparative data means).

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Table 10

Impacts on Leadership and Life-Coping Skills

Outcome	Program Group	Control Group	Impact	P-Value[a]
Life-coping skills[b]				
Has learned about setting priorities	3.5	3.5	0.0	0.419
Has learned about organizing time and not putting things off	3.6	3.5	0.1 *	0.060
Has learned how to better control temper	3.5	3.4	0.1 **	0.013
Has become better at dealing with fears and worries	3.6	3.6	0.0	0.522
Has tried new ways of acting around people	3.3	3.2	0.1	0.162
Leadership/followership and group skills[b]				
Has observed how others have solved problems and learned from them	3.6	3.6	0.0	0.751
Has learned the challenges of being a leader	3.7	3.5	0.2 ***	0.000
Has had the experience of others counting on him/her	3.6	3.6	0.0	0.316
Tries to present his/her ideas without criticizing others[c]	3.5	3.3	0.1 *	0.063
Encourages different points of view without worrying about agreement[c]	3.7	3.5	0.1 **	0.040
Tries to consider all points of view or possible options before forming an opinion or making a decision[c]	4.0	4.0	0.0	0.595
Sample size (total = 1,196)	736	460		

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Standard errors are presented in this report for all impacts with a p-value of 0.000. Following are the standard errors for all impacts with a p-value of 0.000 (presented in the order in which they appear on the table): .0399.

[b]Except where noted, all responses are on a 1-4 scale, with 1 indicating a negative response and 4 indicating a positive response.

[c]Responses on these items are on a 1-5 scale, with 1 indicating a negative response and 5 indicating a positive response.

Comparative data sources include items from the Youth Experience Survey, version 2.0[11] and a national evaluation of the Americorps program. The majority of these items are on a 1 to 4 scale, with the final three on a 1 to 5 scale. For all, a 1 is a negative response and a 4 (or 5) indicates a positive response.

Future reports will move beyond the single-item analysis to evaluate these psychosocial measures using composite measures assessing a broader array of developmental outcomes. See Appendix C for a discussion of some of these preliminary exploratory analyses.

Life-Coping Skills

Through a combination of classroom activities, a structured living environment, and mentoring relationships, ChalleNGe aims to help young people develop individual strategies and coping mechanisms for managing their personal lives and dealing with emotions. Participants are provided daily models of managing their time, as well as effective coping and emotional and behavioral regulation skills. The young people must learn to cope with negative emotions not by suppressing or dwelling on them, but by reappraising them. For example, in situations that might induce anger and frustration, ChalleNGe encourages participants to think about ways that will help them stay calm, find meaning in what they are going through, and allow them to move forward in pursuing their goals.[12] These are all-important skills related to moving forward with life plans and coping strategies. Research indicates that such aspects of planfulness discriminate between vulnerable adolescents who go on to achieve (both academically and in their careers) and those who do not.[13]

Table 10 shows that there were some statistically significant differences between the program and control groups on responses to questions that focus on organizing time and not putting things off. In addition, there was a statistically significant difference between the program and control group means (3.5 and 3.4, respectively) in emotion regulation, specifically learning how to control one's temper. These tentative findings seem particularly important, considering some of the emotional and coping vulnerabilities of ChalleNGe participants before they entered the program. Further investigation should also determine whether increased time- and anger-management skills may translate to more adaptive long-term outcomes in work, school, and interpersonal realms.

No statistically significant differences were found in related life-coping items that evaluate skills in setting priorities, dealing with fears and worries, and trying out new ways of acting with people. Even though there was no evidence of statistically significant differences,

[11]Hansen and Larson (2005).
[12]John and Gross (2004, 2007).
[13]Masten et al. (2004).

the trends were in predictable directions, with participants in the program group more likely to endorse higher levels of competency on all of these life-coping skill items.

To contextualize these findings, an analysis compared responses of ChalleNGe sample members with those of eleventh-graders used for instrument development of the Youth Experience Survey 2.0 (YES), the survey the items were adapted from.[14] ChalleNGe participants were more likely to give positive responses (stronger positive endorsements of items) than participants in the comparative YES sample (see Appendix C). The specificity of ChalleNGe as a single pointed intervention (versus a range of YES community activities with potentially varying and more diluted impacts across the sample) might partially account for this finding.

Leadership and Group Skills

Daily life in a structured group environment aims to foster cadets' abilities to serve as good leaders and harmonious and respectful group members. This is the focus of many of their roles and daily responsibilities, both in the barracks and the classroom. Participants were evaluated on multiple items related to this core tenet of the intervention.

As shown in Table 10, a higher percentage of program group members reported that they learned the challenges of being a leader. These results were statistically significant. However, no significant differences were found on items asking whether they had had the experience of others counting on them or whether they had learned from how others around them solve problems.

Another potential impact of ChalleNGe relates to how well young people do in cultivating positive group interactions. The survey included items from the Americorps evaluation about having the interpersonal skills to foster a group environment where everyone's point of view is heard, valued, and considered in making decisions. Statistically significant differences were found between program and control participants' means on questions that evaluate the ability of young people to present ideas without criticizing the ideas of others as well as encouraging different points of view without worrying about agreement. However, no differences were found between groups on then evaluating the ideas and opinions of all in order to make a decision. Means of individual and grouped items are comparable, although a bit lower (less strongly endorsed), than means on the same items from youth in the Americorps evaluation (see Appendix C).

[14]Hansen and Larson (2005).

Civic Engagement

The core components of the ChalleNGe program are organized with the explicit goal of affecting such outcomes as responsible citizenship and service to the community. Measures discussed below were incorporated into the survey to evaluate aspects of these core civic-related program components. As with the measures of psychosocial development discussed in the previous section, the civic engagement questions will be the subject of additional analysis in later reports.

As shown in Table 11, even though civic development is a core component of the ChalleNGe program, the evaluation yielded fewer statistically significant differences between program and control groups than anticipated.[15]

The most promising finding was that reports of past civic engagement behavior were significantly higher in the program group than in the control group. These items ask respondents whether they had ever reported a crime that they witnessed, attended a meeting where there was a discussion of an issue in their communities, attended religious services regularly, voted in elections, kept informed about current issues, worked with a group to solve a problem in their community, or contacted a newspaper, radio, or TV talk show to express his or her opinion on an issue. With the exception of attending religious services, most of the items tap behavior that teenagers would be less likely to engage in simply by virtue of their age. This might be an important positive effect of the program if former cadets continued to engage in such community and civic activities, because it also would mean that they would be maintaining contact with social and community organizations.

There was a marginally positive effect of the program on cadets' *justice-oriented citizen behaviors* (that is, the importance they attached to challenging inequalities or protesting to bring about needed change). It is tempting to interpret this as a positive effect, but since there were no other similar statistically significant positive program effects, it is important to note that this result may simply be due to chance. If cadets' endorsement of conventional citizenship behavior (that is, the importance they attached to assisting people who need help, following rules and laws, being concerned about national, state, and local issues, and working with local organizations and government to solve problems) had also increased, there might be reason to conclude that the program had affected their civic goals. But since these results do not support such conclusions, caution should be exercised in evaluating this finding.

[15]Survey questions in this section were provided by the MacArthur Network. Items shown in the table are a combination of existing scales in this field and additional ones created by factor analysis work. See Appendix D for a description of, and more information about, these exploratory analyses and factor loadings.

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Table 11

Impacts on Civic Engagement

Outcome	Program Group	Control Group	Impact	P-Value
Civic engagement				
Collective civic efficacy[a]	1.89	1.98	-0.09 **	0.029
Social trust[a]	3.64	3.66	-0.01	0.767
Social responsibility to be a good person[a]	4.49	4.45	0.05	0.247
Belief in civil justice[a]	4.19	4.14	0.05	0.281
Sense of civic competence[b]	3.12	3.07	0.04	0.179
Past civic engagement[c]	0.39	0.35	0.04 ***	0.004
Belief in American promise[a]	2.73	2.74	-0.01	0.920
Justice-oriented citizen[b]	3.53	3.46	0.06 *	0.092
Conventional citizen scale[b]	3.44	3.38	0.05	0.117
Sample size (total = 1,196)	736	460		

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Average of item responses on a 1 (low) to 5 (high) scale.

[b]Average of item responses on a 1 (low) to 4 (high) scale.

[c]Average of responses to a series of seven Yes (1) or No (0) items.

Interestingly, participants in the control group reported a higher level of *collective civic efficacy* than those in the program group. This aspect of civic engagement was measured based on the respondent's strength of endorsing beliefs that, by working with fellow members of his or her community, he or she could be effective in addressing community problems. The following items formed this scale:

- Thinking about problems you see in your community, how much difference do you believe that people working together as a group can make in solving those problems?
- Thinking about problems you see in your community, how much difference do you believe *you* personally can make in working to solve those problems?

- I feel that individuals can be more effective in solving community problems if they work with a group rather than work alone.
- If you want to solve a problem in your community, it's better to work on it alone than to get bogged down in a group.

The decline in *collective civic efficacy* associated with the program may reflect the realization that cadets gain from their involvement in a community service project — that it is a challenge for a group to work together to solve a community problem. A decline of this kind is not unheard of in the literature on service learning, insofar as youth feel more optimistic about capacities to solve community issues *before* they actually have any experience trying to do so.[16]

It is less clear why ChalleNGe had no impact on the cadets' sense of *civic competence*, that is, their belief that, if they knew about a problem in their community, they would feel confident that they could create a plan to address it, get others to care about it, and express their views in public. It is possible that the measures of civic competence do not match the activities in the program; that is, the kinds of service activities cadets engaged in may not provide them with opportunities to develop these types of leadership skills. A second possibility is that only a small subset of the cadets (for example, those with the disposition to lead a civic project) gained confidence in their capacities to do so.

Results for Subgroups

Some programs are more or less effective for specific subsets of the population they serve. Data on such subgroup effects can inform decisions about how to target scarce program resources. An exploratory analysis examined whether the impacts of ChalleNGe differ for three sets of subgroups defined by characteristics measured at the point young people entered the study: age, high school academic performance, and previous involvement with the justice system. Tables 12, 13, and 14 show selected key outcomes for these subgroups; additional outcomes can be found in Appendix E. Future reports will include additional subgroup analysis.

During field visits, ChalleNGe staff reported that younger participants can be more difficult to work with because they are less focused and mature. Moreover, participants who are 16 or 17 years old when they finish the residential phase tend to have fewer options for postprogram placements. Table 12 shows selected impacts for sample members who were 16 years old

[16]Kahne and Westheimer (2006); Levine (2008); Styvertsen, Flanagan, and Stout (2007).

