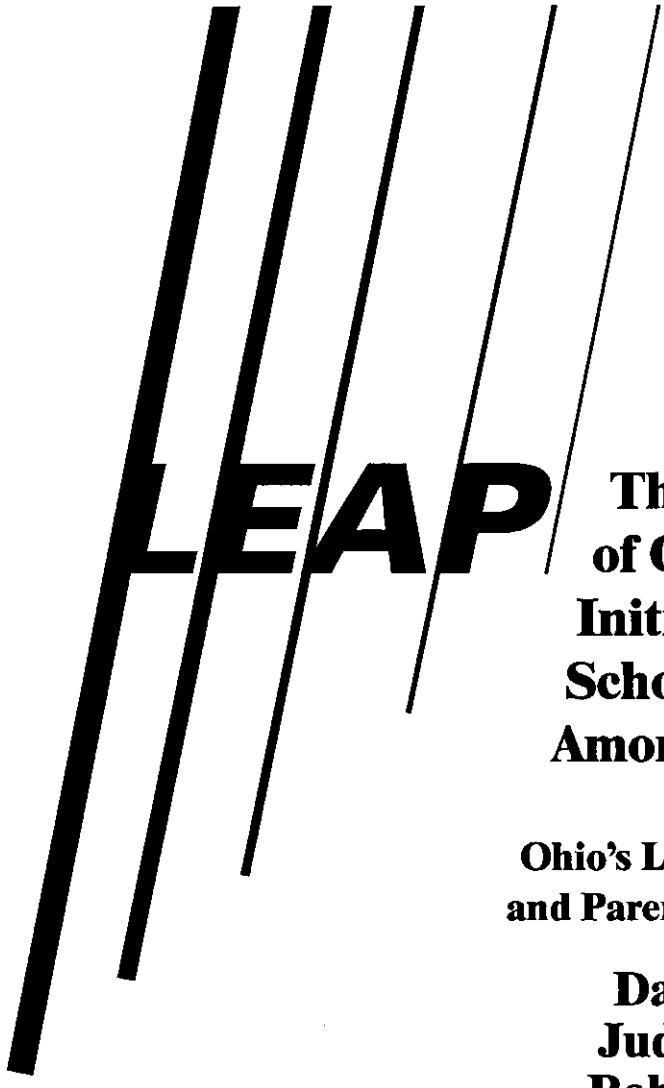

Three-Year Impacts of Ohio's Welfare Initiative to Improve School Attendance Among Teenage Parents

Ohio's Learning, Earning, and Parenting Program

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MDRC

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PREFACE

This report provides timely new information on the success of an important approach to addressing two critical domestic policy concerns: the long period that teen mothers on welfare often spend on public assistance and the high rate at which poor teenagers drop out of school. In 1989, the state of Ohio sought to address both issues, and to do so on a large scale. Targeting all of the state's teen mothers on welfare who had not completed high school, Ohio's LEAP program uses financial incentives and penalties, combined with case management and support services, as a means to promote school attendance. In effect, LEAP ties the size of the welfare grant to whether a teen mother goes to school. Through this, the program seeks to foster school completion and, ultimately, increase employment and self-sufficiency and reduce reliance on public assistance.

This is the fourth in a series of reports from a 12-county study, which MDRC is conducting for the Ohio Department of Human Services. The first report showed that, after the expected start-up problems, LEAP proved operationally feasible: Schools and the welfare department implemented the reporting and data systems needed to operate the bonus and grant reduction system and manage the program. The second report found that LEAP prevented some in-school teens from dropping out and brought some dropouts back to school. The third report, covering only Cleveland, showed that the increased school attendance translated into a significant increase in school completion (primarily high school graduation but also receipt of a GED, a high school equivalency certificate) for teens who *were enrolled* in school when they entered the program, but little if any gain for teens who *had dropped out* of school prior to their exposure to LEAP. The latter group often experienced repeated grant reductions (sanctions) for failing to return to school or attend regularly.

This report looks at LEAP's effects on school completion, employment, welfare receipt, and other outcomes for a subsample of teens in 7 of the 12 counties three years after they were determined to be eligible for LEAP. As in the last report, the results differ sharply for teens who were and were not enrolled in school when they were found eligible for LEAP.

- For initially enrolled teens, LEAP increased school completion (although primarily GED completion) by almost 20 percent and increased employment by over 40 percent.
- For dropouts, there was no increase in school completion or employment, despite high sanctioning.
- Overall, fewer teens remained on welfare, although the receipt rates were still very high.
- In Cleveland, but not in the other large cities, LEAP substantially increased high school graduation rates, suggesting the importance of both providing special services to keep teens in school and setting restrictions on leaving high school to enter a GED program.

These new findings show that LEAP's incentives clearly mattered: More young people completed school (or were still enrolled), went to work, and/or left welfare. The greater success in Cleveland, moreover, suggests some strategies to improve on these results. But the report also reminds us that there are no easy answers. For the tougher group – those who were initially out of

school – LEAP produced no gains and repeated sanctions. Overall, too many teens returned to school only to leave again without getting a diploma. And too many remained on welfare and not employed.

Earlier LEAP reports found that a troublingly large number of teens described their schools as dangerous and disorderly places where learning was difficult. This suggests that, for LEAP to reach its full potential, something will have to change in the public schools, and not only in the welfare department. This challenge takes on new urgency, since LEAP-like requirements were mandated in the welfare reform legislation that passed Congress in 1995.

This report does not tell the complete LEAP story. The final report, available in about a year, will track a much larger sample of teens for a longer time in all 12 counties. While long follow-up is always informative, the youth of many of the LEAP teens makes this essential to reaching a final conclusion on the program's achievements.

Multi-year evaluations like this one require the sustained commitment of staff in the agencies that run the programs and that fund the study. This study benefited from an unusual public-private partnership including staff in the 12 Ohio counties, the state Department of Human Services, and a group of additional funders. This report's publication is a welcome opportunity to express our appreciation for their support.

Judith M. Gueron
President

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EXECUTIVE SUMMARY

This report presents the latest findings on the effectiveness of Ohio's Learning, Earning, and Parenting (LEAP) Program, a statewide welfare initiative that uses financial incentives and penalties to promote school attendance by pregnant and parenting teenagers on welfare, the group most likely to become long-term welfare recipients. LEAP requires these teens to stay in school and attend regularly or, if they have dropped out, to return to school or enter a program to prepare for the GED (General Educational Development, or high school equivalency) test. The program thereby strives to increase the proportion of teens who graduate from high school or receive a GED, find jobs, and ultimately achieve self-sufficiency.

Teens who meet LEAP's requirements have their welfare checks increased — $62 for school enrollment and an additional $62 each month they attend school regularly — and teens who do not (without an acceptable reason) have $62 deducted from their welfare grant every month until they comply with program rules. Those who exceed the allowed number of total absences in a month but not the allowed number of unexcused absences qualify for neither a bonus nor a sanction. Teens may be temporarily exempted from LEAP's requirements for medical reasons, to care for an infant, or if child care or transportation is unavailable, and they are no longer subject to the requirements when they reach the age of 20. During most of the period covered by this report, a teen living on her own with one child — the most common situation — was eligible for a monthly AFDC grant of $274. Thus, a bonus raised her grant to $336 and a sanction reduced it to $212.

Teens' enrollment and attendance are monitored by case managers, who explain the program's rules, offer guidance, and authorize assistance with child care and transportation teens may need to attend school. LEAP itself provides no other services, although many Ohio high schools have special programs, called GRADS, which are designed to assist teen parents in managing their dual roles as parents and students.

This is the fourth report from an evaluation of LEAP's operations, results, and cost-effectiveness, which the Manpower Demonstration Research Corporation (MDRC) has been conducting since the program began in 1989.[1] The evaluation is being conducted under contract to the Ohio Department of Human Services (ODHS), with additional funding provided by the Ford Foundation, the Cleveland Foundation, BP America, the Treu-Mart Fund, the George Gund Foundation, the Procter & Gamble Fund, and the U.S. Department of Health and Human Services.

The report focuses on the experience of teens in seven counties (with about half of the statewide LEAP caseload) three years after they were found eligible for LEAP.[2] These teens became eligible during the program's first two years of operation, and all of them encountered LEAP early in its evolution. Given the program's improvement since that time, the findings in this report may be

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[1]MDRC's previous three reports on LEAP are: Dan Bloom, Hilary Kopp, David Long, and Denise Polit, *LEAP: Implementing a Welfare Initiative to Improve School Attendance Among Teenage Parents* (1991); Dan Bloom, Veronica Fellerath, David Long, and Robert G. Wood, *LEAP: Interim Findings on a Welfare Initiative to Improve School Attendance Among Teenage Parents* (1993); and David Long, Robert G. Wood, and Hilary Kopp, *LEAP: The Educational Effects of LEAP and Enhanced Services in Cleveland* (1994).

[2]Sample members are referred to as "teens" in this report, but at the three-year point, most were no longer teenagers.

conservative estimates of LEAP's effectiveness as a mature program.

The report assesses the program's effects on high school graduation and GED receipt, and on teens' college enrollment, employment and earnings, welfare receipt, and other outcomes. In part because many of the teens were in school or a GED program at the three-year follow-up point, the fifth and final report will use a longer follow-up period — four and a half years — to capture the program's longer-term results. Scheduled for publication in 1997, it will also cover all 12 study counties and will compare LEAP's benefits and costs.

LEAP is directed to a critically important segment of the welfare population, can be operated on a large scale at a relatively low cost, and does not require establishing new agencies or organizations. Thus, policymakers outside Ohio may find the LEAP model an attractive option if it is found to be effective.

An Overview of the Findings

LEAP's incentives were intended to produce a chain of effects on teens' behavior, starting with increased school enrollment and attendance and culminating in reduced welfare dependence and increased self-sufficiency. The program's effectiveness is being evaluated using a research design in which all teens in the study counties who were determined to be eligible for LEAP during its first two years of operation were, at the same time, assigned at random to either a program group (subject to LEAP) or a control group (not subject to LEAP). The measured average differences between the two groups' outcomes over time (e.g., their differences in rates of high school graduation or GED attainment, employment, or welfare receipt) are the observed results (or "impacts") of LEAP. Thus far, LEAP has been successful in improving some outcomes in the impact chain; its success has been concentrated among teens who had *not* dropped out of school at the time they were found eligible for the program.

Virtually all program group members were reached by LEAP's incentive structure, with 93 percent qualifying for at least one bonus or "sanction" (grant reduction) during their first 18 months in the program. Overall, the young mothers responded strongly to the incentives: The program had large impacts on school enrollment and attendance, as described in previous reports. At the three-year point examined in this report, LEAP's impacts on subsequent outcomes were both smaller and sometimes less consistent across locations and groups within the LEAP population. There were clear impacts on school progress (completion of the ninth, tenth, and eleventh grades); however, LEAP increased high school graduation and GED receipt in some communities, but not in others. LEAP teens — possibly as a result of spending more time in school (even without graduating) and attaining GEDs — were more likely to be working and less likely to be on welfare: At the three-year follow-up point, the program group's employment rate (33 percent) was higher than the control group's (28 percent), and a larger percentage had left the welfare rolls (17 percent compared to 12 percent).

LEAP's success varied greatly for the two major groups within the LEAP population. For teens who were *enrolled* in high school or a GED program when they became eligible for LEAP (referred to as the "initially enrolled" teens), the program had significant effects on a combined measure of high school graduation or GED receipt (primarily GED receipt) and on employment. High school graduation/GED receipt rose by close to 20 percent: 46 percent of initially enrolled teens in the program group received a high school diploma or GED within three years, compared to 39 percent of the control group. (The impact was even larger for younger teens who started LEAP at or close

to their age-for-grade level.) At the three-year point, 66 percent of the initially enrolled teens had graduated or received a GED or were in some type of school program (compared to 57 percent of the control group), although 83 percent were still on welfare. The initially enrolled teens' employment rates increased by over 40 percent: 39 percent of the program group were working (mostly part time), compared to 27 percent of the control group. This employment increase will be very impressive if it holds up for the final report's longer follow-up period and much larger sample.

In contrast, although LEAP induced many *dropouts* to return to school or (more commonly) to enter a GED program, it did not have an appreciable effect on their rates of high school graduation/GED receipt or employment. The program did have some success working with dropouts who were 17 or younger, most of whom had been out of school for less than a year. But it was ineffective in altering the school behavior of older dropouts, who outnumber their younger counterparts. Moreover, in its largely futile effort to change their life course, the program imposed numerous sanctions on many dropouts, who reported diminished spending on essentials for their children as well as themselves. At the three-year point, only a third of these teens had graduated from high school, had received a GED, or were in school or a GED program, and 84 percent remained on welfare.

LEAP's impacts also varied across the study communities, with the most striking difference being between the results in Cleveland — where there were more services to keep teens in school and more restrictions on leaving high school to enter a GED program — and the other areas.[3] First, in Cleveland (where one in six LEAP-eligible teen mothers in Ohio lived), the program's effect on high school graduation/GED receipt was significantly greater than in other large cities. Second, the Cleveland impact, while following the statewide pattern of greater success for initially enrolled teens, was driven mainly by an increase (relative to the control group) in high school graduations rather than GEDs (which was the case in most other locations). Third, the increased rate of high school graduation in Cleveland was followed by a significant increase in college enrollment, a link in the impact chain that was not observed elsewhere. However, at the three-year point, possibly because more teens were enrolled in college, LEAP did not appear to generate larger employment gains in Cleveland, or remove more teens from the welfare rolls, than it did in other communities. Particularly if the longer-term follow-up shows that Cleveland's greater education gains are translating into substantial impacts on employment and welfare receipt, the differences in program implementation across the counties will offer important lessons on strategies to improve LEAP's overall effectiveness.

LEAP uses welfare incentives to try to change teen mothers' school behavior, but it does not do anything to reform the schools, where a large number of LEAP teens reported on a survey that they did not feel safe, experienced frequent class disruptions by other students, and were "given a hard time about being a parent" by both students and teachers. This report shows that financial incentives can make a difference: Teens responded, and this produced some employment and welfare gains. But the limited size of the gains points to how difficult it is to change behavior. Many teen mothers who returned to high school did not graduate, instead dropping out and sometimes choosing the easier GED route. The report also points to a policy trade-off: LEAP's gains for initially enrolled youth came

[3]Except for the findings on bonus and sanction rates, all Cleveland results presented in this report cover East Cleveland as well as Cleveland. The special services and restrictions (it is school district policy to strictly enforce the Ohio rule that students under age 18 cannot leave high school to attend a GED program) apply only to Cleveland.

at the cost of repeated sanctions for the older dropouts and their children. Policymakers should consider this trade-off, and the potential for improved outcomes suggested by the Cleveland findings, in assessing the LEAP experience.

Data Sources for This Report

This report's analysis of program operations — i.e., the application of LEAP's incentive structure — uses bonus and sanction data obtained from LEAP casefiles (including those for some teens too old to have had the full LEAP experience) from Ohio's three largest counties: Cuyahoga (Cleveland), Franklin (Columbus), and Hamilton (Cincinnati). The impact estimates that are the report's main focus come from comparing the experience of the program and control groups in seven counties: Cuyahoga, Franklin, Hamilton, Lawrence, Lucas, Muskingum, and Stark.

Most of the data for the report are from a survey administered approximately three years after random assignment to 913 teens (446 in the program group and 467 in the control group), who are a random subsample of all the teens in the seven counties who were randomly assigned between mid-August 1990 and September 1991 and who were young enough to have been exposed to the full LEAP treatment. Additional data on school outcomes are from administrative records for all 4,325 sample members who lived in five of the largest urban school districts in the seven counties (Cincinnati, Cleveland, East Cleveland, Columbus, and Toledo), were randomly assigned between July 1989 (when random assignment began) and June 1991, and were young enough to have received the full LEAP treatment.

The Teens' School Status and Age as a Context for the Findings

It is important to keep in mind the school status and age of the teens when they first became eligible for LEAP and the limited three-year period covered by this report's follow-up. As discussed above, all LEAP teens can be classified into two groups: those who were already enrolled in high school or a GED program when they became eligible for LEAP (initially enrolled teens) and those who were not enrolled at the time (dropouts). For enrolled teens, LEAP's job is to keep them in school and attending regularly until they receive their diploma or GED. Presumably this job is easier for teens who are at (or close to) their age-for-grade level than for teens who are enrolled but have fallen a grade or more behind their peers.

The program's task with the dropouts is different: to induce teens to return to high school or enter a GED program and then keep them there until they eventually graduate or pass the GED test. For most dropouts, this requires a major change in their lives (perhaps less so for those who have been out of school a short time). Dropouts also face more barriers to succeeding (e.g., on average, they have more children). LEAP's task is especially formidable with older dropouts who have been out of school a long time.

In terms of age at random assignment, 13 percent of the teens in the survey sample were 15 or under; 44 percent were 16 or 17; and 43 percent were 18 or 19. Thus, for example, three years later:

- A teen who was 16 and in school but behind age-for-grade at random

assignment might still be in high school, not working, and on welfare.

- A teen who was 17 and at age-for-grade at random assignment might have completed high school, gone to community college, and still be on welfare.
- A dropout who was 17 at random assignment might have subsequently received a GED, gone to work, and left welfare.
- A dropout who was 18 might have been in and out of school, frequently sanctioned, and remain on welfare.

As the first two examples illustrate, it can easily take more than three years for LEAP's impact chain to take shape, even if teens respond to the LEAP treatment exactly as intended (it takes even longer for teens who start LEAP at age 15 or younger). As a result, it is not possible to determine, with three years of data, whether or not LEAP will achieve its full chain of effects on the teens' behavior.

Findings on Bonuses and Sanctions

- **County LEAP programs experienced difficulties in implementing LEAP's incentive structure during the program's first two to three years of operation, particularly in urban counties, but have efficiently carried out bonuses and sanctions since then.**

As discussed in detail in the 1993 report and summarized in this one, all seven counties covered in the present report successfully implemented LEAP's incentive structure. Program operations improved over time, which meant that most teens were exposed to a more efficient and predictable LEAP program during the 1991-92 school year than the one they faced in the prior two years. The key was full implementation of a sophisticated computer system that made tracking teens easier and carrying out bonuses and sanctions largely automatic.

- **Almost all eligible teens (93 percent) were touched by LEAP's incentives, with 75 percent earning at least one bonus and 56 percent qualifying for at least one sanction.**

Fully 93 percent of teens earned at least one bonus or sanction, with the average teen qualifying for six grant adjustments (3.5 bonus payments and 2.8 sanctions) during her first 18 months in LEAP. During this 18-month period, there were more bonuses than sanctions: 37 percent of teens earned only bonuses; 18 percent qualified for only sanctions; and 38 percent earned at least one bonus and one sanction. In other words, 75 percent of teens earned at least one bonus and 56 percent qualified for at least one sanction. As time passed and the teens got older, those who were still eligible for LEAP received many more sanctions than bonuses, probably because teens who had graduated or received a GED by month 18 (generally cooperative teens, who earned frequent bonuses) were no longer subject to LEAP, leaving a higher proportion of frequently sanctioned teens still subject to the program.

- **Bonus and sanction rates were strikingly different for teens who were enrolled in school when they became eligible for LEAP and teens who were not.**

Based on Cleveland data covering most teens' entire period of eligibility for LEAP, bonus rates were higher, and sanction rates much lower, for the initially enrolled teens. Less than two-thirds of them were ever referred for a sanction, and only 4 percent were referred for nine or more sanctions and no bonuses. In contrast, more than three-quarters of the dropouts qualified for at least one sanction, and 22 percent qualified for nine or more sanctions and no bonuses.

- **The majority of teens with multiple sanctions reported diminished spending on essentials for their families, especially clothing and food. Most teens with multiple bonus payments reported spending a large share of the additional money on their children.**

Teens who were sanctioned at least four times reported in the three-year LEAP survey that the resulting welfare grant reductions had a material effect on their families: 58 percent said that their families had fewer essentials (most often clothing, food, and medicine) because of the grant reductions. Moreover, the sanctions reportedly affected the children at least as much as their teenage parents. Teens replaced part of the income they lost to sanctions by borrowing money (usually from their parents), applying for other forms of public assistance (most frequently Food Stamps), and seeking additional child support. In addition, two-thirds of teens postponed paying bills, most often utilities bills or rent.

Among teens who received at least four bonus payments, close to 90 percent reported using the additional money on essentials, especially for their children. Almost a quarter also reported being able to pay for some "luxuries" such as new clothing and outings (e.g., to the movies or to the zoo) for their children. These teens also were better able to pay their bills and to save some money, which they said was later used to obtain special items for their children, buy household essentials, and cover unexpected emergencies.

Findings on High School Graduation and GED Receipt

Full Sample

- **For the full sample of teens, LEAP substantially increased high school enrollment, attendance, and progress through the eleventh grade, but did not have a significant impact on high school graduation.**

According to the three-year survey, LEAP increased completion of the ninth, tenth, and eleventh grades but had no overall impact on high school graduation. (See the top panel of Table 1.) LEAP teens' GED completion rate reached 11 percent by the end of three years, compared to 8 percent for the control group, a difference that also was not statistically significant.[4] The school records data (not shown in Table 1) indicate a GED receipt impact of almost identical size which, probably because the sample was much larger, was statistically significant.

Also, an examination of school records data for about two-thirds of the teens (in five urban

[4]Statistical significance means that one can be highly confident that the difference was due to the program, rather than to statistical chance. In Table 1 and other tables in this report, one asterisk indicates a 90 percent probability that a measured difference was due to the program, and two or three asterisks indicate a 95 or 99 percent probability, respectively.

TABLE 1

LEAP's THREE-YEAR IMPACTS IN SEVEN COUNTIES FOR THE SURVEY SAMPLE, BY SCHOOL ENROLLMENT SUBGROUP

Sample and Its Status 3 Years After Random Assignment	Program Group	Control Group	Difference
All teens			
Completed grade 11	50.0 %	45.4 %	4.6 *
Ever completed high school	22.9	23.5	−0.6
Ever completed GED	11.1	8.4	2.7
Ever completed high school or GED	34.0	31.9	2.1
Currently enrolled in high school or a GED program	17.5	14.5	3.0
Ever completed high school or GED, or currently enrolled in high school or a GED program	51.6	46.5	5.1 *
Ever employed in past 3 months	33.2	27.6	5.5 *
Employed in past 3 months and has a high school diploma or GED	15.8	12.8	3.0
Currently receiving AFDC	83.3	87.6	−4.3 *
Teens enrolled in school at random assignment			
Completed grade 11	60.6 %	58.1 %	2.5
Ever completed high school	35.6	34.2	1.4
Ever completed GED	10.0	4.4	5.6 **
Ever completed high school or GED	45.6	38.6	7.0 *
Currently enrolled in high school or a GED program	20.3	18.3	2.0
Ever completed high school or GED, or currently enrolled in high school or a GED program	65.9	56.9	9.0 **
Ever employed in past 3 months	38.9	27.4	11.5 ***
Employed in past 3 months and has a high school diploma or GED	22.6	14.5	8.1 **
Currently receiving AFDC	82.6	87.1	−4.6
Teens not enrolled in school at random assignment			
Completed grade 11	35.8 %	28.0 %	7.8 *
Ever completed high school	6.7	7.8	−1.1
Ever completed GED	12.0	14.3	−2.3
Ever completed high school or GED	18.6	22.1	−3.4
Currently enrolled in high school or a GED program	13.6	9.5	4.0
Ever completed high school or GED, or currently enrolled in high school or a GED program	32.2	31.6	0.6
Ever employed in past 3 months	26.3	26.5	−0.1
Employed in past 3 months and has a high school diploma or GED	7.1	9.3	−2.2
Currently receiving AFDC	83.6	89.1	−5.5

NOTES: "Completed GED" refers to passing the GED test.