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Table 12

Selected Impacts, by Age at Random Assignment

	Age								
	17 and Over				Under 17				
Outcome (%)	Program Group	Control Group	Impact	P-Value[a]	Program Group	Control Group	Impact	P-Value[a]	H-Stars
Currently working	55.2	53.5	1.7	0.651	54.1	49.0	5.1	0.308	
Currently working full time	43.5	42.3	1.2	0.736	43.4	36.6	6.8	0.166	
Earned high school diploma or GED certificate	61.9	40.3	21.6 ***	0.000	57.6	27.2	30.4 ***	0.000	
Currently taking high school/GED courses	14.4	20.7	-6.3 **	0.024	18.6	33.1	-14.6 ***	0.001	
Currently enrolled in college courses	11.3	9.1	2.2	0.335	11.8	4.1	7.7 ***	0.008	
Currently enlisted in the military	11.0	5.7	5.3 **	0.011	11.2	7.5	3.7	0.188	
Has high school diploma or GED certificate and is currently engaged in any of the above activities[b]	46.0	27.5	18.5 ***	0.000	43.9	15.0	28.9 ***	0.000	*
Ever arrested in the last 12 months	25.4	25.2	0.2	0.940	27.8	27.0	0.8	0.856	
Convicted of any crime in the last 12 months	8.6	13.2	-4.6 **	0.043	10.7	12.9	-2.2	0.486	
Any self-reported delinquency in the last 12 months	59.6	66.5	-6.9 *	0.055	67.7	64.6	3.1	0.516	*
Sample size (total = 1,196)	458	303			278	157			

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Standard errors are presented in this report for all impacts with a p-value of 0.000. Following are the standard errors for all impacts with a p-value of 0.000 (presented in the order in which they appear on the table): "17 and Over": 3.546, and 3.491. "Under 17": 4.739, and 4.409.

[b]This measure includes any employment, school or GED programs, vocational training, military activities, or any residential programs (not listed separately above).

at the time of enrollment and for those who were 17 or 18.[17] The last column (labeled "H-Stars") shows whether the differences in impacts between the two subgroups are statistically significant. Although some of the *outcomes* for the control group are quite different for the two age groups (for example, 40 percent of the older youth had completed a diploma or GED, compared with 27 percent of the younger youth), it does not appear that the program *impacts* differed systematically by age.

For the second subgroup analysis, shown in Table 13, sample members were split between those who reported a pre-random assignment arrest or conviction and those who did not. One hypothesis was that involvement in ChalleNGe might help to "straighten out" young people who had been involved with the justice system. Again, outcomes look quite different across the groups. As expected, sample members with a pre-random assignment arrest or conviction were more likely to have a post-random assignment arrest or conviction. However, there are no clear patterns of differential impacts across the groups. For example, it appears that ChalleNGe had a larger impact on military enlistment for the high-delinquency subgroup (perhaps because completing the program helped program group youth who had prior records gain access to the military), but program group members in that subgroup were also more likely than their control group counterparts to report engaging in delinquent acts.

A third subgroup analysis examined whether ChalleNGe's impacts differed for young people who were experiencing the greatest academic difficulty before they enrolled. There are several baseline measures that might be used to create academic performance subgroups, but the analysis in Table 14 divides the research sample according to sample members' self-reported grades in high school ("mostly Ds and Fs" versus better grades) There were competing hypotheses regarding the program's potential effectiveness for these two groups. On the one hand, ChalleNGe may have larger impacts for young people who would fare worse on their own. On the other hand, the program's focus on the GED might create problems for young people who are unable to reach that milestone during the residential phase. No clear patterns of different program impacts emerged between the groups. Future reports may include further analysis using different definitions of this subgroup.

[17] As noted earlier, youth who were under 16.5 years at the time of enrollment were not included in the study.

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Table 13

Selected Impacts, by Delinquency Level

	Delinquency Level								
	Ever Arrested/Convicted				Never Arrested/Convicted				
Outcome (%)	Program Group	Control Group	Impact	P-Value[a]	Program Group	Control Group	Impact	P-Value[a]	H-Stars
Currently working	55.2	47.8	7.4	0.161	54.9	52.2	2.8	0.447	
Currently working full time	44.3	41.4	2.9	0.582	42.9	38.5	4.5	0.212	
Earned high school diploma or GED certificate	54.0	30.9	23.1 ***	0.000	64.4	40.4	24.0 ***	0.000	
Currently taking high school/GED courses	17.2	25.9	-8.7 **	0.041	15.5	26.5	-11.0 ***	0.000	
Currently enrolled in college courses	8.8	5.9	2.9	0.302	13.2	9.0	4.2 *	0.074	
Currently enlisted in the military	10.8	0.9	9.9 ***	0.000	10.4	7.8	2.6	0.207	**
Has high school diploma or GED certificate and is currently engaged in any of the above activities[b]	41.7	12.3	29.4 ***	0.000	47.6	28.0	19.6 ***	0.000	*
Ever arrested in the last 12 months	37.4	40.4	-3.0	0.556	19.7	20.8	-1.2	0.683	
Convicted of any crime in the last 12 months	13.3	17.7	-4.4	0.248	5.4	11.3	-5.9 ***	0.002	
Any self-reported delinquency	67.0	56.9	10.1 **	0.047	57.9	66.7	-8.8 **	0.013	***
Sample size (total = 1,177)	267	132			457	321			

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Standard errors are presented in this report for all impacts with a p-value of 0.000. Following are the standard errors for all impacts with a p-value of 0.000 (presented in the order in which they appear on the table): "Ever Arrested/Convicted": 5.126, 2.730, and 4.712. "Never Arrested/Convicted": 3.442, 2.912, and 3.418.

[b]This measure includes any employment, school or GED programs, vocational training, military activities, or any residential programs (not listed separately above).

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Table 14

Selected Impacts, by Academic Performance

	Academic Performance								
	Mostly Ds and Fs				Mostly Better than Ds and Fs				
Outcome (%)	Program Group	Control Group	Impact	P-Value[a]	Program Group	Control Group	Impact	P-Value[a]	H-Stars
Currently working	53.6	48.0	5.6	0.202	58.3	54.2	4.2	0.309	
Currently working full time	42.6	32.8	9.8 **	0.023	46.5	45.0	1.5	0.715	
Earned high school diploma or GED certificate	54.9	32.8	22.1 ***	0.000	65.4	37.9	27.5 ***	0.000	
Currently taking high school/GED courses	18.0	28.8	-10.7 ***	0.004	14.6	23.4	-8.8 ***	0.006	
Currently enrolled in college courses	10.5	8.7	1.8	0.516	12.5	5.7	6.7 ***	0.006	
Currently enlisted in the military	11.4	8.0	3.4	0.192	8.9	5.1	3.7 *	0.074	
Has high school diploma or GED certificate and is currently engaged in any of the above activities[b]	40.4	21.7	18.7 ***	0.000	49.8	22.9	26.9 ***	0.000	
Ever arrested in the last 12 months	28.0	23.9	4.1	0.289	27.2	25.7	1.5	0.682	
Convicted of any crime in the last 12 months	8.6	11.3	-2.6	0.318	8.2	11.6	-3.4	0.164	
Any self-reported delinquency	65.8	69.7	-3.9	0.350	60.3	63.2	-2.9	0.467	
Sample size (total = 1,161)	333	207			382	239			

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Standard errors are presented in this report for all impacts with a p-value of 0.000. Following are the standard errors for all impacts with a p-value of 0.000 (presented in the order in which they appear on the table): "Mostly Ds and Fs": 4.250, and 4.042. "Mostly Better than Ds and Fs": 3.899, and 3.834.

[b]This measure includes any employment, school or GED programs, vocational training, military activities, or any residential programs (not listed separately above).

Conclusions and Next Steps

The results presented in this report constitute the second chapter in the unfolding story of the ChalleNGe program's impacts. Twenty-one months after they entered the study, at age 18 or 19, young people in the program group, who had access to ChalleNGe, were substantially more likely to have earned a high school diploma or a GED and were also more likely to be engaged in productive activities such as working or attending school. The program group was also less likely to have been convicted of a crime and appeared to have engaged in fewer delinquent activities. Together, these results suggest that the program group is better positioned to move forward in education, employment, and other critical realms.

While quite promising, the 21-month results also suggest some reasons for caution. As might be expected, many of the differences measured between the groups at 21 months were smaller than the corresponding differences at the nine-month point. In some areas, such as health, the earlier differences disappeared altogether. Moreover, because many control group members were attending high school or GED preparation classes when they were interviewed, the program group's advantage in high school completion may continue to narrow over time. Relatively few program group members were in college, so it is not yet clear how many ChalleNGe graduates will use their high school credentials to obtain further education or training that may qualify them for higher-paying jobs. Finally, as noted earlier, some other evaluations of youth programs have found impacts on GED receipt that did not translate into longer-term improvements in economic outcomes.

Results from the 36-month survey, scheduled for late 2010, will fill in the next chapter in this important story. The analysis of that survey will also include a more in-depth examination of impacts for subgroups and sites, and impacts on measures of psychosocial development and civic engagement. Those results will provide important clues about the program's longer-term impacts but, even then, the results may not be definitive. Most of the sample members will be only 20 or 21 years old when they are interviewed, an age when many young people across the socioeconomic spectrum are still struggling to find their way. This may be particularly true because the survey was mostly administered during 2009, in the midst of the most severe recession in a generation, when the unemployment rate for workers between 16 and 24 years old was approaching 20 percent — and even higher for young workers with no post-secondary education.

Appendix A

Analyses of Survey Response Bias

Appendix A assesses the reliability of impact results measured by the 21-month survey. It also examines whether the impacts for the survey respondents can be generalized to the impacts for the research sample. The appendix first describes how the survey sample was selected. Then it discusses the response rates for the survey sample and for the program and control groups. Next, it examines differences between survey respondents and nonrespondents, followed by a comparison of the two research groups among the survey respondents.

This appendix concludes — with some caution — that the survey is reliable and that the results for the survey respondent sample can be generalized to the research sample. A comparison of the program and control groups among the survey respondents shows few differences in background characteristics, and those were largely addressed in the analysis model. Furthermore, respondents and nonrespondents did not differ in measurable characteristics before random assignment.