Estimates of the program-control group differences are regression-adjusted using ordinary least squares, controlling for pre-random assignment background characteristics of sample members.

Rounding may cause slight discrepancies in calculating differences.

A two-tailed t-test was applied to the difference between the program and control groups. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent, and * = 10 percent.

school districts) who did not respond to the survey suggests that their impacts were larger than those based on survey respondents, indicating that the survey-based impact findings may be conservative.

- **Two-thirds of the teens did not receive a high school diploma or GED within the three-year follow-up period.**

A number of factors probably explain the low rate of school completion, including teens' feelings about school and their own future. In an earlier survey, a large proportion of LEAP teens reported that their schools were unsafe, inflexible, and unsupportive. Some also viewed their economic prospects as dim, with or without a diploma or GED (see Appendix Table D.1 in the full report). Other studies have pointed to the situational and emotional problems that can make school attendance difficult for teenage single mothers. Another factor is the teens' youth. By the end of follow-up, approximately 30 percent of LEAP teens in the survey sample were under 20, and 18 percent (compared to 15 percent of control group members) were in high school or a GED program. When school completion or enrollment are considered together, significantly more LEAP teens than control group members (52 percent compared to 47 percent) had graduated from high school, received a GED, or were in high school or a GED program (mostly the latter). Thus, it is possible that, with longer follow-up, LEAP's impacts on high school graduation and GED receipt may increase.

Finally, it is important to consider LEAP's high school graduation impacts in the context of the overall graduation rates in the same locales. According to official data, the high school graduation rates for all students in the five school districts where school records were collected ranged between 27 and 45 percent in 1994. Lifting the graduation rates of LEAP teens to such levels would be a noteworthy achievement.

Subgroups

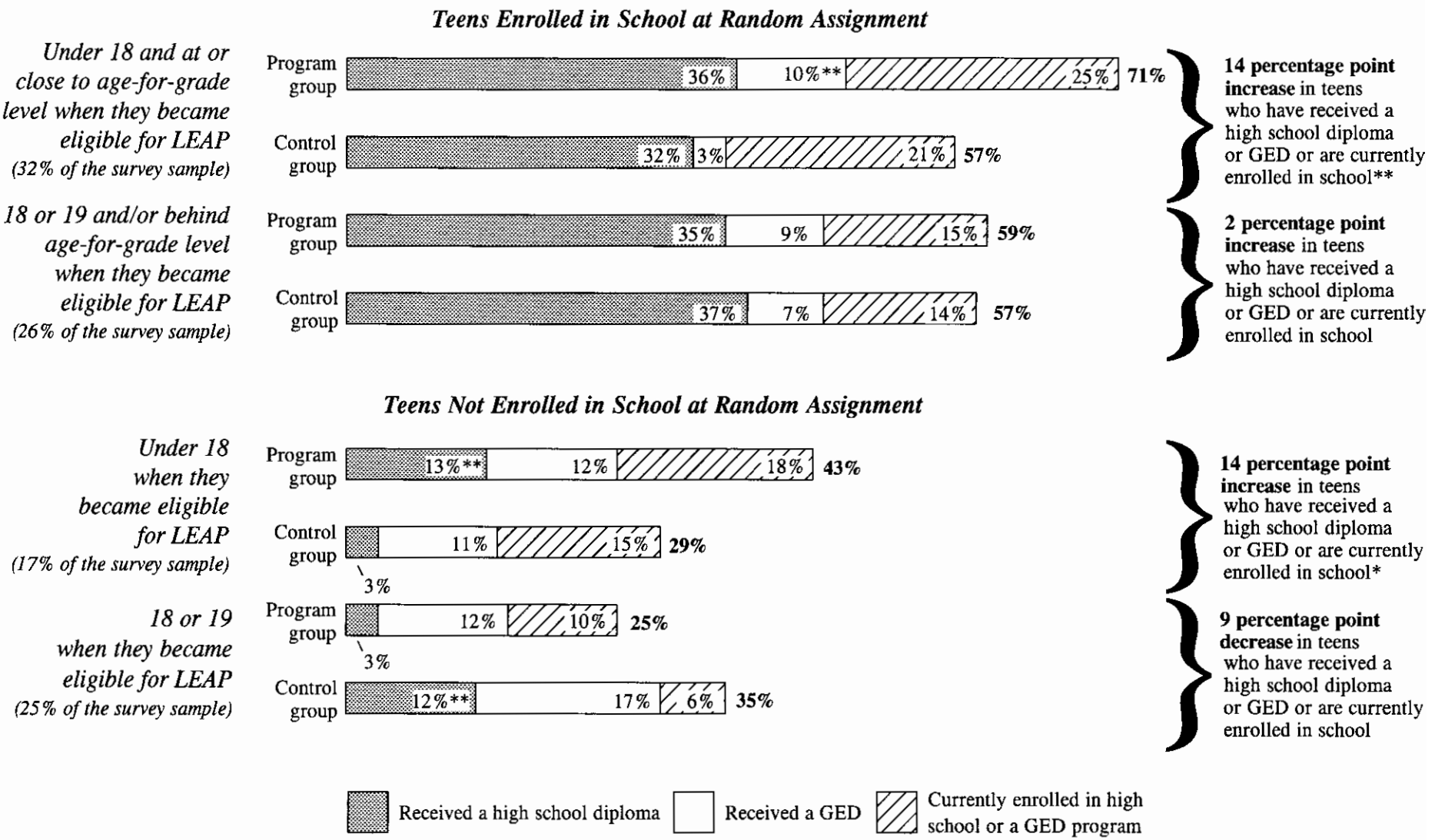
- **LEAP increased the combined high school/GED completion rate of teens who were enrolled in school when they became eligible for the program, with most of the impact being on GED receipt. Within this initially enrolled group, teens who had been under age 18 and at or close to their age-for-grade level received diplomas or GEDs, or were enrolled in school at the three-year point, to a far greater extent than those in the control group.**

Over half of the teens were enrolled in school or a GED program at the time they first became eligible for LEAP. The program induced more of these teens to stay in school than would have done so without LEAP and, as shown in the middle panel of Table 1, this generated a substantial increase in school completion: According to the seven-county survey, after three years 46 percent of LEAP teens completed school or a GED program, compared to 39 percent of control group teens. Most of this impact was attributable to GED completions. (This impact may increase over time, since, as shown in Table 1, 20 percent of LEAP teens were in high school or a GED program at the end of three years, a somewhat higher percentage than for the control group.)

Dividing enrolled teens into the subgroups shown in Figure 1 helps identify the teens for whom LEAP has been most and least effective, although the results are not conclusive, given the small size of the subgroup samples. The program's impact on high school/GED completion was particularly large for teens who were in school and had not turned age 18 or fallen substantially behind age-for-grade level at the time their LEAP eligibility was determined. As indicated by the top two bars in the figure, 46 percent of teens in the program group who had these characteristics received a diploma or

FIGURE 1

LEAP's THREE-YEAR IMPACTS ON SCHOOL OUTCOMES FOR SELECTED SUBGROUPS WITHIN THE SURVEY SAMPLE



NOTES: "At or close to age-for-grade level" applies to 17-year olds who have completed at least the tenth grade, 16-year-olds who have completed the ninth grade, 15-year-olds who have completed at least the eighth grade, etc. All others are considered "behind age-for-grade level." Asterisks indicate that a difference is statistically significant (significance levels are indicated as *** = 1 percent, ** = 5 percent; * = 10 percent). Rounding may cause slight discrepancies in calculating differences.

GED within the three years, and another 25 percent were enrolled in high school or a GED program at the three-year point. Thus, 71 percent of the LEAP teens had obtained a high school diploma or GED, or were working on it, compared to only 57 percent of the control group — a large and statistically significant difference. The difference for other teens who were initially enrolled in school was much smaller and not statistically significant.

- **LEAP did not appear to increase school completion for teens who were dropouts at the time they became eligible for the program. Only one in five of these teens received a diploma or GED.**

As shown in the bottom panel of Table 1, the program did not increase school completion by dropouts, at least not by the end of the three-year period covered by the survey. Only 19 percent of program group members and 22 percent of control group members received a diploma or GED, a difference that was not statistically significant. It is noteworthy, however, that the program's impact on eleventh-grade completion was sizable (8 percentage points) and statistically significant. However, less than 20 percent of eleventh-grade completers went on to receive their diplomas within the three years, and LEAP had no effect on the proportion that did.

Once again, different subgroups among teens who were out of school when they were determined eligible for LEAP fared quite differently. As indicated in the bottom half of Figure 1 (and, again, remembering that this is based on small samples), LEAP appeared to be successful with dropouts who were under the age of 18 when they started the program. Thirteen percent of these LEAP teens graduated within three years — more than four times the rate for the control group — and 18 percent were enrolled in high school or a GED program at that point, compared to 15 percent of the control group. Thus, although the rates of GED receipt were similar, significantly more (43 percent) of the program group received a diploma or GED or were in school or a GED program at the three-year point, compared to only 29 percent of the control group. In contrast, the results for older dropouts were not at all encouraging.

- **LEAP's school impacts varied substantially across geographic areas. The program significantly increased high school graduations in Cleveland, produced no significant effects in Cincinnati, Columbus, and Toledo, and significantly increased GED receipt outside these large urban areas.**

Records data collected from five school districts in four urban areas indicate that LEAP's impact on high school and GED completion, as well as the composition of this impact, was not consistent across districts. The program effect in Cleveland was significantly larger than in Cincinnati, Columbus, and Toledo, and it included an increase in both high school diplomas and GEDs, neither of which increased in the other cities. The smaller survey sample, which covers more counties and non-urban areas, also shows that LEAP produced a significant increase in graduations in Cleveland (see Table 2), but in this sample there were also positive impacts on GED receipt outside Cleveland (due mainly to an increase outside these large urban areas).

Cleveland's success in increasing high school graduation was somewhat surprising: Cleveland has the largest AFDC and LEAP population in Ohio and had the most difficulty initially implementing the program. Its achievement appears to reflect three factors. First, partly through a special demonstration program, about half of the program group teens in Cleveland were offered a range of enhanced services (on-site day care, GRADS programs, on-site LEAP case managers, and teen-focused GED programs), which the 1994 report found increased the proportion of teens who, once attending,

TABLE 2

LEAP's THREE-YEAR IMPACTS IN SEVEN COUNTIES FOR THE SURVEY SAMPLE, BY SCHOOL ENROLLMENT SUBGROUP AND AREA

Sample and Its Status 3 Years After Random Assignment	Cleveland			All Seven Counties (Excluding Cleveland)		
	Program Group	Control Group	Difference	Program Group	Control Group	Difference
All teens						
Ever completed high school	23.5 %	16.9 %	6.6 *	22.7 %	27.3 %	-4.6
Ever completed GED	6.6	9.7	-3.1	13.7	7.6	6.1 **
Ever completed high school or GED	30.1	26.6	3.5	36.4	34.9	1.5
Ever enrolled in college	14.2	11.4	2.8	11.2	12.4	-1.3
Ever employed in past 3 months	29.8	27.5	2.3	35.4	27.3	8.1 **
Currently receiving AFDC	85.8	90.9	-5.0	81.6	86.1	-4.5
Teens enrolled in school at random assignment						
Ever completed high school	33.3	24.3	9.0 *	37.3	39.9	-2.6
Ever completed GED	7.1	3.0	4.2	11.5	5.4	6.1 **
Ever completed high school or GED	40.5	27.2	13.2 **	48.8	45.3	3.5
Ever enrolled in college	20.6	11.8	8.8 *	17.3	18.6	-1.3
Ever employed in past 3 months	33.2	28.4	4.8	41.8	27.2	14.5 ***
Currently receiving AFDC	87.0	90.8	-3.8	79.9	84.9	-5.0

NOTES: "Completed GED" refers to passing the GED test.

Estimates of the program-control group differences are regression-adjusted using ordinary least squares, controlling for pre-random assignment background characteristics of sample members.

Rounding may cause slight discrepancies in calculating differences.

A two-tailed t-test was applied to the difference between the program and control groups. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent, and * = 10 percent.

eventually received a high school diploma or GED. Second, Cleveland rigorously enforced the state rule that students under the age of 18 are not allowed to leave high school to prepare for or take the GED test, while other districts, notably Columbus and Toledo, permitted many students to make this switch. Third, Cleveland teens might have been more willing to stay in school, partly because Cleveland has more alternative high schools than do the other districts.

Findings on Employment, Welfare Receipt, and College Enrollment

Full Sample

- **Overall, LEAP increased the likelihood that teens would be working three years after they became eligible for the program and reduced the likelihood that they would be receiving AFDC benefits.**

As shown in the top panel of Table 1, 33 percent of program group teens worked (mostly part time) during the three months immediately prior to the survey, compared to almost 28 percent of the control group, for an increase of 5.5 percentage points. This impact is comparable in magnitude to that of successful mandatory welfare-to-work programs targeted to adult welfare recipients.

The program also significantly reduced AFDC receipt, although this impact did not emerge quickly: LEAP had no effect on welfare receipt during the first year following random assignment, or even for the early months during the third year. However, by the time of the three-year survey, 83 percent of the program group were receiving AFDC, compared to 88 percent of the control group.

It will be important to determine whether the employment and welfare impacts continue to grow over time, given the youth of the sample and the fact that almost one-sixth of them were enrolled in school or a GED program at the end of the three-year follow-up.

Subgroups

- **The employment impact was entirely attributable to the program's effect on teens who were initially enrolled in school. LEAP lifted their employment rate by over 40 percent, while it had no effect on dropouts.**

For the survey sample, the employment gains parallel the education impacts: Both were centered on teens who were enrolled in school when they first became eligible for LEAP. As shown in Table 1, 39 percent of initially enrolled teens were working three years later, compared to only 27 percent of the control group, for an increase of 12 percentage points, or 42 percent. If this result holds up for the final report's longer follow-up period and much larger sample, it will be a substantial achievement, given especially the history of very limited program results for teen parents on welfare.

It appears that LEAP's impact on school completion by initially enrolled teens may have driven this large effect on employment. As shown in Table 1, the increase in the share of teens who had completed school *and* were working (8 percentage points) was two-thirds of the total increase in employment (12 percentage points). In contrast, LEAP had no impact on the employment of dropouts three years after they became eligible for LEAP. In other words, LEAP has produced impacts on several outcomes for in-school teens, but not for dropouts.

In terms of AFDC impacts, there was no similar subgroup variation. The measured reduction in receipt was similar for both enrolled teens and dropouts, although both fell just short of being

statistically significant (probably because of the small sample sizes).

- **For initially enrolled teens in Cleveland, where LEAP increased high school graduations, it also increased college enrollment; however, at the three-year point, LEAP had not raised employment rates. In the seven counties as a whole (excluding Cleveland), LEAP increased GED attainment and substantially increased employment.**

Given the superior high school completion findings in Cleveland, it is important to compare subsequent results there to those in other locations. For Cleveland teens who were enrolled in high school or a GED program at random assignment (see Table 2), LEAP produced a 9 percentage point increase in both the likelihood of receiving a high school diploma and the likelihood of enrolling in college, but no significant increase in the employment rate. In contrast, outside of Cleveland, there was no increase in high school diplomas or college enrollment, but there was a large, 15 percentage point increase in employment. The increased college enrollment may be one explanation for the lack of employment impacts in Cleveland for teens who were enrolled in school at random assignment.

As shown in Table 2, the GED receipt rate almost doubled outside Cleveland, and the employment rate increased from 27 percent to 35 percent, with both impacts being driven by the results for the initially enrolled teens (as shown in the bottom panel of Table 2). This is new evidence that GED certificates earned by teen parents may have positive labor market effects.

Conclusion

Results to date from the LEAP evaluation show that welfare incentives (coupled with case management and support services) can change behavior and ultimately reduce AFDC receipt, but that change is difficult and the incentives may produce some perverse effects. For teens who were in school or a GED program when they became subject to LEAP's mandates, the program substantially increased school attendance (showing that teens are able to combine school and parenthood), school or GED completion, and subsequent employment. But it produced a higher rate of GED receipt rather than high school graduation. For teens who were out of school when they became eligible for LEAP, the program's incentives were clearly not enough (especially for the older teens) to increase the very low rate of school completion or to increase employment. LEAP's multiple sanctions, however, affected poor families.

The findings suggest that LEAP can produce promising outcomes, particularly when it gets to teen parents while they are young and still in school. As currently operated, LEAP reaches teens sooner than it did during the period covered by this study. This is because the eligibility of teens for LEAP is now determined automatically by computer as soon as a teen parent opens a welfare case or a teenager on an existing welfare case becomes pregnant with (or gives birth to) her first child; and because program actions, once eligibility is established, are swifter than they were during the study period. Thus, LEAP may be more effective as an ongoing program than the results indicate.

However, the findings also point to the limits on what incentives alone can do to increase high school graduation. LEAP gets more young people to the schoolhouse door, but too many subsequently walk back out before getting a diploma. The greater success in Cleveland suggests some strategies for improving on these results. But more far-reaching changes in the teens' school experience will likely be needed if LEAP is to realize its full potential. The study's final report will explore these issues further, present LEAP's later impacts for teens in all 12 evaluation counties, and compare the program's benefits and costs.

CHAPTER 1

INTRODUCTION

This report is the fourth in a series analyzing the effectiveness of Ohio's Learning, Earning, and Parenting (LEAP) Program. LEAP, a statewide program developed and managed by the Ohio Department of Human Services (ODHS), uses financial incentives and penalties to promote school attendance by pregnant and parenting teenagers on welfare, the group most likely to become long-term welfare recipients. The program requires such teens who are in school to attend regularly, while those who have dropped out must enroll in high school or a program to prepare for the GED (General Educational Development) test, which one must pass to receive an Ohio Certificate of High School Equivalence. Teens who comply with LEAP's rules receive bonus payments — $62 for school enrollment and an additional $62 each month they attend school regularly — and teens who do not (without an acceptable reason) have $62 deducted from their welfare grant every month until they comply with the rules. Teens' enrollment and attendance is monitored by case managers, who also offer guidance and authorize assistance with child care and transportation for teens complying with the rules. LEAP relies on the education system to provide all other services.

By requiring school attendance, the program tries to trigger a chain of effects on the teens' behavior — promoting academic progress, increasing the proportion of teens who earn a high school diploma or GED, and eventually producing gains in employment and reductions in welfare dependence.

The Manpower Demonstration Research Corporation (MDRC) has been evaluating LEAP using a random assignment research design since program operations began in mid-1989. Between then and 1991, close to 10,000 eligible teenage parents in 12 counties throughout Ohio — which encompassed about two-thirds of the statewide LEAP caseload — were randomly assigned to a program group (which was subject to LEAP's rules and incentives) or a control group (which was not). The subsequent measured differences between the two groups are the "impacts" (effects) of LEAP's package of bonuses, penalties, and support services.

This report focuses on the experiences of two subsets of program and control group members three years after they became eligible for LEAP: (1) teens who responded to a survey administered in 1994 in seven of the 12 research counties, and (2) teens in five urban school districts (in four counties) for whom school records were obtained. It assesses LEAP's impacts on the attainment of a high school diploma or GED, as well as subsequent effects on college enrollment, training, employment and earnings, welfare receipt, family composition, and income. The final report, scheduled to be published in 1997, will assess LEAP's longer-term effects on such outcomes as employment and welfare receipt, and will compare the program's benefits to its costs.[1]

The evaluation is being conducted under contract to the Ohio Department of Human Services (ODHS), with additional funding provided by the Ford Foundation, the Cleveland Foundation, BP

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[1]MDRC's previous three reports on LEAP are: Dan Bloom, Hilary Kopp, David Long, and Denise Polit, *LEAP: Implementing a Welfare Initiative to Improve School Attendance Among Teenage Parents* (1991); Dan Bloom, Veronica Fellerath, David Long, and Robert G. Wood, *LEAP: Interim Findings on a Welfare Initiative to Improve School Attendance Among Teenage Parents* (1993); and David Long, Robert G. Wood, and Hilary Kopp, *LEAP: The Educational Effects of LEAP and Enhanced Services in Cleveland* (1994).

America, the Treu-Mart Fund, the George Gund Foundation, the Procter & Gamble Fund, and the U.S. Department of Health and Human Services.

I. LEAP's Rationale and Distinctive Features

LEAP is an innovative policy intervention that seeks to reduce future welfare receipt by encouraging teen mothers to take what for many if not most of them is the necessary first step toward self-sufficiency: completing their education. Dropping out of school is only one of the many negative consequences traditionally associated with teenage childbearing; others include long-term welfare receipt, single parenthood, unemployment, rapid repeat childbearing, poverty, and poor outcomes for the children of teen mothers.

In recent years, a number of social scientists have disputed the notion that teenage childbearing is the *cause* of many of these negative consequences (Bachrach and Carver, 1992). They point out that young women who become pregnant and opt to have and keep their babies are more likely than others to be poor and to have reduced life prospects in the first place.

Failure to finish school leaves young mothers without the basic skills to succeed in the labor market (Berlin and Sum, 1988); indeed, the earnings prospects of women who have not finished school have steadily declined over the last two decades (Levy and Murnane, 1992). School dropout places young mothers at especially high risk of lengthy welfare stays. Bane and Ellwood's (1983) pioneering analysis of data from the Panel Study of Income Dynamics indicated that women under 30 who went on welfare after giving birth as unmarried mothers and who were high school dropouts averaged 10 and 6 years on the welfare rolls for nonwhite and white women, respectively.

LEAP marks an important departure from the many programs for teenage parents developed by schools, health agencies, and community-based organizations since the 1970s, which have typically provided educational instruction — often oriented toward preparing students to take the GED test — as well as counseling, parenting classes, and other services to further participants' personal development. Such programs have usually enrolled relatively small numbers of young women who volunteered for their services, and they have consequently reached only a fraction of the teen parents on welfare in the areas they serve, sometimes at a relatively high cost per enrollee.

LEAP differs from these earlier initiatives in three major ways. First, rather than being voluntary and small-scale, LEAP is mandatory for all teen parents receiving Aid to Families with Dependent Children (AFDC) in Ohio who are in school or who have dropped out.[2] Second, it uses financial incentives to increase attendance and achieve its aims. Third, it relies on the public school and adult education systems to provide education to the teens.

LEAP's approach was modeled in part on the welfare-to-work initiatives geared toward adults that have been operated by state welfare agencies since the early 1980s, which have targeted a broad segment of the welfare population and have used negative financial incentives to increase participation in employment-focused activities. In these programs, individuals who fail to comply with program participation requirements have been subject to a "sanction," i.e., a reduction of their welfare grant. Many welfare-to-work programs have been found to produce significant increases in earnings and

[2]In Ohio, this program is known as ADC. However, this report will use the federal abbreviation, AFDC.

reductions in welfare (see, e.g., Gueron and Pauly, 1991; Riccio, Friedlander, and Freedman, 1994; U.S. Department of Health and Human Services and U.S. Department of Education, 1995).