Survey Sample Selection

The research sample includes 3,074 sample members who were randomly assigned from June 2005 through December 2006. Approximately half the full research sample, a total of 1,507 individuals, was selected to be interviewed for the 21-month survey. This sample is referred to as the "fielded sample" (see Box A.1 and Table A.1). With a planned analysis to estimate a pooled impact where each site is weighed equally, the sample was chosen to minimize the variance of estimated impacts in the model. Ideally, this means selecting an equal number of program and control group members from each site. However this was not possible with

Box A.1

Key Samples

Research sample. All individuals in the study randomly assigned from June 2005 through December 2006.

Fielded Sample. Sample members in the research sample who were selected for the field interview.

Respondent Sample. Sample members who completed the survey.

Nonrespondent Sample. Sample members in the fielded sample who were not interviewed because they were not located, refused to be interviewed, or for other reasons.

Overlap Sample. Sample members who completed *both* the nine-month and 21-month surveys.

Nonoverlap Sample. Sample members who completed *either* the nine-month or 21-month survey.

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Appendix Table A.1

Fielded Survey Sample

State	Total Sample	Program Group	Control Group
California	123	94	29
Florida	157	95	62
Georgia	188	94	94
Illinois	190	95	95
Michigan	189	95	94
Mississippi	143	94	49
North Carolina	168	94	74
New Mexico	92	66	26
Texas	133	95	38
Wisconsin	124	94	30
Total	1,507	916	591

SOURCE: MDRC calculations.

the wide variation in site size for ChalleNGe. Therefore, a balanced survey sample was chosen from each of the larger sites, and all control group members but more program group members were chosen in smaller sites.

Survey Response Rates

Sample members who were interviewed for the survey are referred to as "survey respondents," or the "respondent sample," while sample members among the fielded sample who were not interviewed are known as "nonrespondents," or the "nonrespondents sample." A total of 1,196 sample members, or 79 percent of the fielded sample, completed the survey (80 percent [total = 736] of program group members and 78 percent [total = 460] of control group members).

Of the nonrespondent sample, 51 percent (159 out of 311) could not be located for the interview.[1] Whenever the response rate is lower than 100 percent, nonresponse bias may occur. That is, differences may exist between the respondent sample and the larger, fielded sample, owing to differences between the sample members who completed a survey and those who did not.

[1]Other respondents were not interviewed because they refused, were in jail, in the military, in rehab, or deceased.

Comparisons Between Respondents and Nonrespondents Within the Survey Sample

In order to examine whether there are systematic differences between those who responded to the survey and those who did not, Appendix Table A.2 presents an analysis of selected baseline characteristics of survey respondents and nonrespondents. Overall, the two groups are similar. However, a few statistically significant differences emerge. Respondents were less likely to have been arrested and convicted before random assignment and, consistent with decreased involvement with the criminal justice system, were less likely to have the criminal justice system suggest application to ChalleNGe. During the survey fielding, the survey firm reported difficulty in interviewing sample members who were incarcerated and tried to follow up and interview them when released, if possible. For the next survey wave, the survey firm is conducting interviews with those who are currently incarcerated, so this difference will likely shrink or disappear. The respondent group was also more likely to give education and training as a reason for applying to ChalleNGe. Conversely, prior to random assignment a significantly higher percentage of the respondent group were considered obese, based on their reported height and weight.

Comparison Between the Research Groups in the Survey Respondent Sample

Although random assignment research designs minimize the potential bias, there is the possibility that the characteristics of the research groups will differ due to the selective nature of the survey response process. If this is true, the reliability of impact estimates for the respondent sample may be affected.

Appendix Table A.3 shows selected baseline characteristics of the program and control group members who responded to the 21-month survey. Differences emerge among respondents for highest grade completed and prior arrest/conviction. For highest grade completed, the characteristic was included in the analysis model to control for the variation between the two groups. For prior arrest/conviction, the program group fared worse, so would likely cause the effects of the program to be underestimated, if anything. A logistic regression predicting treatment status among respondents confirmed that the control and program groups are similar; baseline characteristics cannot predict treatment status (the F-statistic testing joint significance was not significant).

Comparison Between the Survey Waves

Lastly, it is inevitable to want to compare the results of this survey with those of the earlier survey wave to understand the potential influence of the ChalleNGe program over time. In

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Appendix Table A.2

Selected Baseline Characteristics of Survey Respondents and Nonrespondents

Characteristic (%)	Respondent Group	Nonrespondent Group	Total	
Male	87.9	93.0	89.0	
Average age (years)	16.7	16.7	16.7	
Race/ethnicity[a]				
Hispanic	18.6	17.1	18.3	
White	43.0	44.0	43.2	
Black	32.1	35.6	32.8	
Other	0.5	0.2	0.5	
Highest grade completed				
8th grade or lower	14.6	14.3	14.5	
9th grade	31.6	31.1	31.5	
10th grade	36.0	38.8	36.6	
11th grade	17.1	15.4	16.8	
12th grade	0.7	0.5	0.7	
Usual grades received in school				
Mostly As and Bs	3.9	4.7	4.1	
Mostly Bs and Cs	17.9	20.8	18.5	
Mostly Cs and Ds	41.6	36.4	40.5	
Mostly Ds and Fs	46.8	48.2	47.1	
Has/had Individual Education Plan (IEP)	32.5	28.7	31.7	
Ever suspended from school	81.8	82.7	81.9	
Ever arrested	31.5	40.7	33.4	***
Ever convicted	17.5	24.5	18.9	***
Who first suggested you should apply for ChalleNGe? (%)				
Yourself	24.3	24.8	24.4	
A relative	46.9	48.7	47.2	
A school official	17.5	14.3	16.9	
The justice system	7.0	12.0	8.0	***
Reasons for applying to ChalleNGe?				
Want a high school diploma/GED certificate	81.9	77.3	81.0	*
Want to go to college/get more training	43.5	36.1	42.0	**
Want to get a job	39.4	36.1	38.7	
Want to join the military	33.7	31.2	33.2	
Want to get life on track	79.4	80.8	79.7	
Overall health very good or excellent	67.2	69.1	67.6	
Taking any medication	23.5	21.1	23.0	
Overweight (BMI 25-29)[b]	20.6	23.0	21.1	

(continued)

Appendix Table A.2 (continued)

Characteristic (%)	Respondent Group	Nonrespondent Group	Total	
Obese (BMI 30+)[b]	11.5	5.7	10.3	***
Ever drink alcohol or use drugs	38.4	36.9	38.1	
Sample size	1,196	311	1,507	

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

NOTES: Missing values are not included in individual variable distributions.
Rounding may cause slight discrepancies in sums and differences.
Distributions may not add to 100 percent where categories are not mutually exclusive.
[a]Race/ethnicity categories were constructed by counting as Hispanic those who checked both Hispanic and black or white. None of these sample members are counted as multiracial and grouped in the "other" category.
[b]Body Mass Index (BMI) is a measure of body fat based on height and weight that applies to both adult men and women. BMI is calculated by dividing a person's weight by his or her height squared. A person is defined as overweight if his or her BMI is between 25 and 29.9. A person is defined as obese if his or her BMI is 30 or higher.

order to compare the results of these two surveys, when possible, it is important to understand whether reductions in impacts over time are owing simply to who responded to the survey. More than half of the 21-month survey respondent sample (55 percent) also completed the shorter nine-month survey. These individuals are referred to as the "overlap sample." Those individuals who completed only one of the two surveys are referred to as the "nonoverlap sample."

Appendix Table A.4 looks at the impacts for key ChalleNGe outcomes at the two time points. By comparing the change in impacts for the overlap and nonoverlap samples, one can understand if one of the groups is driving the change in results over time. As the left panel of Table A.4 shows, the change in impacts, using weights, from the first to the second survey is not due to one particular sample. Thus, the differences are due to something beyond the changing survey sample. In addition, since the weighting scheme differed in the analysis of each survey wave, the right panel of Table A.4 shows the unweighted impacts with a similar variation in the differences over time for the two samples.

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Appendix Table A.3

Selected Baseline Characteristics of Program and Control Group Members, among Survey Respondents

Characteristic (%)	Program Group	Control Group	Total	
Male	87.7	88.2	87.9	
Average age (years)	16.7	16.8	16.7	
Race/ethnicity[a]				
Hispanic	19.9	16.8	18.7	
White	43.0	43.1	43.0	
Black	30.5	34.5	32.1	
Other	0.3	0.9	0.5	
Highest grade completed				***
8th grade or lower	12.4	17.7	14.6	
9th grade	31.7	31.3	31.6	
10th grade	35.5	36.8	36.0	
11th grade	19.4	13.8	17.1	
12th grade	0.9	0.4	0.7	
Usual grades received in school				
Mostly As and Bs	3.7	4.1	3.9	
Mostly Bs and Cs	18.1	17.7	17.9	
Mostly Cs and Ds	42.9	39.7	41.7	
Mostly Ds and Fs	46.7	46.9	46.8	
Has/had Individual Education Plan (IEP)	31.7	33.8	32.5	
Ever suspended from school	82.2	81.1	81.8	
Ever arrested	34.1	27.7	31.7	**
Ever convicted	19.3	14.9	17.6	*
Who first suggested you should apply for ChalleNGe? (%)				
Yourself	25.4	22.6	24.3	
A relative	45.6	48.8	46.8	
A school official	17.3	17.9	17.5	
The justice system	6.8	7.4	7.0	
Reasons for applying to ChalleNGe?				
Want a high school diploma/GED certificate	82.5	81.1	81.9	
Want to go to college/get more training	43.2	44.0	43.5	
Want to get a job	39.1	39.8	39.4	
Want to join the military	33.2	34.5	33.7	
Want to get life on track	78.0	81.5	79.3	
Overall health very good or excellent	68.1	65.9	67.2	
Taking any medication	24.6	21.7	23.5	
Overweight (BMI 25-29)[b]	21.3	19.7	20.6	

(continued)

Appendix Table A.3 (continued)

Characteristic (%)	Program Group	Control Group	Total
Obese (BMI 30+)[b]	11.6	11.3	11.5
Ever drink alcohol or use drugs	40.1	35.7	38.4
Sample size	736	460	1,196

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

NOTES: Missing values are not included in individual variable distributions.
Rounding may cause slight discrepancies in sums and differences.
Distributions may not add to 100 percent where categories are not mutually exclusive.
[a]Race/ethnicity categories were constructed by counting as Hispanic those who checked both Hispanic and black or white. None of these sample members are counted as multiracial and grouped in the "other" category.
[b]Body Mass Index (BMI) is a measure of body fat based on height and weight that applies to both adult men and women. BMI is calculated by dividing a person's weight by his or her height squared. A person is defined as overweight if his or her BMI is between 25 and 29.9. A person is defined as obese if his or her BMI is 30 or higher.