Because federal legislation exempted women whose children were younger than three years old from participating in such programs (and, until 1987, exempted women whose children were younger than six), teenage parents were generally not subject to these requirements. However, LEAP was able to draw on the experiences of Wisconsin's Learnfare program, which extended this mandatory and universal approach to younger AFDC recipients. Started in 1987, the Wisconsin program requires AFDC recipients between the ages of 13 and 19 (including those who are not parents) to regularly attend school or an alternative program leading to a high school diploma or GED in order for their families to receive their full AFDC grant. A recent evaluation indicates that the program has succeeded in increasing school enrollment (State of Wisconsin, Legislative Audit Bureau, 1995).

A mandatory approach was also taken in the Teenage Parent Demonstration, sponsored by the U.S. Department of Health and Human Services. This demonstration began operations in Camden and Newark, New Jersey, and in South Chicago shortly after Wisconsin's Learnfare began and required teen parents who were new AFDC recipients to participate in one or more activities, including education, or incur a sanction. Evaluation results for this program have generally been somewhat encouraging for those teens who were in high school or had completed high school at the start of the intervention (Maynard, Nicholson, and Rangarajan, 1993).

LEAP has gone beyond these initiatives in pioneering the use of positive as well as negative financial incentives. It offers monetary rewards for desired behavior (school enrollment and regular attendance) as well as financial penalties for behavior that violates the norms the program seeks to promote.

II. The LEAP Model

Participation in LEAP is mandatory for all pregnant women and custodial parents (almost all are women) under 20 years old[3] who are receiving AFDC and do not have a high school diploma or GED. This includes both teens who head welfare cases and those who receive assistance on someone else's case (usually their mother's). All eligible teens are required to enroll (or remain enrolled) in and regularly attend a school or education program leading to a high school diploma or GED.

LEAP has created a three-tiered incentive structure:

- **Grant increases.** Teens who provide evidence of school enrollment receive a bonus payment of $62. They then receive an additional $62 in their welfare check for each month in which they meet the program's attendance requirements (see Table 1.1).
- **Grant reductions.** Teens who do not attend an initial LEAP assessment interview (which commences participation in LEAP), or who fail to enroll in school, have $62 deducted from their grant (i.e., the teens are "sanctioned") each month until they comply with program rules. Similarly, enrolled teens

[3]During LEAP's first year of operations, participation was not mandatory for pregnant women and the age limit was 19 rather than 20.

TABLE 1.1

APPLICATION OF SCHOOL ENROLLMENT AND ATTENDANCE STANDARDS IN LEAP

Standards	Monitoring Procedures	Bonus/Sanction Guidelines
Enrollment		
Teens are required to be enrolled in a school or education program leading to a high school diploma or its equivalent (a GED) during the entire time they are eligible for LEAP. A temporary exemption is granted if the teen is in the last seven months of a pregnancy or is the primary caregiver for a child under three months old, child care or transportation is unavailable, etc.	(1) After an initial LEAP assessment meeting, a teen has 10 days to provide proof of school enrollment. (2) Continued enrollment in the school or program for which proof was provided is monitored using records submitted by the school or program.	(1) When a teen verifies enrollment, she (or the head of the AFDC case) receives a $62 enrollment bonus. A teen who fails to verify enrollment is sanctioned with a $62 AFDC grant reduction each month until she complies. (2) A further $62 enrollment bonus is paid for each additional school year in which the teen is enrolled.
Attendance		
Once enrolled, teens are expected to attend regularly. For full-time high school (or junior high school) programs, this means two or fewer unexcused absences in a month and four or fewer total absences in that month. For part-time programs, attendance standards are based on the number of scheduled days.	Attendance is monitored using monthly records submitted by the school or program. Teens are given a chance to demonstrate that they had "good cause" for absences: The teen or her child was ill or injured, normal child care or transportation was not available and alternatives could not be found, etc.	A $62 bonus is paid for every month in which a teen meets the attendance requirement. (The bonus is also paid when the month's attendance could not be determined but enrollment had been verified.) A $62 sanction is imposed for every month in which a teen fails to meet the standards. The teen receives her normal AFDC grant (no bonus or sanction) if she exceeds the allowed number of total absences but not the allowed number of unexcused absences.

are sanctioned by $62 for each month in which they exceed the allowed number of unexcused absences.

- **Unchanged grants.** Teens who exceed the allowed number of *total* absences, but do not exceed the allowed number of *unexcused* absences, receive neither a bonus nor a sanction.

LEAP sanctions and bonuses can substantially change the income of participants. During most of the period covered by this analysis, a teen living on her own with one child was eligible for an AFDC grant of $274 per month.[4] A bonus increased her grant to $336; a sanction reduced it to $212. Thus, the total difference in AFDC grants between a teen who enrolled in school and attended regularly and one who failed to enroll and attend without a good reason was $124 per month. The program's requirements for receipt of bonuses and sanctions are summarized in Table 1.1.

Because teens have several opportunities to provide evidence of "good cause" for absences that schools define as unexcused,[5] there is a three-month lag between the month of attendance and the corresponding sanction or bonus. For example, poor attendance in October triggers a program sanction in January.[6] Teens may be temporarily exempted from the LEAP requirements if they are in the last seven months of a pregnancy, if they are caring for a child under three months old, if child care or transportation is unavailable, or for other reasons considered legitimate by the program.[7] Teens are no longer subject to LEAP's requirement after they reach the age of 20.

Under Ohio's county-administered welfare system, LEAP is operated by County Departments of Human Services (CDHS) in all 88 of the state's counties. Each eligible teen is assigned to a CDHS case manager, who monitors her compliance with program rules to determine whether a bonus or sanction is warranted, offers guidance, and authorizes assistance with child care and transportation while the teen is attending school and if she is complying with LEAP's rules.[8] Besides child care and transportation cost reimbursement, LEAP also offered only case management services. Any other

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[4]A teen living on her own with two children received $396 when she earned a bonus, compared to $272 when her grant was reduced owing to a sanction. These grant levels were in effect between 1990 and 1992. The levels were slightly lower in 1989 and slightly higher in 1993.

[5]Absences for which the teen provides a physician's statement are not counted under LEAP rules.

[6]When LEAP staff receive attendance information for a teen for a specific month (ideally, by the fifth of the subsequent month), teens who fail to earn a bonus are notified by mail and have seven days to provide evidence of good cause for absences reported by the school. If good cause is not granted and a sanction is proposed, teens are again notified by mail and are given an additional 15 days to request a hearing on the proposed sanction. If no hearing is requested during this period, the sanction is processed. Together, these two waiting periods mean than sanctions cannot be processed in the first or second month following the poor attendance.

[7]Teens who are exempt during a pregnancy or because they are caring for an infant may "volunteer" for LEAP, in which case they may receive bonuses for attending school regularly. Otherwise, exempt teens receive neither bonuses nor sanctions.

[8]The functions and average caseload of LEAP case managers have been similar to those of case managers in welfare-to-work programs for adults (see Doolittle and Riccio, 1992). The average caseload was well over 100 during most of the period covered by this analysis. For example, in the fall of 1992, the average caseloads were 120 in Cuyahoga, 100 in Hamilton, and 135 in Stark. The caseload was under 100 only in Franklin, where LEAP case managers were responsible for AFDC and well as LEAP duties for their entire caseload.

services were provided by schools, education programs, or other agencies, not by LEAP. Two programs are particularly noteworthy. The Ohio Department of Education operates the Graduation, Reality and Dual-Role Skills (GRADS) program, as well as the Graduation, Occupation, and Living Skills (GOALS) program. GRADS funds home economics teachers to provide instruction in parenting and life skills to pregnant and parenting students in many high schools in the state. GOALS provides similar services to young parents (ages 16 to 30) who have dropped out of school; the program is linked to selected GED programs operated by urban school districts. Both programs are available to eligible students regardless of whether they are on welfare, and thus were available to members of the control group as well as to LEAP teens.

The total cost of the case management, child care and transportation assistance, and net expense of the incentive structure (i.e., bonus payment expenses minus savings from sanctions) has been quite modest.[9]

III. An Overview of This Report

Chapter 2 describes the evaluation's random assignment research design and the data sources and samples used for this report. Chapter 3 briefly summarizes the implementation of LEAP's financial incentive structure and provides estimates of bonus and sanction rates. It also examines how teens have spent bonus payments and coped with sanctions. Earlier results from the evaluation indicated that LEAP was successful in getting teens to remain or enroll in high school or a GED program and then to attend regularly. Chapter 4 analyzes whether this has translated into progress in school, especially into higher rates of high school graduation and GED receipt. Finally, Chapter 5 examines LEAP's impacts on a range of other self-sufficiency-related outcomes: employment and earnings, welfare receipt, training, family composition, household income, and childbearing.

These results are not final. The data on which they are based cover only the first three years after teens became eligible for LEAP. However, the average LEAP teen had completed only 9.46 grades of high school, and was seventeen and a half years old, when she entered LEAP. On average, therefore, teens needed at least two and a half years to finish school even if everything went well. It is likely that, over time, more teens will eventually complete their education and that, among teens who have already completed it, more will become employed and eventually leave the welfare rolls.

The final LEAP report, scheduled to be published in 1997, will have additional years of follow-up data and a much larger sample of teens from all 12 counties in the evaluation, providing a more solid basis for assessing the program's long-term effectiveness.

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[9]An estimate of the cost of LEAP in Cleveland was $537 per teen per year (see Long, Wood, and Kopp, 1994, Chapter 4). A final estimate of LEAP's cost, including the indirect cost to schools and education programs, will be made as part of the benefit-cost analysis to be presented in the final report.

CHAPTER 2

THE LEAP EVALUATION AND THIS REPORT'S DATA SOURCES AND SAMPLES

The LEAP evaluation uses a rigorous, random assignment research design and multiple data sources to study the implementation, impact, and cost-effectiveness of the program. This chapter begins with a description of the evaluation and then discusses the data sources and samples used in this report, emphasizing three key points. First, most of the analysis in this report is based on survey data covering a little more than 900 teens in seven counties. Second, the other data sources are school records, collected for approximately 4,300 teens in five urban school districts, and LEAP casefile records on a little more than 300 teens — in two overlapping samples — in three counties. Third, all three data sources cover an average of three years from the time teens first became eligible for LEAP. The data that will be available for the project's final report will cover four and a half years for a sample of approximately 7,700 teens in the 12 study counties.

I. The LEAP Evaluation

MDRC's evaluation of the LEAP program was designed to provide reliable evidence about the program's success in moving teens along the "impact chain" referred to in Chapter 1. The evaluation is being conducted in 12 counties in Ohio, which include most of the state's major cities and about two-thirds of its eligible teen parent population. The 12 counties, identified in Figure 2.1, were selected randomly; hence, the overall sample is representative of all LEAP-eligible teens statewide.[1] The counties were divided into two tiers. This report focuses on the seven Tier 1 counties – Cuyahoga (Cleveland), Franklin (Columbus), Hamilton (Cincinnati), Lawrence, Lucas (Toledo), Muskingum, and Stark – which were selected from the 12 for more intensive study after consultation with county officials.[2] These seven counties include more than half of the state's AFDC recipients. The final report will also include data on the five Tier 2 counties.

The 12 counties differ in terms of local economic conditions and population characteristics (see Table 2.1), and cover both urban and rural areas. The seven Tier 1 counties each have between six and 31 school districts, which vary in the quality, diversity, extent, and flexibility of their education services. Most LEAP teens are concentrated in the large-city school districts, where many education options have been available (primarily from the districts, but also from other public and private programs). In the Cleveland public schools, Ohio's largest school district, teens in the LEAP sample have attended nearly 60 different programs, including 12 regular high schools, nine of which had

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[1]The 12 counties were randomly selected from all Ohio counties that, according to Ohio Department of Human Services (ODHS) estimates, had at least 40 potentially eligible teens at the beginning of program operations in 1989. Each had a probability of selection that was proportional to its estimated LEAP caseload. Since 12 counties were selected on this basis, counties with more than one-twelfth of the LEAP caseload across all counties that had at least 40 cases (Cuyahoga, Franklin, and Hamilton counties) had a 100 percent likelihood of selection.