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Appendix Table A.4

Selected Impacts among Survey Respondents in Wave 1 and Wave 2 Surveys, by Weights

	Weighted			Not Weighted		
Outcome	W1 Impact	W2 Impact	Difference	W1 Impact	W2 Impact	Difference
Received high school diploma/GED certificate (%)						
Overlap	35.3	24.7	10.6	35.6	24.3	11.3
Nonoverlap	37.9	25.7	12.2	37.7	22.8	14.9
Currently taking college courses (%)						
Overlap	8.4	3.8	4.6	8.5	4.3	4.2
Nonoverlap	8.9	6.2	2.7	8.8	6.4	2.4
Working full time (%)						
Overlap	9.5	7.5	2.0	9.0	5.4	3.7
Nonoverlap	10.5	-3.9	14.4	10.9	-1.4	12.3
Arrested (%)						
Overlap	-6.0	-3.3	-2.6	-6.1	-2.5	-3.6
Nonoverlap	-8.7	-1.9	-6.8	-8.3	1.9	-10.2
Convicted (%)						
Overlap	-4.1	-6.4	2.2	-4.3	-4.7	0.4
Nonoverlap	-6.2	-7.5	1.3	-6.2	-1.9	-4.3
Body Mass Index[a]						
Overlap	-0.4	0.4	-0.8	-0.4	0.1	-0.5
Nonoverlap	0.9	0.5	0.4	0.9	0.2	0.6
Living in own home (%)						
Overlap	-0.6	-0.4	-0.2	-0.8	-0.1	-0.6
Nonoverlap	-1.6	4.1	-5.7	-1.3	7.2	-8.5
Self-reported health good or excellent (%)						
Overlap	10.7	1.9	8.8	10.3	5.1	5.3
Nonoverlap	1.0	-3.0	4.0	1.6	-1.4	3.0

(continued)

Appendix Table A.4 (continued)

SOURCE: MDRC calculations from responses to the 9-month and 21-month surveys.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Body Mass Index (BMI) is a measure of body fat based on height and weight that applies to both adult men and women. BMI is calculated by dividing a person's weight by his or her height squared. A person is defined as overweight if his or her BMI is between 25 and 29.9. A person is defined as obese is his or her BMI is 30 or higher.

Appendix B

Supplementary Tables on Delinquency and Criminal Activity

National Guard Youth ChalleNGe Program

Appendix Table B.1

Supplemental Impacts on Delinquency and Criminal Activity in the Last 12 Months

Outcome (%)	Program Group	Control Group	Impact	P-Value
Self-reported arrests/charges				
Arrested	26.3	25.4	0.9	0.719
Arrested only once	17.4	15.2	2.3	0.309
Arrested more than once	8.9	10.2	-1.3	0.450
Charged with any crime	25.0	24.7	0.3	0.917
Charged with a violent crime	3.4	3.6	-0.2	0.842
Charged with a property crime	4.1	5.4	-1.3	0.316
Charged with a drug crime	2.9	5.3	-2.5 **	0.030
Charged with a public order crime	17.5	13.0	4.6 **	0.034
Sample size (total = 1,196)	736	460		

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

National Guard Youth ChalleNGe Program

Table B.2

Types of Self-Reported Delinquency

Outcome (%)	Never	Once	Twice	Three or four times	Five or more times
Violent incidents					
Got into a serious physical fight	51.4	15.6	12.4	10.3	10.4
Got into a fight with another group	78.7	10.0	5.3	3.3	2.8
Hurt someone badly enough to need medical attention	74.2	14.2	6.7	2.6	2.4
Used or threatened to use a weapon to get something	96.7	1.8	0.8	0.3	0.3
Property incidents					
Deliberately damaged property	87.0	7.1	3.6	1.6	0.8
Stole something worth more than $50	93.7	3.3	1.3	1.0	0.7
Stole something worth less than $50	89.7	5.1	2.3	1.5	1.4
Entered a house without owner's permission in order to steal something	96.0	3.0	0.8	NA	0.3
Drove a car without owner's permission	90.6	4.3	2.6	0.9	1.6
Bought, sold, or held stolen property	92.2	4.0	2.1	0.7	1.1
Used someone's credit card or bank card without their permission	98.2	0.9	0.4	0.2	0.3
Deliberately wrote a bad check	97.8	1.3	0.3	0.3	0.3
Other incidents					
Sold marijuana or other drugs	87.5	2.6	2.1	1.3	6.5
Sample size (total = 1,196)					

SOURCE: MDRC calculations from responses to the 21-month survey. Delinquency questions from Haynie (2001).

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

Appendix C

Supplementary Tables Analyses on Life-Coping, Leadership, and Group Skills

As discussed earlier, modest but promising significant differences were found between program and control groups on a cluster of single items assessing life-coping, leadership, and group skills. For the purpose of this report, only single survey questions were discussed so that they could be evaluated alongside comparable items from other national data surveys (See Table C.1).

In addition to these single item comparisons, preliminary exploratory analyses were conducted using composite measures created from factor analysis (See Table C.2). The individual survey items included in this phase of evaluation were selected from existing measures, as well as pilot measures under development by the MacArthur Research Network on Transitions to Adulthood. To create composite measures, factor analyses were performed to test the relationship between the observed survey item responses and their hypothesized underlying latent constructs. Exploratory factor analysis produced a total of 12 composite measures. Table C.2 lists the items by composite measure; the factor loadings were based on a varimax rotation (an orthogonal rotation method), and a priori theory.

Impacts of these composite measures, shown in Table C.3, are regression-adjusted using ordinary least squares and control for select baseline respondent characteristics. Results are summarized below:

- Statistically significant program impact on *leadership and problem-solving* skills and *positive outlook* and *perseverance* but not for *sense of control* or *time-management* abilities
- Statistically significant program impact found for *emotional regulation and impulsivity* but not for *thrill-seeking* behaviors
- Statistically significant program impact found on *interdependence* and *group interactions* but not for *diverse relationships, tolerance,* or *racial/ethnic sensitivity*

In sum, in these exploratory analyses using composite measures, ChalleNGe participants report more skills related to taking responsibility for and control of themselves and their impulses, solving problems and setting goals, and being productive, harmonious group members. Although we cannot be certain at this point, ongoing meaningful, youth-relevant conversations between the participants and their mentors, as well as other program staff and peers may be an important mechanism through which such benefits accrue. This includes contact with counselors, who play a special role in helping participants build their life skills, including teaching modules on such topics as anger management, career planning, coping and problem-solving skills, and job search skills.

National Guard Youth ChalleNGe Program

Appendix Table C.1

Comparison Statistics for Leadership and Life-Coping Survey Items

Item	ChalleNGe Mean (SD)	Comparison Mean (SD)
If you were to compare yourself now with the way you were at the time of random assignment, how well would each of the following statements describe you?[a]		
I have learned about setting priorities.	3.5 (.8)	2.1 (-1.1)
I have learned about organizing time and not putting things off.	3.5 (.8)	2.3 (-1.1)
I have observed how others have solved problems and learned from them.	3.6 (.7)	2.2 (-1.1)
I have learned about the challenges of being a leader.	3.6 (.7)	2.2 (-1.1)
I have had the experience of others counting on me.	3.6 (.7)	2.1 (-1.1)
I have learned how to control my temper better.	3.5 (.8)	2.4 (-1.2)
I have become better at dealing with my fears and worries.	3.6 (.7)	2.5 (-1.2)
I have tried new ways of acting around people.	3.2 (1.0)	2.5 (-1.1)
The next set of questions asks how you do things in group situations. For each of the following, please answer whether in group situations you do this never, rarely, sometimes, often or always[b]		
You try to present your ideas without criticizing the ideas of others.	3.4 (1.2)	4.1 (-0.8)
You encourage different points of view without worrying about agreement.	3.6 (1.2)	3.9 (-0.9)
You try to consider all points of view or possible options before forming an opinion or making a decision.	4.0 (1.0)	4.1 (-0.8)

SOURCE: Hansen and Larson, 2005.

NOTES: [a]Comparative means from a sample of 1,822 youth, part of instrument development sample for the Youth Experience Survey. These youth included 11th-graders from 19 diverse high schools and approximately matched the population of Illinois in ethnicity, socioeconomic status, and urban vs. suburban vs. rural residence. Item response set: Not at all (1), A little (2), Quite a bit (3), and Yes, definitely (4).

[b]Comparative means from a sample of 2,279 youths, ages 16-30, part of the Americorps evaluation. Americorps item response set adapted for ChalleNGe: Never (1), Not very often (2), Sometimes (3), Very often (4), and Always (5).

National Guard Youth ChalleNGe Evaluation

Appendix Table C.2

Items and Factor Loadings for Leadership and Life-Coping Scales

Life-Coping Skills	Time Management	Emotional Regulation	Sense of Control
Learned to set priorities	0.318		
Learned to organize time and not put things off	0.732		
Learned to better control temper		0.379	
Has become better at dealing with fears and worries		0.419	
Has become more open to doing new things		0.412	
Has tried new ways of acting around people		0.511	
Has started thinking about who he/she wants to be		0.381	
Believes other people determine what he/she can do			0.500
Believes he/she has little control over what happens			0.645
Believes he/she has no way of solving problems			0.524
Cronbach alpha coefficient	0.56	0.63	0.53

	Positive Outlook	Impulsivity	Thrill-Seeking
Believes people think he/she has useful talents	0.361		
Can find something positive in even the worst situation	0.389		
Rarely gives up when things get tough	0.366		
Usually acts from "gut feeling" and doesn't think much about the consequences of actions		0.463	
Deals with problems in his/her own way		0.357	
Lives life without much thought for the future		0.413	
Likes doing things without strict rules		0.402	
Changes interests a lot because his/her attention shifts		0.442	
Tries new things just for fun or excitement			0.397
When nothing is happening, usually starts looking for excitement			0.869
Cronbach alpha coefficient	0.42	0.56	0.59

(continued)

Appendix Table C.2 (continued)

Leadership and Group Skills	Leadership	Interdependence	Group Relations
Has observed how others have solved problems and learned from them	0.414		
Has learned how to solve problems in different ways	0.691		
Has learned the challenges of being a leader	0.475		
Has had the experience of others counting on him/her	0.370		
Has someone to ask for help when he/she needs it		0.492	
Is able to ask for help when he/she needs it		0.641	
People know they can count on him/her for help		0.492	
Has people that he/she can count on		0.722	
Feels that he/she is important to others		0.576	
Has people in his/her life who matter to him/her		0.383	
People seek his/her advice and support		0.452	
Seeks advice and support from others		0.524	
Tries to present his/her ideas without criticizing others			0.641
Encourages different points of view without worrying about agreement			0.649
Tries to consider all points of view or possible options before forming an opinion or making a decision			0.500
Cronbach alpha coefficient	0.63	0.75	0.62

	Intergroup Relationships	Racial Senstivity/Prejudice
Often socializes with members of other racial or ethnic groups	0.385	
Feels comfortable in groups of people different than him/her	0.941	
Thinks before doing or saying something prejudiced		0.581
Recognizes when he/she does things that are prejudiced		0.614
Stops others when they say negative things about other racial or ethnic groups		0.227
Cronbach alpha coefficient	0.56	0.48

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Only factor items with loadings greater than or equal to |.30| are shown, based on factor analysis. Factor loadings indicate items that were used to create the respective scales. Items were included on the factors on which they most highly loaded.