[2]The Tier 1 counties agreed to assign 20 percent of eligible teens to the control group (as opposed to 5 percent in the Tier 2 counties), and to facilitate MDRC's field research and casefile data collection.

FIGURE 2.1
COUNTIES IN THE LEAP EVALUATION

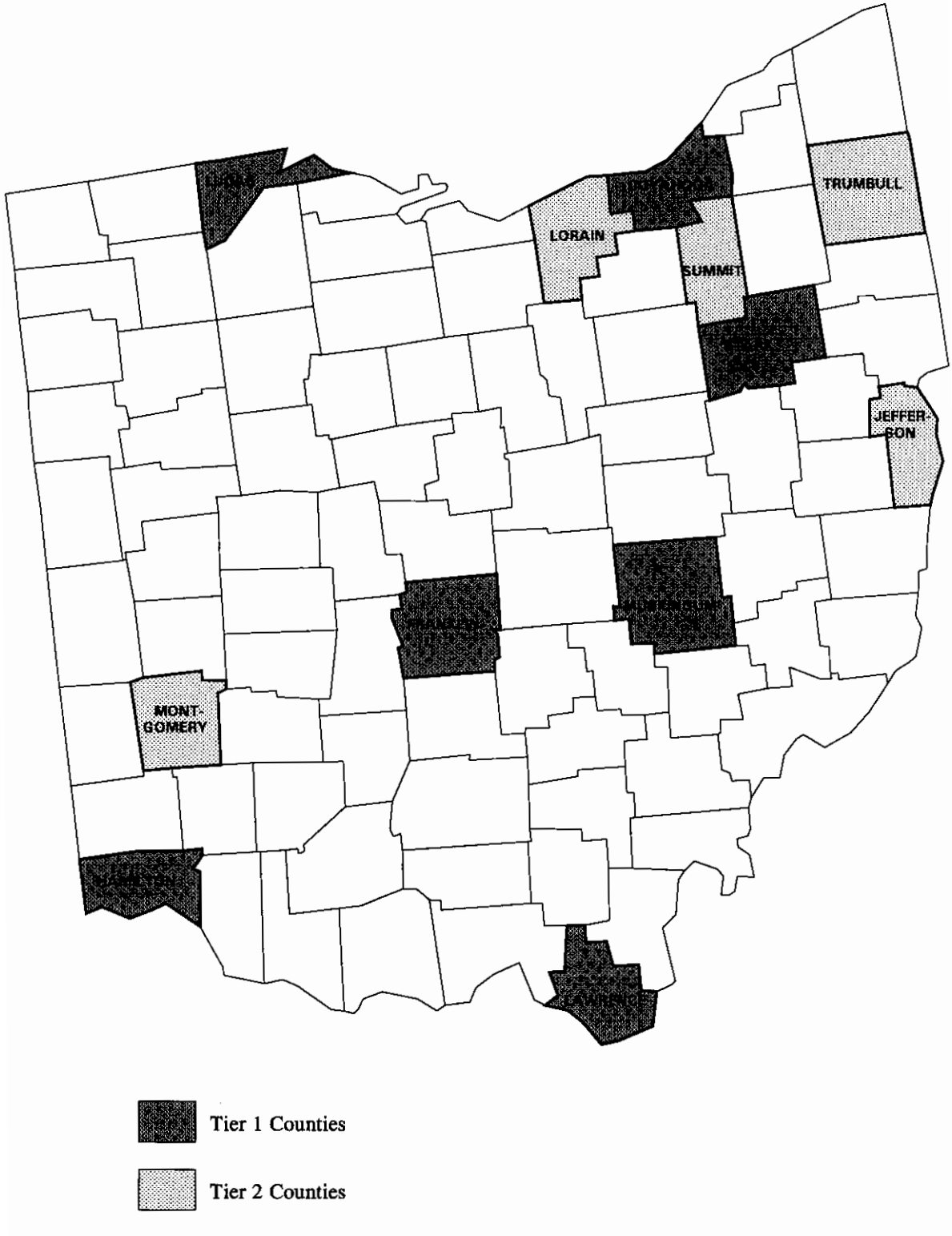

TABLE 2.1

SELECTED DEMOGRAPHIC CHARACTERISTICS OF OHIO COUNTIES IN THE LEAP EVALUATION

County	Largest City	County Population (1994)	County Population Rank (a) (1994)	AFDC Recipients (b) (1994)	Percent of Total State AFDC Recipients (1994)	Births to Teenagers/ Total Births (%) (1993)	Poverty Rate (1992)	Unemployment Rate (1993)	Percent Rural (1990)	Percent Under 18 Who Are Nonwhite (1990)
Tier 1 counties										
Cuyahoga	Cleveland	1,403,239	1	134,321	20.0	13.4	18.9	6.8	0.2	35.1
Franklin	Columbus	1,005,161	2	70,357	10.5	12.8	17.2	4.6	3.1	24.1
Hamilton	Cincinnati	867,728	3	60,363	9.0	14.9	15.1	5.5	3.2	28.5
Lawrence	Ironton	63,870	39	6,893	1.0	15.9	25.5	8.2	45.4	3.2
Lucas	Toledo	457,635	6	42,610	6.4	16.3	18.6	6.9	5.2	23.8
Muskingum	Zanesville	83,566	29	5,051	0.8	18.4	16.5	8.6	67.4	6.1
Stark	Canton	374,612	7	20,576	3.1	12.4	12.8	6.9	22.0	10.7
Tier 2 counties										
Jefferson	Steubenville	78,737	32	6,898	1.0	16.5	19.5	9.1	44.0	8.2
Lorain	Lorain	279,405	9	15,930	2.4	15.3	14.4	6.3	13.6	14.6
Montgomery	Dayton	572,140	4	36,541	5.5	12.9	15.3	5.4	5.0	24.7
Summit	Akron	527,920	5	33,724	5.0	12.4	13.8	6.0	5.7	18.0
Trumbull	Warren	228,829	11	14,024	2.1	12.6	14.6	8.2	27.9	10.0
Totals for the 12 counties		5,942,842	--	447,288	66.7	--	--	--	--	--
Weighted average for the 12 counties (c)		--	--	--	--	13.7	16.5	6.1	7.5	24.3
Totals for the Tier 1 counties		4,255,811	--	340,171	50.7	--	--	--	--	--
Weighted average for the Tier 1 counties (d)		--	--	--	--	13.9	17.2	6.1	6.0	26.7
Ohio totals		11,102,198	--	670,378	100	13.6	15.4	6.5	25.9	15.2

SOURCES: Children's Defense Fund–Ohio and Junior Leagues of Ohio, 1995 (unemployment rates based on Ohio Bureau of Employment Services statistics); Council for Economic Opportunities in Greater Cleveland, 1993 (largest city, county population, county population rank, poverty rate); Ohio Department of Health (births to teens, total births) Ohio Department of Human Services (AFDC recipients); U.S. Bureau of the Census, 1990 (percent rural, percent under 18 who are nonwhite).

NOTES: (a) There are 88 counties in Ohio.

(b) AFDC recipients is a total of ADC–Regular (i.e., single–parent families), ADC–Unemployed (i.e., two–parent families in which the principal wage–earner is unemployed), and ADC–Incapacitated (approximately 4.2 percent of the total).

(c) Weighted by county population as a percentage of the 12–county total population.

(d) Weighted by county population as a percentage of the 7–county total population.

GRADS programs when the study began;[3] 13 alternative, magnet, and night high school programs; 16 junior high schools; and 17 adult basic education programs operated by the district. In addition, teens have attended 22 other adult education programs (not affiliated with the district) and four private schools in Cleveland.[4] School districts in smaller cities and towns have offered many fewer alternatives, although some had several choices available.

The evaluation's analysis of program operations has examined LEAP's institutional structure, implementation issues, and application of its incentive structure. The findings of this analysis, which was based primarily on field research conducted in all 12 research counties, were presented in the previous three LEAP reports. Also central to the analysis of program operations has been estimating bonus and sanction rates — a topic that was also covered in previous reports and is discussed with other new results in Chapter 3 of this report.

The analysis of program impacts – the focus of this report – comes from a comparison of the experience of two groups of teens in the 12 research counties. All teens in these counties who were determined to be eligible for LEAP between the beginning of program operations in July 1989 and September 1991 were randomly assigned to either a program group, which was eligible (and mandatory) for all aspects of LEAP, or a control group, which was not. Overall, in the 12 counties, close to 10,000 teens were randomly assigned.[5] Because eligible teens were placed in the program and control groups at random, the members of the two groups are similar in all measurable and unmeasurable characteristics except for the fact that one group received the LEAP treatment and the other did not. Thus, the control group provides the best evidence on what would have happened to the teens in the program group if LEAP did not exist.[6] Differences in the subsequent behavior of teens in the two groups can confidently be attributed to LEAP's package of bonuses, penalties, and case management.[7]

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[3]As noted in Chapter 1, the GRADS (Graduation, Reality and Dual-Role Skills) program, operated by the Ohio Department of Education, uses specially trained home economics teachers to provide instruction and services to pregnant and parenting students in high schools that had chosen to be part of the program.

[4]Three of the adult education programs were developed as part of the Cleveland Student Parent Demonstration (see Long, Wood, and Kopp, 1994). Others were operated by the Job Training Partnership Act system (JTPA), Cuyahoga Community College, proprietary training schools, and other organizations.

[5]The impact analysis in the final report will be based on the 7,700 of these teens who were born on or after September 1, 1970.

[6]The control group did not have access to LEAP (including its incentives and case management) until January 1, 1994. At that point, control group members were admitted to the program if they were eligible and requested to participate. A control group member who entered LEAP could receive bonus payments, but could not be sanctioned.

Members of the control group, of course, were free to attend school, but their school attendance was not monitored by LEAP staff, and their welfare grants were not adjusted based on their attendance. Also, until January 1, 1994, control group teens were not eligible for allowance payments or case management from Ohio's Job Opportunities and Basic Skills Training (JOBS) Program, the employment and training program for adult AFDC recipients. (These $50 monthly allowance payments were intended to cover expenses related to JOBS participation.) Members of the control group, however, were eligible to receive child care assistance to the same extent as members of the program group because all AFDC recipients who attend school or are in a training program are entitled to assistance from JOBS (LEAP is a component of JOBS in Ohio).

[7]A random assignment research design eliminates many, but not all, potential evaluation problems. In particular, it captures only impacts that occur *after* the time of random assignment. Some potentially eligible

(continued...)

The impact study focuses on how LEAP altered short-term education outcomes – school and adult education program enrollment, attendance, progress, and completion – and longer-term outcomes, including employment and welfare receipt. An analysis of the education outcomes, focusing on "school completion" (defined as receiving a high school diploma or GED certificate), is presented in Chapter 4. (See Bloom et al., 1993, and Long, Wood, and Kopp, 1994, for analyses of other education outcomes.) A preliminary analysis of longer-term changes – including those concerning employment, earnings, welfare receipt, and family structure – is presented in Chapter 5. The next (and final) report will also examine LEAP's impacts on outcomes such as employment, earnings, and welfare receipt, but for a longer follow-up period.

Finally, the cost-effectiveness analysis will draw on findings from the operations analysis (specifically, estimates of the average length of program eligibility and bonus and sanction rates) and impact analyses (e.g., the estimated program impacts on earnings and welfare grants). The analysis will be presented in the next LEAP report.