See Table C.3 for impact table using the scales created here.

National Guard Youth ChalleNGe Program

Table C.3

Additional Exploratory Impacts on Life-Coping, Leadership, and Group Skills

Outcome	Program Group	Control Group	Impact	P-Value[a]
Life-coping skills				
Time management	7.1	7.0	0.1	0.106
Sense of control	12.8	12.6	0.3	0.115
Positive outlook/perseverance	22.7	22.1	0.5 ***	0.001
Emotional regulation	17.9	17.5	0.4 ***	0.007
Impulsivity	12.1	13.1	-1.0 ***	0.000
Thrill-seeking	6.8	6.9	-0.2	0.211
Leadership and group skills				
Leadership and problem solving	14.7	14.4	0.3 ***	0.009
Interdependence	37.5	36.9	0.6 ***	0.006
Constructive group interactions	11.2	10.8	0.3 **	0.043
Cultivates diverse relationships	8.7	8.7	0.0	0.948
Racial/ethnic senstivity	13.0	12.9	0.1	0.422
Tolerance	3.8	3.8	0.0	0.151
Sample size (total = 1,196)	736	460		

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Significance levels are indicated as follows: *** = 1 percent, ** = 5 percent, and * = 10 percent.

[a]Standard errors are presented in this report for all impacts with a p-value of 0.000. Following are the standard errors for all impacts with a p-value of 0.000 (presented in the order in which they appear in the table): .0233

No statistically significant differences were found between program and control groups in items evaluating youths' *sense of control* or *time-management* abilities. The *sense of control* items assessed how much youth felt in charge of their behaviors and choices (for example, "Other people determine most of what I can and cannot do") as well as events (for example, "I have little control over the things that happen to me"). *Time-management* items focused on setting priorities and procrastination (for example, "I have learned about organizing time and not putting things off"). Even though there was no evidence of statistically significant differences, trends were in predictable directions, with program youth reporting higher levels of *self-control* and *time-management* abilities. These findings may be related to the organizational structure and military nature of the ChalleNGe program. In addition, no differences were found in the *thrill-seeking* measure, which evaluated the tendency to seek out new activities for fun or ex-

citement and may be more developmentally driven. That is, most youth this age have the tendency to seek out new exciting adventures and opportunities, and an intervention program like ChalleNGe might not necessarily affect that.

Lastly, there was no evidence of statistically significant differences between program and control groups on intergroup relation measures, specifically *diverse relationships, tolerance,* or *racial/ethnic sensitivity.* However, any differences in means, although not statistically significant, were in predictable directions. Since only some programs have a heterogeneous mix of cadets, the lack of program impact may be because there was lack of opportunity in more homogeneous sites. Site-by-site comparisons might be useful in future analyses (looking at program effects within more diverse sites versus more homogenous sites where opportunities are fewer to cultivate this capacity) for this cluster of measures.

Future research should assess the underlying pathways through which ChalleNGe contributes to some of these changes, as well as further substantiate the impact of the program (and different components of the program) on these types of psychosocial maturity skills. Future follow-up is needed to fine-tune analysis of the pilot aggregate measures as well as to determine the longer-term program effects on these coping skills and the relationship of these skills to other key outcomes for participants in the program, such as work and academic success.

Appendix D

Items and Factor Loadings for Civic Engagement Scales

National Guard Youth ChalleNGe Evaluation

Appendix Table D.1

Items and Factor Loadings for Civic Engagement Scales

Social Responsibility	Good Citizen	Civil Justice
It's important to assist those who are most in need of help	0.446	
Everyone should be concerned with national, state, and local issues	0.723	
It's important to challenge inequalities		0.439
It's important for people to work with local organizations and government to solve problems		0.479
It's important to protest when something in society needs changing		0.526
It's important to follow rules and laws		
Cronbach alpha coefficient	0.49	0.45

Civic Commitment	Justice-Oriented Citizen	Conventional Citizen
It's important to respondent to help those who are less fortunate	0.451	
It's important to respondent to help improve relations between racial and ethnic groups	0.872	
It's important to respondent to serve his/her country		0.409
It's important to respondent to practice his/her religion		0.408
It's important to respondent to be a leader in his/her community		0.599
It's important to respondent to help solve environmental problems		0.593
It's important to respondent to get a job to contribute to society		0.681
It's important to respondent to respect people, no matter who they are		
It's important to respondent to stick up for his/her rights if pushed around		
Cronbach alpha coefficient	0.69	0.65

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Only factor items with loadings greater than or equal to |.30| are shown, based on factor analysis. Factor loadings indicate items that were used to create the respective scales. Items were included on the factors on which they most highly loaded.

Appendix E

Supplementary Subgroup Tables

National Guard Youth ChalleNGe Program

Appendix Table E.1

Impacts on Educational Attainment, by Age at Random Assignment

	Age								
	17 and Over				Under 17				
Outcome	Program Group	Control Group	Impact	P-Value[a]	Program Group	Control Group	Impact	P-Value[a]	H-Stars
Earned high school diploma or GED certificate	61.9	40.3	21.6 ***	0.000	57.6	27.2	30.4 ***	0.000	
High school diploma	21.8	17.9	3.9	0.188	22.0	12.9	9.1 **	0.016	
GED certificate	49.0	24.7	24.3 ***	0.000	46.1	15.6	30.5 ***	0.000	
Both high school diploma and GED certificate	8.8	2.2	6.6 ***	0.000	10.2	1.2	9.0 ***	0.000	
Earned any college credit	22.9	10.3	12.6 ***	0.000	28.0	5.3	22.7 ***	0.000	**
Received college degree	0.4	0.0	0.4	0.323	0.0	0.0	0.0	0.000	
Ever received vocational training	29.4	23.3	6.1 *	0.065	30.5	23.8	6.7	0.131	
Received trade license/training certificate	19.6	18.3	1.3	0.665	18.7	10.7	8.0 **	0.027	
Sample size (total = 1,196)	458	303			278	157			

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Standard errors are presented in this report for all impacts with a p-value of 0.000. Following are the standard errors for all impacts with a p-value of 0.000 (presented in the order in which they appear on the table): "17 and Over": 3.546, 3.518, 1.775, and 2.801. "Under 17": 4.739, 4.601, 2.473, and 0.

National Guard Youth ChalleNGe Program

Appendix Table E.2

Impacts on Current Activities and Periods of Inactivity, by Age at Random Assignment

	Age								
	17 and Over				Under 17				
Outcome	Program Group	Control Group	Impact	P-Value[a]	Program Group	Control Group	Impact	P-Value[a]	H-Stars
Current status									
Currently in (%)									
High school	5.0	9.0	-4.1 **	0.030	9.0	22.6	-13.6 ***	0.000	**
GED prep	9.9	12.7	-2.8	0.241	10.5	11.7	-1.2	0.696	
College courses	11.3	9.1	2.2	0.335	11.8	4.1	7.7 ***	0.008	
Job training	7.2	8.4	-1.2	0.561	6.6	5.4	1.2	0.618	
Currently involved in education and training activities (%)	29.6	32.0	-2.5	0.472	34.0	39.9	-5.9	0.226	
Currently working (%)	55.2	53.5	1.7	0.651	54.1	49.0	5.1	0.308	
Current hourly wage under $6	3.0	4.3	-1.3	0.336	3.1	4.2	-1.1	0.560	
Current hourly wage between $6 and $7.99	12.8	16.1	-3.3	0.199	13.0	20.3	-7.2 **	0.048	
Current hourly wage between $8 and $9.99	23.4	19.3	4.1	0.180	20.3	15.9	4.3	0.266	
Current hourly wage $10 or more	9.5	7.6	2.0	0.358	9.1	4.6	4.5 *	0.096	
Currently working full time (%)	43.5	42.3	1.2	0.736	43.4	36.6	6.8	0.166	
Current average weekly earnings[b] ($)	213	177	36 *	0.056	199	177	21	0.409	
Currently enlisted in the military (%)	11.0	5.7	5.3 **	0.011	11.2	7.5	3.7	0.188	
Active Army	3.8	1.3	2.5 **	0.046	4.8	2.2	2.6	0.171	
Army National Guard	4.0	0.9	3.1 **	0.010	4.3	3.0	1.3	0.500	
Other	2.8	1.4	1.4	0.229	1.1	2.1	-1.0	0.417	
Currently involved in any of the above activities[c] (%)	69.9	67.2	2.7	0.433	74.9	67.7	7.2	0.107	
Has high school diploma or GED certificate and is currently involved in any of the above activities[c] (%)	46.0	27.5	18.5 ***	0.000	43.9	15.0	28.9 ***	0.000	*
Sample size (total = 1,196)	458	303			278	157			

(continued)

Appendix Table E.2 (continued)

Outcome	Age: 17 and Over — Program Group	17 and Over — Control Group	17 and Over — Impact	17 and Over — P-Value[a]	Age: Under 17 — Program Group	Under 17 — Control Group	Under 17 — Impact	Under 17 — P-Value[a]	H-Stars
Periods of inactivity (%)									
Since random assignment, idle for one or more months	46.0	51.8	5.8	0.116	47.1	53.9	6.8	0.175	
Idle for 1-2 months	20.5	16.6	3.9	0.186	20.9	15.2	5.7	0.141	
Idle for 3-11 months	22.2	29.9	-7.7 **	0.017	24.1	27.8	-3.7	0.397	
Idle for a year or more	3.3	5.3	-2.0	0.172	2.2	10.9	-8.8 ***	0.000	**
Sample size (total = 1,196)	458	303			278	157			

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Standard errors are presented in this report for all impacts with a p-value of 0.000. Following are the standard errors for all impacts with a p-value of 0.000 (presented in the order in which they appear on the table): "17 and Over": 3.491. "Under 17": 3.404, 4.409, and 2.274.