II. The Samples and Data Sources Used in This Report

All of the analysis in this report is based on data from the seven Tier 1 counties.[8] Between July 1989, when program operations began, and September 1991, a total of 7,017 teens in these counties were randomly assigned to the LEAP evaluation — 80 percent to the program group and 20 percent to the control group.[9] In order to increase the extent to which the study sample's experience reflected the full treatment of an ongoing LEAP program, this sample was further reduced in two important steps (see Figure 2.2). First, 1,442 older teens who experienced LEAP only during its start-up phase – when the program was undergoing problems operating under rules and procedures different from those that were eventually put in place – were excluded from most of the analysis. This reduced the sample to 5,575 teens.[10]

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[7](...continued)
LEAP teens were sanctioned when they did not show up for the initial assessment meeting, which verified their program eligibility (see Bloom et al., 1993). Some of these teens were never randomly assigned (i.e., never became part of the study), and others were assigned after being sanctioned one or more times. Any impact these sanctions had on teens' behavior was not captured in the study. In addition, some of the problems that can plague other research designs – such as the potential bias introduced by missing data or differential attrition by individuals in research groups that are being compared – can also affect a random assignment design.

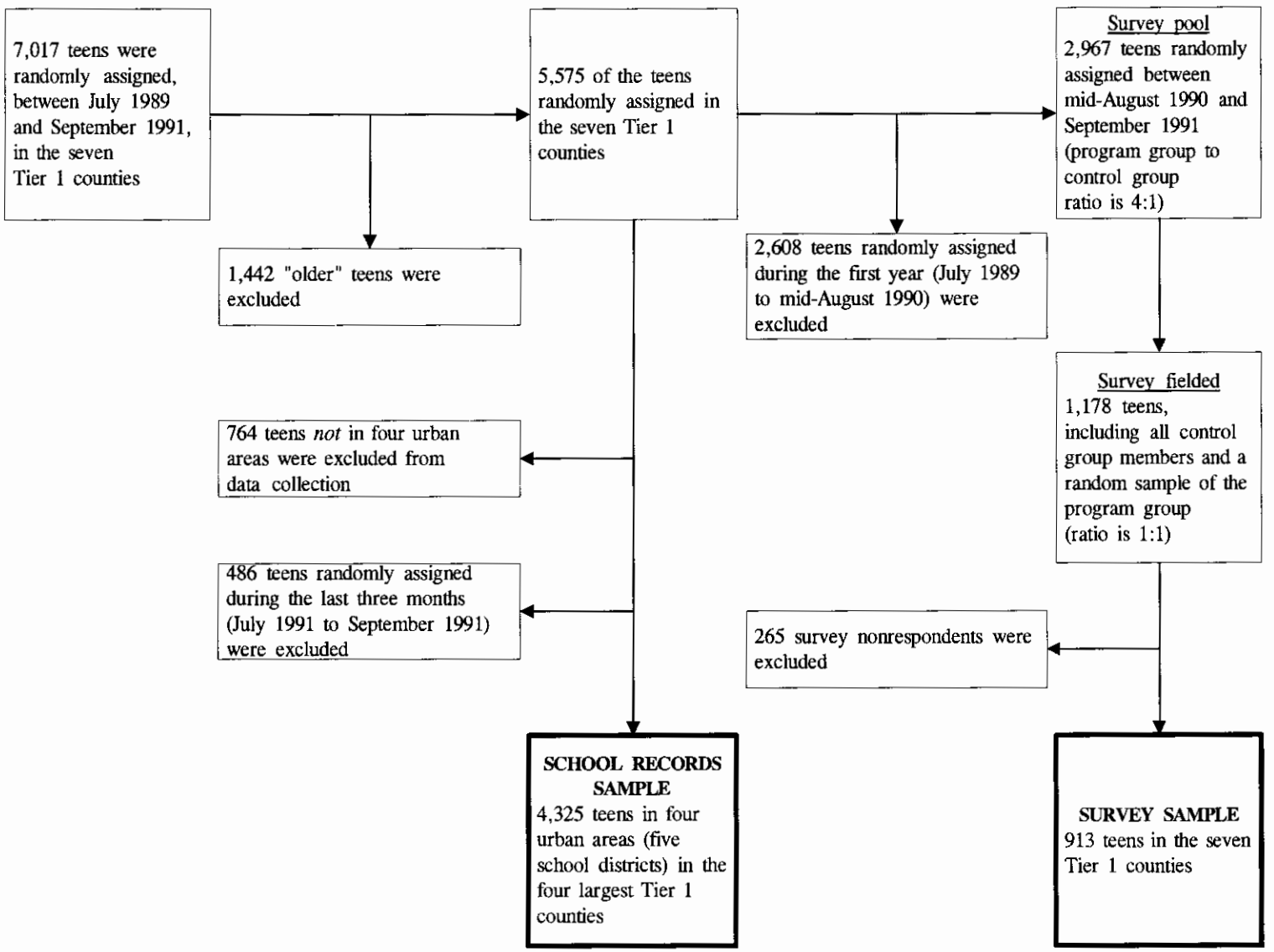
[8]As indicated above, the 12 counties in the LEAP evaluation were chosen randomly, but the seven Tier 1 counties were selected non-randomly from this group of 12. Strictly speaking, therefore, the seven counties are not entirely representative of the statewide caseload. However, as indicated in Table 2.1, the characteristics of the caseloads in the Tier 1 counties are similar to those of all 12 counties.

[9]This ratio reflected an effort to balance two objectives: (1) to minimize the number of teens who would not receive LEAP services and (2) to obtain a control group of sufficient size to allow for statistically reliable analysis.

[10]Teens born prior to September 1, 1971 ("older" teens), were dropped from the analysis because, on September 1, 1990, LEAP raised the age at which teens were no longer eligible for LEAP from 19 to 20. Therefore, teens born prior to September 1, 1971, would have aged out of LEAP on their nineteenth birthday and then become subject to the LEAP mandate again in September 1990. These teens received a strange (continued...)

FIGURE 2.2

DERIVATION OF THE SURVEY AND SCHOOL RECORDS SAMPLES USED IN THIS LEAP REPORT



Second, the "three-year" survey – the major data source for this report – did not include teens who were randomly assigned during the first year of program operations (July 1989 to mid-August 1990), reducing the sampling frame from 5,575 to 2,967 teens (2,363 members of the program group and 604 members of the control group). The reason for focusing on the second year of random assignment (mid-August 1990 through September 1991) was to get estimates of LEAP's impact for teens who (1) were enrolled after the start-up year when, as described in Chapter 3, the bonus and sanction process was not functioning smoothly,[11] and (2) were subject to LEAP's mandate as soon as they were eligible, as would be the case in an ongoing program.[12]

Two of the other samples used in this report — the school records and Cleveland casefile samples — are also subsamples of the 5,575 teens, but were not limited to this later cohort. The fourth sample, the three-county LEAP casefile sample, includes teens who were born prior to September 1, 1971, so it is not a subsample of the 5,575 teens.

A. The LEAP Three-Year Survey

In order to have information from all Tier 1 counties that covered the full "chain" of LEAP's potential impacts – from education to employment, welfare receipt, family structure, and other outcomes – for the same group of teens, the study included a survey.[13] Because of budget considerations, the survey could not cover all teens randomly assigned in the seven counties. Also, as noted above, it was desirable to provide information on the likely effects of an ongoing LEAP program. For both reasons, the survey was targeted at the subsample of 2,967 teens randomly assigned between mid-August 1990 and September 1991, excluding the older teens, who received an atypical treatment (see Figure 2.2). Within this group, interviewers sought (via telephone, followed by in-person contact) to reach all members of the control group and a random subset of one-fourth of the program group, for a total of 1,178 teens.[14]

The survey was conducted over a five-month period, from February to July 1994. As shown in Figure 2.2 and Table 2.2, interviewers were able to complete 913 interviews, for a completion rate of 77.5 percent overall (76.4 percent for the program group and 78.6 percent for the control group). The length of follow-up (i.e., the time between random assignment and administration of the survey)

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[10](...continued)
LEAP treatment that is not representative of the program as it now operates. In addition, these older teens were exposed to LEAP only during its start-up phase when, as discussed in Chapter 3 (and in detail in Bloom et al., 1991), the program was experiencing operational problems.

[11]As discussed in Chapter 3 of this report, the system was still problematic until the third year of LEAP operations, when a new data system was fully operational. See Bloom et al., 1991, for a more detailed discussion of the implementation problems that made the first year of operations atypical of an ongoing program.

[12]The 5,575 sample included some "on-board" teens — teens who already met the LEAP eligibility criteria when the program began and thus entered LEAP under circumstances that would not exist in an ongoing program. For example, some already had two- or three-year-old children and had been on AFDC for years, whereas, in an ongoing program, teens on AFDC would become subject to LEAP's mandate as soon as they were pregnant with their first child.

[13]This was the second survey in the evaluation. As discussed in Bloom et al., 1993, the earlier brief survey collected school-related information on a large subset of program and control group members 4 to 21 months after random assignment.

[14]Ten members of the control group were not included in the survey sample.

TABLE 2.2

SAMPLES AND DATA SOURCES USED IN THIS LEAP REPORT

Sample/ Data Source	Areas in Which Data Were Collected	Composition of Sample for Whom Data Were Collected (a)	Number of Teens in Sample		Period Covered by Data
Survey sample: Telephone and in-person interviews	All seven Tier 1 counties	All control group members and 25% of program group members who were randomly assigned between mid-August 1990 and September 1991. Survey interviews completed with 78% (913) of these teens.	Sample fielded: 1,178 584 594 Respondents: 913 446 467	 Total Program group Control group Total Program group Control group	From random assignment to survey administration. Survey administered from February to July 1994—29 to 46 months after sample members' random assignment. Average of 37 months of follow-up from random assignment.
School records sample: High school records data on graduation and state records on GED receipt	Five urban public school districts: Cleveland, East Cleveland, Columbus, Cincinnati, and Toledo	All program and control group members who were living in these districts at the time of random assignment and who were randomly assigned between July 1989 and June 1991 (b)	4,325 3,471 854	Total Program group Control group	1989-90, 1990-91, 1991-92, and 1992-93 academic years. Data for three academic years, counting the one in which a sample member was randomly assigned, were available for all sample members. Average of 30 months of follow-up from random assignment.
LEAP casefile sample (c)	Cuyahoga, Franklin, and Hamilton counties	Random subsample of teens randomly assigned between July 1989 and November 1990	263	Program group	18 months after random assignment.
Cleveland casefile sample	Cuyahoga County	Random subsample of teens randomly assigned between July 1989 and June 1991	170 (d)	Program group	From random assignment through end of LEAP eligibility for 138 of the 170 teens. For the remaining 32 teens, data cover the first 26 to 49 months of LEAP eligibility.

(continued)

TABLE 2.2 (continued)

NOTES: Random assignment began in July 1989—when the LEAP program began operating—and continued through September 1991.

(a) Unless otherwise noted, teens born prior to September 1, 1971, were excluded from all samples because they received a limited treatment of LEAP during the initial start-up phase of the program.

(b) Teens randomly assigned after June 1991 were excluded because of an inadequate follow-up period.

(c) The three-county casefile sample was reported on in the MDRC interim report on LEAP (Bloom et al., 1993). That report included teens born prior to September 1, 1971.

(d) The 170 cases include all Cleveland cases (except those born prior to September 1, 1971) in the three-county casefile sample, with additional information and cases supplemented by automated LEAP casefile information from the Cuyahoga County Department of Human Services.

ranged from just under two and a half years to over three and a half years, for an average of 37 months. (In Chapters 3 to 5, this is referred to as three years of follow-up.) The average age of the LEAP teens at the time of survey administration was only 20.6 years, and more than 30 percent of teens were still under the age of 20, and hence potentially still eligible for LEAP.[15]

B. School Records Data

This report uses additional data on school outcomes from two other sources. Data on high school graduations come from the administrative records of five selected urban school districts – Cincinnati, Cleveland, East Cleveland, Columbus, and Toledo – within four of the seven counties. Data on GED receipt come from the State of Ohio's records on GED testing, and cover the same school districts. As shown in Figure 2.2, the school records sample (for whom data were collected on both high school graduation and GED receipt) consists of all members of the 5,575-person sample who were living in one of these five school districts at the time of random assignment (more than three-quarters of the sample) and were randomly assigned between July 1989 and June 1991 (i.e., including the early intake period that was dropped for the survey sample). Teens who entered the sample during the last three months of random assignment – July, August, and September 1991 – were omitted from the school records sample because of inadequate follow-up (i.e., less than three academic years). High school graduation data were collected in these five districts for the four academic years from 1989-90 to 1992-93. Data on GED completions covered the same time frame (i.e., through June 1993).