[b]Weekly earnings averages include zeroes for respondents who were not employed.

[c]This measure includes any employment, school or GED programs, vocational training, military activities, or any residential programs (not listed separately above).

National Guard Youth ChalleNGe Program

Appendix Table E.3

Impacts on Delinquency and Criminal Activity in the Last 12 Months, by Age at Random Assignment

	Age								
	17 and Over				Under 17				
Outcome	Program Group	Control Group	Impact	P-Value	Program Group	Control Group	Impact	P-Value	H-Stars
Self-reported arrests/convictions (%)									
Arrested	25.4	25.2	0.2	0.940	27.8	27.0	0.8	0.856	
Charged with any crime	24.7	25.2	0.5	0.864	25.4	25.3	-0.1	0.981	
Convicted of any crime[a]	8.6	13.2	4.6 **	0.043	10.7	12.9	2.2	0.486	
Convicted of a violent crime	1.0	0.8	0.3	0.708	2.6	1.7	0.9	0.549	
Convicted of a property crime	2.0	2.6	-0.6	0.599	0.9	5.1	-4.2 ***	0.009	*
Convicted of a drug crime	1.6	2.2	-0.7	0.512	1.1	0.8	0.3	0.787	
Convicted of a public order crime	4.7	8.1	-3.4 *	0.055	7.8	6.4	1.4	0.599	
Self-reported delinquency[b]									
Any incidents (%)	59.6	66.5	-6.9 *	0.055	67.7	64.6	3.1	0.516	*
Any violent incidents (%)	26.6	35.9	-9.3 ***	0.006	58.7	58.4	0.3	0.950	
Any property incidents (%)	51.6	55.0	-3.5	0.345	29.0	34.2	-5.2	0.264	
Number of incidents	3.1	4.2	-1.1 ***	0.003	3.6	3.7	-0.1	0.908	
Number of violent incidents	1.8	2.4	-0.6 ***	0.008	2.3	2.0	0.3	0.369	**
Number of property incidents	0.9	1.3	-0.4 *	0.057	0.9	1.4	-0.5 *	0.084	
Sample size (total = 1,196)	458	303			278	157			

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Conviction categories from Langan and Levin (2002).

[b]See full list of types of delinquency in Box 2.

National Guard Youth ChalleNGe Program

Appendix Table E.4

Impacts on Health, Sexual Activity, and Use of Substances, by Age at Random Assignment

	Age								
	17 and Over				Under 17				
Outcome	Program Group	Control Group	Impact	P-Value	Program Group	Control Group	Impact	P-Value	H-Stars
Physical and mental health									
Overweight[a] (%)	26.9	26.5	0.4	0.902	23.3	23.4	-0.1	0.975	
Obese[a] (%)	10.9	11.5	-0.6	0.811	8.1	10.3	-2.2	0.456	
Overall health either excellent or good (%)	69.7	69.8	0.0	0.990	74.3	68.2	6.1	0.174	
Psychological distress score[b]	5.0	4.9	0.1	0.711	4.8	5.3	-0.5	0.221	
Serious psychological distress[b] (%)	5.5	4.7	0.9	0.591	6.4	5.8	0.6	0.818	
Sexual activity (%)									
Sexually active	88.4	86.9	1.4	0.558	90.6	86.6	4.0	0.200	
Always uses birth control	53.3	51.8	1.5	0.693	53.8	58.1	-4.3	0.384	
Uses birth control sometimes of most of the time	27.7	26.5	1.2	0.710	28.3	20.4	7.9 *	0.072	
Never uses birth control	10.2	11.5	-1.3	0.579	11.0	12.5	-1.5	0.639	
Drug and alcohol use (%)									
Binge drinking (5 or more drinks in a row) in the last 14 days	2.4	5.1	-2.7 *	0.050	3.1	3.7	-0.6	0.740	
Frequent marijuana use (10 or more occasions) in the last 12 months	22.0	26.0	-4.0	0.204	24.2	22.7	1.5	0.727	
Ever used other illegal drugs[c]	26.2	25.6	0.6	0.840	21.7	19.5	2.3	0.561	
Frequent illegal drug use (6 or more occasions) in the last 12 months	6.3	4.0	2.3	0.179	4.7	3.3	1.4	0.479	
Sample size (total = 1,196)	458	303			278	157			

(continued)

Appendix Table E.4 (continued)

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Body Mass Index (BMI) is a measure of body fat based on height and weight that applies to both adult men and women. BMI is calculated by dividing a person's weight by his or her height squared. A person is defined as overweight if his or her BMI is between 25 and 29.9. A person is defined as obese if his or her BMI is 30 or higher.

[b]The K6 scale is the sum of the responses to six questions asking how often a respondent experienced symptoms of psychological distress. The scale ranges from 0 to 24. A score of 13 points or more on the K6 scale is considered an indication of serious psychological distress. http://www.hcp.med.harvard.edu/ncs/k6_scales.php.

[c]"Other illegal drugs" refers to drugs other than marijuana. Examples given in the survey question included: LSD or other psychedelic drugs, cocaine, crystal meth, amphetamines, barbiturates, heroin, and performance-enhancing substances like anabolic steroids.

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Appendix Table E.5

Impacts on Living, Marital, and Parental Status, by Age at Random Assignment

	Age								
	17 and Over				Under 17				
Outcome (%)	Program Group	Control Group	Impact	P-Value[a]	Program Group	Control Group	Impact	P-Value[a]	H-Stars
Living and marital status									
Living at parents' home	58.7	54.5	4.1	0.257	54.3	72.2	-17.9 ***	0.000	***
Living in own home or apartment	20.0	19.8	0.2	0.947	17.5	9.7	7.8 **	0.026	*
Living in someone else's home	16.9	19.9	-3.0	0.289	20.0	15.0	5.0	0.204	*
Other living arrangement[b]	4.4	5.8	-1.3	0.408	8.2	2.8	5.4 **	0.025	**
Never married and not living with a partner	84.4	82.7	1.7	0.530	88.2	82.8	5.4	0.119	
Married or living with a partner	14.8	16.7	-2.0	0.470	10.8	15.7	-5.0	0.138	
Divorced or separated	0.8	0.6	0.2	0.727	1.0	1.5	-0.4	0.698	
Parental status									
Has at least one child or is pregnant	16.5	15.3	1.2	0.668	17.0	11.7	5.3	0.126	
Has a child	15.0	13.9	1.1	0.682	16.1	11.1	5.0	0.147	
Pregnant	1.5	2.0	-0.5	0.549	1.3	0.9	0.4	0.696	
Sample size (total = 1,196)	458	303			278	157			

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Standard errors are presented in this report for all impacts with a p-value of 0.000. Following are the standard errors for all impacts with a p-value of 0.000 (presented in the order in which they appear on the table): 4.854.

[b]"Other living arrangement" includes: living in a group home or homeless shelter, not living anywhere (homeless), or any other arrangement not specifically listed.

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Appendix Table E.6

Impacts on Educational Attainment, by Academic Performance

	Academic Performance								
	Mostly Ds and Fs				Mostly Better than Ds and Fs				
Outcome (%)	Program Group	Control Group	Impact	P-Value[a]	Program Group	Control Group	Impact	P-Value[a]	H-Stars
Earned high school diploma or GED certificate	54.9	32.8	22.1 ***	0.000	65.4	37.9	27.5 ***	0.000	
High school diploma	14.3	16.6	-2.2	0.487	29.6	15.4	14.1 ***	0.000	***
GED certificate	46.4	18.0	28.4 ***	0.000	50.0	24.2	25.8 ***	0.000	
Both high school diploma and GED certificate	5.6	1.7	3.8 **	0.031	14.2	1.8	12.4 ***	0.000	***
Earned any college credit	23.7	8.3	15.4 ***	0.000	24.8	10.0	14.8 ***	0.000	
Received college degree	0.5	0.1	0.4	0.485	0.4	0.0	0.3	0.402	
Ever received vocational training	27.5	20.2	7.2 *	0.062	32.4	26.2	6.2	0.101	
Received trade license/training certificate	14.5	13.0	1.5	0.641	23.3	15.7	7.6 **	0.023	
Sample size (total = 1,161)	333	207			382	239			

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Standard errors are presented in this report for all impacts with a p-value of 0.000. Following are the standard errors for all impacts with a p-value of 0.000 (presented in the order in which they appear on the table): "Mostly Ds and Fs": 4.250, 4.106, and 3.394. "Mostly Better than Ds and Fs": 3.899, 3.378, 3.901, 2.317, and 3.172.

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Appendix Table E.7

Impacts on Current Activities and Periods of Inactivity, by Academic Performance

	Academic Performance								
	Mostly Ds and Fs				Mostly Better than Ds and Fs				
Outcome	Program Group	Control Group	Impact	P-Value[a]	Program Group	Control Group	Impact	P-Value[a]	H-Stars
Current status									
Currently in (%)									
High school	6.9	16.9	-10.1 ***	0.000	6.1	10.5	-4.4 *	0.051	
GED prep	11.7	13.7	-2.0	0.501	9.1	13.7	-4.7 *	0.071	
College courses	10.5	8.7	1.8	0.516	12.5	5.7	6.7 ***	0.006	
Job training	7.0	4.4	2.6	0.230	8.1	9.1	-1.0	0.675	
Currently involved in education and training activities (%)	32.9	37.0	-4.1	0.338	31.3	32.4	-1.1	0.771	
Currently working (%)	53.6	48.0	5.6	0.202	58.3	54.2	4.2	0.309	
Current hourly wage under $6	2.6	4.5	-1.9	0.244	3.9	4.1	-0.2	0.907	
Current hourly wage between $6 and $7.99	11.0	15.9	-4.8	0.110	15.0	18.4	-3.4	0.265	
Current hourly wage between $8 and $9.99	23.8	16.3	7.5 **	0.042	21.9	19.6	2.3	0.489	
Current hourly wage $10 or more	10.4	5.8	4.7 *	0.066	8.5	7.1	1.4	0.547	
Currently working full time (%)	42.6	32.8	9.8 **	0.023	46.5	45.0	1.5	0.715	
Current average weekly earnings[b] ($)	204	142	62 ***	0.004	220	198	22	0.309	
Currently enlisted in the military (%)	11.4	8.0	3.4	0.192	8.9	5.1	3.7 *	0.074	
Active Army	4.5	2.9	1.7	0.339	3.8	0.7	3.1 **	0.018	
Army National Guard	4.4	1.3	3.2 **	0.045	2.8	1.3	1.5	0.208	
Other	2.2	2.3	-0.2	0.898	1.8	1.5	0.3	0.800	
Currently involved in any of the above activities[c] (%)	71.4	68.8	2.6	0.523	73.6	66.8	6.8 *	0.071	
Has high school diploma or GED certificate and is currently involved in any of the above activities[c] (%)	40.4	21.7	18.7 ***	0.000	49.8	22.9	26.9 ***	0.000	
Sample size (total = 1,161)	333	207			382	239			

(continued)

Appendix Table E.7 (continued)

Outcome	Academic Performance: Mostly Ds and Fs — Program Group	Mostly Ds and Fs — Control Group	Mostly Ds and Fs — Impact	Mostly Ds and Fs — P-Value[a]	Mostly Better than Ds and Fs — Program Group	Mostly Better than Ds and Fs — Control Group	Mostly Better than Ds and Fs — Impact	Mostly Better than Ds and Fs — P-Value[a]	H-Stars
Periods of inactivity (%)									
Since random assignment, idle for one or more months	48.3	52.8	4.5	0.317	43.4	53.2	9.7 **	0.019	
Idle for 1-2 months	21.0	15.4	5.6	0.108	19.7	18.2	1.5	0.646	
Idle for 3-11 months	24.0	31.0	-7.0 *	0.080	21.6	27.2	-5.6	0.113	
Idle for a year or more	3.3	6.4	-3.2 *	0.091	2.1	7.8	-5.6 ***	0.001	
Sample size (total = 1,161)	333	207			382	239			

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Standard errors are presented in this report for all impacts with a p-value of 0.000. Following are the standard errors for all impacts with a p-value of 0.000 (presented in the order in which they appear on the table): "Mostly Ds and Fs": 2.741, and 4.042. "Mostly Better than Ds and Fs": 3.834.

[b]Weekly earnings averages include zeroes for respondents who were not employed.

[c]This measure includes any employment, school or GED programs, vocational training, military activities, or any residential programs (not listed separately above).

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Appendix Table E.8

Impacts on Delinquency and Criminal Activity in the Last 12 Months, by Academic Performance

	Academic Performance								
	Mostly Ds and Fs				Mostly Better Than Ds and Fs				
Outcome	Program Group	Control Group	Impact	P-Value[a]	Program Group	Control Group	Impact	P-Value[a]	H-Stars
Self-reported arrests/convictions (%)									
Arrested	28.0	23.9	4.1	0.289	27.2	25.7	1.5	0.682	
Charged with any crime	28.0	23.6	-4.4	0.256	24.1	25.1	1.0	0.773	
Convicted of any crime[b]	8.6	11.3	2.6	0.318	8.2	11.6	3.4	0.164	
Convicted of a violent crime	1.2	1.3	-0.1	0.946	1.3	0.7	0.6	0.514	
Convicted of a property crime	1.6	3.6	-2.0	0.156	1.5	2.7	-1.2	0.327	
Convicted of a drug crime	1.6	1.3	0.3	0.802	1.0	1.7	-0.7	0.428	
Convicted of a public order crime	5.4	5.0	0.4	0.829	5.2	7.3	-2.1	0.279	
Self-reported delinquency[c]									
Any incidents (%)	65.8	69.7	-3.9	0.350	60.3	63.2	-2.9	0.467	
Any violent incidents (%)	57.3	62.9	-5.6	0.202	52.6	51.5	1.1	0.793	
Any property incidents (%)	30.5	37.7	-7.1 *	0.091	26.0	32.5	-6.6 *	0.078	
Number of incidents	3.3	4.7	-1.4 ***	0.002	3.4	3.5	-0.1	0.810	**
Number of violent incidents	2.1	2.4	-0.3	0.170	2.0	2.1	-0.1	0.765	
Number of property incidents	0.8	1.7	-0.9 ***	0.000	0.9	1.0	-0.1	0.619	**
Sample size (total = 1,161)	333	207			382	239			

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Standard errors are presented in this report for all impacts with a p-value of 0.000. Following are the standard errors for all impacts with a p-value of 0.000 (presented in the order in which they appear on the table): "Mostly Ds and Fs": 0.241.

[b]Conviction categories from Langan and Levin (2002).

[c]See full list of types of delinquency in Box 2.

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Appendix Table E.9

Impacts on Health, Sexual Activity, and Use of Substances, by Academic Performance

	Academic Performance								
	Mostly Ds and Fs				Mostly Better than Ds and Fs				
Outcome	Program Group	Control Group	Impact	P-Value	Program Group	Control Group	Impact	P-Value	H-Stars
Physical and mental health									
Overweight[a] (%)	25.2	20.8	4.4	0.255	24.7	27.5	-2.8	0.443	
Obese[a] (%)	8.4	16.2	-7.8 ***	0.007	10.8	7.8	3.0	0.233	***
Overall health either excellent or good (%)	73.9	66.5	7.4 *	0.070	69.5	72.9	-3.4	0.358	*
Psychological distress score[b]	4.6	5.1	-0.5	0.192	5.2	5.0	0.1	0.682	
Serious psychological distress[b] (%)	3.3	2.9	0.4	0.812	7.2	6.4	0.8	0.694	
Sexual activity (%)									
Sexually active	90.5	88.1	2.4	0.380	88.0	85.6	2.3	0.402	
Always uses birth control	53.7	60.1	-6.4	0.149	51.3	47.0	4.3	0.301	*
Uses birth control sometimes or most of the time	30.3	21.0	9.3 **	0.019	27.9	29.1	-1.2	0.755	*
Never uses birth control	9.4	9.3	0.1	0.955	11.6	13.5	-1.9	0.478	
Drug and alcohol use (%)									
Binge drinking (5 or more drinks in a row) in the last 14 days	4.1	6.3	-2.2	0.247	2.1	3.2	-1.1	0.410	
Frequent marijuana use (10 or more occasions) in the last 12 months	18.8	29.6	-10.9 ***	0.004	26.3	21.3	5.0	0.155	***
Ever used other illegal drugs[c]	20.4	20.4	0.0	0.996	27.4	26.3	1.1	0.752	
Frequent illegal drug use (6 or more occasions) in the last 12 months	5.3	6.6	-1.3	0.530	6.5	1.7	4.9 ***	0.005	**
Sample size (total = 1,161)	333	207			382	239			

(continued)

Appendix Table E.9 (continued)

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Body Mass Index (BMI) is a measure of body fat based on height and weight that applies to both adult men and women. BMI is calculated by dividing a person's weight by his or her height squared. A person is defined as overweight if his or her BMI is between 25 and 29.9. A person is defined as obese if his or her BMI is 30 or higher.

[b]The K6 scale is the sum of the responses to six questions asking how often a respondent experienced symptoms of psychological distress. The scale ranges from 0 to 24. A score of 13 points or more on the K6 scale is considered an indication of serious psychological distress. http://www.hcp.med.harvard.edu/ncs/k6_scales.php.

[c]"Other illegal drugs" refers to drugs other than marijuana. Examples given in the survey question included: LSD or other psychedelic drugs, cocaine, crystal meth, amphetamines, barbiturates, heroin, and performance-enhancing substances like anabolic steroids.

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Appendix Table E.10

Impacts on Living, Marital, and Parental Status, by Academic Performance

	Academic Performance								
	Mostly Ds and Fs				Mostly Better than Ds and Fs				
Outcome (%)	Program Group	Control Group	Impact	P-Value	Program Group	Control Group	Impact	P-Value	H-Stars
Living and marital status									
Living at parents' home	59.8	62.8	-3.0	0.494	55.0	56.7	-1.6	0.696	
Living in own home or apartment	16.9	14.0	3.0	0.359	21.6	18.3	3.3	0.322	
Living in someone else's home	17.7	19.3	-1.5	0.660	17.7	18.7	-1.1	0.736	
Other living arrangement[a]	5.5	4.0	1.5	0.430	5.7	5.9	-0.2	0.925	
Never married and not living with a partner	84.7	84.0	0.7	0.822	85.2	80.2	5.0	0.110	
Married or living with a partner	14.7	14.8	0.0	0.990	13.3	19.0	-5.7 *	0.060	
Divorced or separated	0.6	1.2	-0.7	0.381	1.5	0.8	0.7	0.465	
Parental status									
Has at least one child or is pregnant	16.2	9.7	6.5 **	0.030	18.4	19.5	-1.1	0.721	*
Has a child	14.9	8.3	6.5 **	0.024	17.0	18.8	-1.8	0.562	*
Pregnant	1.5	1.6	-0.1	0.904	1.4	1.4	0.0	0.965	
Sample size (total = 1,161)	333	207			382	239			

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]"Other living arrangement" includes: living in a group home or homeless shelter, not living anywhere (homeless), or any other arrangement not specifically listed.

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Appendix Table E.11

Impacts on Educational Attainment, by Delinquency Level

	Delinquency Level								
	Ever Arrested/Convicted				Never Arrested/Convicted				
Outcome (%)	Program Group	Control Group	Impact	P-Value[a]	Program Group	Control Group	Impact	P-Value[a]	H-Stars
Earned high school diploma or GED certificate	54.0	30.9	23.1 ***	0.000	64.4	40.4	24.0 ***	0.000	
High school diploma	16.1	12.8	3.2	0.377	27.1	18.7	8.3 ***	0.007	
GED certificate	45.0	18.5	26.6 ***	0.000	50.8	24.4	26.4 ***	0.000	
Both high school and GED certificate	7.0	0.3	6.7 ***	0.003	13.4	2.8	10.6 ***	0.000	
Earned any college credit	23.7	7.5	16.2 ***	0.000	26.0	10.2	15.9 ***	0.000	
Received college degree	0.3	0.0	0.3	0.570	0.2	0.0	0.2	0.474	
Ever received vocational training	26.2	15.5	10.7 **	0.017	31.1	26.5	4.5	0.172	
Received trade license/training certificate	20.6	14.0	6.6	0.116	18.3	15.7	2.5	0.362	
Sample size (total = 1,177)	267	132			457	321			

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Standard errors are presented in this report for all impacts with a p-value of 0.000. Following are the standard errors for all impacts with a p-value of 0.000 (presented in the order in which they appear on the table): "Ever Arrested/Convicted": 5.126, 4.917, and 4.069. "Never Arrested/Convicted": 3.442, 3.438, 2.031, and 2.848.

National Guard Youth ChalleNGe Program

Appendix Table E.12

Impacts on Current Activities and Periods of Inactivity, by Delinquency Level

	Delinquency Level								
	Ever Arrested/Convicted				Never Arrested/Convicted				
Outcome	Program Group	Control Group	Impact	P-Value[a]	Program Group	Control Group	Impact	P-Value[a]	H-Stars
Current status									
Currently in (%)									
High school	8.8	12.8	-4.0	0.213	5.8	14.1	-8.3 ***	0.000	
GED prep	9.6	13.7	-4.1	0.222	10.0	13.9	-3.8	0.103	
College courses	8.8	5.9	2.9	0.302	13.2	9.0	4.2 *	0.074	
Job training	5.4	7.1	-1.7	0.491	8.7	8.5	0.3	0.903	
Currently involved in education and training activities (%)	29.7	31.7	-2.0	0.690	32.9	37.4	-4.5	0.200	
Currently working (%)	55.2	47.8	7.4	0.161	54.9	52.2	2.8	0.447	
Current hourly wage under $6	3.7	3.0	0.7	0.730	2.4	3.6	-1.2	0.342	
Current hourly wage between $6 and $7.99	10.2	17.0	-6.8 *	0.056	14.1	16.9	-2.9	0.270	
Current hourly wage between $8 and $9.99	23.2	23.6	-0.5	0.920	21.6	17.7	3.9	0.186	
Current hourly wage $10 or more	8.9	3.1	5.9 **	0.033	10.2	7.6	2.7	0.209	
Currently working full time	44.3	41.4	2.9	0.582	42.9	38.5	4.5	0.212	
Current average weekly earnings ($)[b]	219	150	69 **	0.012	204	176	28	0.107	
Currently enlisted in the military (%)	10.8	0.9	9.9 ***	0.000	10.4	7.8	2.6	0.207	**
Active Army	5.4	0.4	5.0 **	0.013	2.8	2.0	0.8	0.480	*
Army National Guard	4.8	-0.2	5.0 ***	0.006	3.4	2.4	0.9	0.446	*
Other	0.7	0.7	0.0	0.994	3.6	1.9	1.7	0.165	
Currently involved in any of the above activities (%)	72.1	57.8	14.3 ***	0.004	72.2	71.8	0.4	0.900	**
Has high school diploma or GED certificate and is currently involved in any of the above activities (%)[c]	41.7	12.3	29.4 ***	0.000	47.6	28.0	19.6 ***	0.000	*
Sample size (total = 1,177)	267	132			457	321			

(continued)

Appendix Table E.12 (continued)

Outcome	Delinquency Level: Ever Arrested/Convicted — Program Group	Ever Arrested/Convicted — Control Group	Ever Arrested/Convicted — Impact	Ever Arrested/Convicted — P-Value[a]	Never Arrested/Convicted — Program Group	Never Arrested/Convicted — Control Group	Never Arrested/Convicted — Impact	Never Arrested/Convicted — P-Value[a]	H-Stars
Periods of inactivity (%)									
Since random assignment, idle for one or more months	49.2	52.5	3.3	0.538	44.9	52.7	7.8 **	0.033	
Idle for 1-2 months	23.5	14.5	9.1 **	0.035	18.5	17.3	1.2	0.676	
Idle for 3-11 months	22.9	31.4	-8.5 *	0.069	23.9	28.4	-4.4	0.164	
Idle for a year or more	2.8	6.6	-3.9 *	0.080	2.5	7.1	-4.5 ***	0.003	
Sample size (total = 1,177)	267	132			457	321			

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Standard errors are presented in this report for all impacts with a p-value of 0.000. Following are the standard errors for all impacts with a p-value of 0.000 (presented in the order in which they appear on the table): "Ever Arrested/Convicted": 2.730, and 4.712. "Never Arrested/Convicted": 2.094, and 3.418.

[b]Weekly earnings averages include zeroes for respondents who were not employed.

[c]This measure includes any employment, school or GED programs, vocational training, military activities, or any residential programs (not listed separately above).

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Appendix Table E.13

Impacts on Delinquency and Criminal Activity in the Last 12 Months, by Delinquency Level

	Delinquency Level								
	Ever Arrested/Convicted				Never Arrested/Convicted				
Outcome	Program Group	Control Group	Impact	P-Value	Program Group	Control Group	Impact	P-Value	H-Stars
Self-reported arrests/convictions (%)									
Arrested	37.4	40.4	-3.0	0.556	19.7	20.8	-1.2	0.683	
Charged with any crime	34.7	39.4	4.7	0.358	19.0	20.6	1.7	0.570	
Convicted of any crime[a]	13.3	17.7	4.4	0.248	5.4	11.3	5.9 ***	0.002	
Convicted of a violent crime	3.6	0.5	3.1 *	0.072	0.1	1.2	-1.2 **	0.041	**
Convicted of a property crime	1.0	2.5	-1.5	0.272	1.4	4.8	-3.3 ***	0.008	
Convicted of a drug crime	2.4	2.7	-0.3	0.877	0.3	1.3	-1.0	0.104	
Convicted of a public order crime	7.9	12.3	-4.4	0.165	4.0	5.0	-1.0	0.477	
Self-reported delinquency[b]									
Any incidents (%)	67.0	56.9	10.1 **	0.047	57.9	66.7	-8.8 **	0.013	***
Any violent incidents (%)	58.0	46.6	11.4 **	0.029	49.3	58.9	-9.6 ***	0.009	***
Any property incidents (%)	29.5	34.7	-5.2	0.301	24.8	34.4	-9.6 ***	0.004	
Number of incidents	3.4	3.7	-0.2	0.667	2.9	4.2	-1.2 ***	0.001	
Numbers of violent incidents	2.1	2.0	0.1	0.821	1.8	2.3	-0.5 **	0.013	
Number of property incidents	0.9	1.1	-0.2	0.463	0.8	1.5	-0.7 ***	0.001	
Sample size (total = 1,177)	267	132			457	321			

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Conviction categories from Langan and Levin (2002).

[b]See full list of types of delinquency in Box 2.

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Appendix Table E.14

Impacts on Health, Sexual Activity, and Use of Substances, by Delinquency Level

	Delinquency Level								
	Ever Arrested/Convicted				Never Arrested/Convicted				
Outcome	Program Group	Control Group	Impact	P-Value	Program Group	Control Group	Impact	P-Value	H-Stars
Physical and mental health									
Overweight (%)[a]	20.9	23.2	-2.3	0.602	29.2	25.9	3.3	0.325	
Obese (%)[a]	10.2	9.8	0.4	0.900	9.8	13.3	-3.5	0.133	
Overall health either excellent or good (%)	67.4	76.1	-8.7 *	0.077	73.5	67.8	5.7 *	0.082	**
Psychological distress score[b]	5.2	4.7	0.5	0.273	4.6	5.2	-0.6 *	0.065	*
Serious psychological distress (%)[b]	5.5	4.5	1.0	0.646	5.4	5.7	-0.4	0.821	
Sexual activity (%)									
Sexually active	91.7	89.3	2.4	0.443	87.6	84.9	2.7	0.285	
Always uses birth control	51.0	48.6	2.4	0.659	55.7	54.4	1.3	0.729	
Uses birth control sometimes of most of the time	32.8	29.8	3.0	0.548	24.9	22.8	2.1	0.512	
Never uses birth control	10.3	17.0	-6.7 *	0.053	10.4	9.7	0.7	0.732	*
Drug and alcohol use (%)									
Binge drinking (5 or more drinks in a row) in the last 14 days	4.1	4.2	0.0	0.992	2.6	5.1	-2.5 *	0.072	
Frequent marijuana use (10 or more occasions) in the last 12 months	28.3	31.0	-2.8	0.565	17.7	23.0	-5.3 *	0.070	
Ever used other illegal drugs[c]	28.4	26.2	2.2	0.626	20.4	22.8	-2.4	0.413	
Frequent illegal drug use (6 or more occasions) in the last 12 months	5.7	4.1	1.6	0.507	5.3	3.9	1.5	0.348	
Sample size (total = 1,177)	267	132			457	321			

(continued)

Appendix Table E.14 (continued)

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]Body Mass Index (BMI) is a measure of body fat based on height and weight that applies to both adult men and women. BMI is calculated by dividing a person's weight by his or her height squared. A person is defined as overweight if his or her BMI is between 25 and 29.9. A person is defined as obese if his or her BMI is 30 or higher.

[b]The K6 scale is the sum of the responses to six questions asking how often a respondent experienced symptoms of psychological distress. The scale ranges from 0 to 24. A score of 13 points or more on the K6 scale is considered an indication of serious psychological distress. http://www.hcp.med.harvard.edu/ncs/k6_scales.php.

[c]"Other illegal drugs" refers to drugs other than marijuana. Examples given in the survey question included: LSD or other psychedelic drugs, cocaine, crystal meth, amphetamines, barbiturates, heroin, and performance-enhancing substances like anabolic steroids.

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Appendix Table E.15

Impacts on Living, Marital, and Parental Status, by Delinquency Level

	Delinquency Level								
	Ever Arrested/Convicted				Never Arrested/Convicted				
Outcome (%)	Program Group	Control Group	Impact	P-Value	Program Group	Control Group	Impact	P-Value	H-Stars
Living and marital status									
Living at parents' home	56.6	60.1	-3.4	0.522	60.0	60.5	-0.5	0.882	
Living in own home or apartment	22.4	16.8	5.6	0.200	16.3	14.9	1.4	0.597	
Living in someone else's home	15.7	19.6	-3.9	0.334	18.1	18.3	-0.3	0.927	
Other living arrangement[a]	5.3	3.2	2.1	0.337	5.6	6.2	-0.6	0.725	
Never married and not living with a partner	82.6	79.6	3.0	0.462	87.1	84.6	2.6	0.311	
Married or living with a partner	15.6	17.4	-1.8	0.654	12.4	15.4	-3.0	0.230	
Divorced or separated	1.7	3.0	-1.3	0.405	0.5	0.0	0.4	0.244	
Parental status									
Has at least one child or is pregnant	19.9	24.2	-4.3	0.318	15.9	11.4	4.5 *	0.067	*
Has a child	19.2	22.6	-3.4	0.424	14.1	10.7	3.4	0.150	
Pregnant	0.8	1.6	-0.8	0.436	1.7	1.7	0.1	0.927	
Sample size (total = 1,177)	267	132			457	321			

SOURCE: MDRC calculations from responses to the 21-month survey.

NOTES: Estimates are regression-adjusted using ordinary least squares, controlling for sample member characteristics. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

The H-statistic was used to test for statistically significant differences in impact estimates across different subgroups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

[a]"Other living arrangement" includes: living in a group home or homeless shelter, not living anywhere (homeless), or any other arrangement not specifically listed.

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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.