School records data are available for 4,325 teens and cover three academic years for each sample member, including the academic year in which the sample member was randomly assigned. The average length of follow-up was 30 months. For an early cohort of sample members (those enrolled before July 1990), data for four academic years are available. Statewide data on GED receipt through June 1993 for this same sample provide three years of follow-up for all sample members and four years for an early cohort. Education outcomes presented in Chapter 4 are measured at the end of the first, second, third, and in some cases fourth year after random assignment, with an academic year defined as lasting from July 1 through June 30.[16] The average age of teens in the school records sample at the end of follow-up was 19.9 years, and almost half were still under the age of 20.

C. Trade-offs in Using the Survey and School Records Data

This report relies heavily on the survey because it provides information on a wide range of LEAP's potential impacts for a random subsample of teens in all seven Tier 1 counties (and a sample that experienced LEAP as it is most likely to operate as an ongoing program). It also provides longer follow-up than the school records data and does not "lose" graduations for sample members who move to other school districts.

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[15]Those under the age of 20 would not have been eligible if they had graduated from high school, received a GED, left AFDC, or moved from Ohio.

[16]In the survey data, as noted above, three years of follow-up refers to approximately 36 months after the date of random assignment. School records data are handled differently. Data had to be aggregated by semesters, and it was not possible to report information for a specific number of post-random assignment months. As a result, year 1 in the records data means anything from one month to 12 months of follow-up, depending on whether the teen was randomly assigned in July of one year or in June of the following year.

As with all surveys, however, there is the potential for recall problems or bias from survey nonresponse. Consequently, survey and school records data on high school graduations were compared. The comparison showed very high consistency: Almost 87 percent of the cases showed the same information on high school graduation in the two data sources, with graduations reported by teens from schools outside the five school records districts accounting for most of the remaining cases. This suggests that recall problems on the survey introduced little or no bias. Survey completion rates were high, which normally minimizes the chance of nonresponse bias. However, as discussed in Chapter 4, a comparison of high school diplomas and GEDs attained by survey nonrespondents in the program group to those in the control group indicated potential bias: It appears that nonresponding program group members were more likely to have graduated or to have received a GED than nonresponders in the control group. This suggests that the impact estimates presented in Chapter 4 may be conservative – i.e., they could understate LEAP's true impacts.

The school records data also have some clear advantages: They cover a larger sample (making it possible to get more reliable estimates of impacts for smaller subgroups and individual counties) and come not from self-reports, but from actual school documents. However, they cover only five districts in four of the counties (excluding rural areas and other locations) and do not include data on high school graduation for teens who move out of the city where they were randomly assigned. (They do include state data on GED receipt for teens in the school records sample who move to other areas of the state.) Thus, while the larger sample permits more extensive subgroup analysis, the sample is less representative and may show lower graduation rates.

While this report uses the survey as its primary data source, Chapter 4 also includes data from the school records sample. The reader is cautioned that, for all of the reasons noted above – particularly the survey's including only teens randomly assigned during the second year, whereas the records cover teens randomly assigned in both years, and the differences in geographic coverage – data on high school graduation and GED receipt from these two data sources can be expected to differ. (As presented in Chapter 4, the findings for these outcomes do differ somewhat depending on the data source.) It should be reiterated, however, that these two data sources were found to be highly consistent for teens who are in both the survey and the school records samples.

D. The LEAP Casefile Sample and the Cleveland Casefile Sample

The assessment of LEAP grant adjustments, which is presented in Chapter 3, uses bonus and sanction rates collected from the LEAP casefiles for two samples of eligible teens. One is the early cohort of the LEAP casefile sample (referred to in this report simply as the "LEAP casefile sample"), which was used in the second LEAP report (Bloom et al., 1993), and which includes "older" teens. This early cohort is a randomly selected sample of 263 program group teens who were randomly assigned between July 1989 and November 1990 in the three research counties with the largest number of teens — Cuyahoga (which includes Cleveland), Franklin (which includes Columbus), and Hamilton (which includes Cincinnati).

The other sample is the Cleveland casefile sample, which was used in the previous LEAP report, which focused on Cleveland (Long, Wood, and Kopp, 1994). It includes two groups: (1) all teens from the LEAP casefile sample described above who lived in Cleveland at the time they became eligible for LEAP ("older" teens were excluded) and (2) additional randomly selected Cleveland cases from the program group (also excluding "older" teens) who were randomly assigned between July 1989 and June 1991. Grant adjustment data for these additional cases were coded from Cuyahoga County's

automated database. These data cover the entire time teens were eligible for LEAP in 138 of the 170 cases (81 percent) and 26 to 49 months of follow-up for the remainder.

III. Characteristics of Teens in the LEAP Samples

Data on the characteristics of all LEAP sample members were gathered on a one-page form — the Teen Parent Information Sheet (TPIS) — completed by LEAP staff at the time teens were randomly assigned. Table 2.3 displays selected characteristics of teens (with the program and control groups combined) in the full 913-person survey sample, as well as the two key subgroups tracked throughout this report: teens who were already enrolled in high school or a GED program at the point they became eligible for LEAP (often referred to in this report as "initially enrolled teens") and those who were not enrolled at the time of random assignment (often referred to as "out-of-school teens" or "dropouts"). Table 2.4 provides the same information for teens in the 4,325-person school records sample. Appendix Tables A.1 and A.2 do the same for teens in the full 5,575-person sample from which these two samples were drawn.

As shown in Table 2.3, for more than half the teens in the survey sample, LEAP began when they were 17 or 18 years old, while almost a third entered the sample when they were 16 or younger and 11 percent were 19. The vast majority entered LEAP with only one child or when they were pregnant with their first child. (Teens became eligible for the program when they were pregnant with their first child if they were receiving AFDC at that point.)[17] However, many of these teens may have had additional children after entering LEAP.

Just over half the survey teens (58 percent) reported that they were enrolled in a junior high, high school, or GED program when they entered LEAP. The other half were out of school and, as indicated in Table 2.3, many had dropped out of school more than a year before they became eligible for LEAP.

Nearly all the teens in the survey sample are female (99 percent) and had never been married when they were randomly assigned (94 percent). More than half headed their own welfare cases at the time of random assignment, while the other 46 percent were on their parent's or another person's AFDC case. Two-thirds of the sample is African-American, and most the remainder is white.

The survey sample was concentrated in Cuyahoga, Franklin, and Hamilton counties (with 38, 21, and 22 percent of the sample, respectively), with much smaller shares in the other four counties.

A more detailed breakdown, run for the full 5,575-person sample but not for the smaller survey sample (see Appendix Table A.2), shows that several characteristics of the teens are related to their age. For example, the proportion of teens who were enrolled in school when they entered the sample decreases with age: More than 80 percent of teens under age 16 were in school, compared to less than a quarter of the 19-year-olds. In addition, older teens appear to have been further behind grade level for their age.

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[17]The teens with two or more children at the time of random assignment were eligible when LEAP began (i.e., they could not have entered LEAP at the point of their first pregnancy because the program did not exist at that time), started receiving AFDC at some point after their second child was born, or were not identified as LEAP-eligible in a timely manner because of administrative delays.

TABLE 2.3

SELECTED CHARACTERISTICS OF TEENS IN THE LEAP SURVEY SAMPLE AT THE TIME OF RANDOM ASSIGNMENT, BY SCHOOL ENROLLMENT STATUS

Characteristic at Random Assignment	Full Sample	School Enrollment Status at Random Assignment			
		Enrolled in School (a)	Out of School	Out of School	
				Less Than 1 Year	At Least 1 Year
Age in years (%)					
15 or less	12.7	19.2	3.9	7.5	0.5
16	18.6	23.0	12.7	21.4	4.5
17	25.8	27.3	23.8	26.2	21.6
18	31.9	25.0	41.2	35.3	46.7
19	11.0	5.5	18.4	9.6	26.6
Average age in years	17.53	17.13	18.06	17.65	18.45
Female (%)	98.7	98.5	99.0	99.5	98.5
Schooling status (%)					
Enrolled in high school, junior high, or GED	57.7	100.0	n/a	n/a	n/a
Out of school	42.3	n/a	100.0	100.0	100.0
Out of school for 2 years or more (%)	8.2	n/a	19.4	n/a	37.7
Average number of months since last attended school (non–enrolled teens only)	15.15	n/a	15.15	5.86	23.88
Average highest grade completed	9.54	9.61	9.44	9.48	9.41
AFDC case status (%)					
Head of own AFDC case	53.7	41.6	70.2	56.7	82.9
On parent's AFDC case	40.2	52.0	24.1	35.8	13.1
On another's AFDC case	6.1	6.5	5.7	7.5	4.0
Ethnicity (%)					
Black	66.5	75.9	53.6	65.2	42.7
White	30.6	21.4	43.0	32.6	52.8
Hispanic	2.2	1.9	2.6	1.1	4.0
Other	0.8	0.8	0.8	1.1	0.5

(continued)

TABLE 2.3 (continued)

Characteristic at Random Assignment	Full Sample	School Enrollment Status at Random Assignment			
		Enrolled in School (a)	Out of School	Out of School	
				Less Than 1 Year	At Least 1 Year
Marital status (%)					
Single, never married	93.5	96.6	89.4	93.6	85.4
Currently married	4.4	3.0	6.2	5.3	7.0
Divorced, separated, or widowed	2.1	0.4	4.4	1.1	7.5
Number of children (%)					
0	20.6	26.6	12.4	18.2	7.0
1	71.0	69.4	73.1	74.9	71.4
2 or more	8.4	4.0	14.5	7.0	21.6
Average number of children	0.88	0.78	1.03	0.89	1.17
Average age of youngest child in months (b)	8.51	8.11	8.96	7.11	10.49
Average age of oldest child in months (b)	10.62	8.98	12.50	8.77	15.59
Received any earnings during the prior 12 months (%)	14.0	13.9	14.2	12.3	16.1
County (%)					
Cuyahoga	38.1	39.8	35.8	36.4	35.2
Franklin	21.4	22.0	20.5	13.9	26.6
Hamilton	21.7	17.8	26.9	30.5	23.6
Lawrence	1.0	1.3	0.5	0.5	0.5
Lucas	9.4	10.6	7.8	9.6	6.0
Muskingum	2.2	2.1	2.3	3.2	1.5
Stark	6.2	6.3	6.2	5.9	6.5
Sample size	913	527	386	187	199

SOURCE: MDRC calculations using data from Teen Parent Information Sheets.

NOTES: N/a means that data are not applicable.
(a) Enrollment is defined as attending high school, junior high school, or GED classes at the time of random assignment.
(b) Excludes teens who reported having no children at the time of random assignment or for whom birthdate information for their children was incomplete.

TABLE 2.4

SELECTED CHARACTERISTICS OF TEENS IN THE LEAP SCHOOL RECORDS SAMPLE AT THE TIME OF RANDOM ASSIGNMENT, BY SCHOOL ENROLLMENT STATUS

Characteristic at Random Assignment	Full Sample	School Enrollment Status at Random Assignment			
		Enrolled in School (a)	Out of School	Out of School	
				Less Than 1 Year	At Least 1 Year
Age in years (%)					
15 or less	13.2	19.1	5.4	8.9	2.3
16	21.2	25.2	15.9	22.6	10.2
17	35.2	34.5	36.2	36.3	36.1
18	26.2	19.2	35.5	29.7	40.5
19	4.2	2.1	7.1	2.6	11.0
Average age in years	17.32	17.03	17.71	17.42	17.97
Female (%)	99.3	99.4	99.1	99.2	99.1
Schooling status (%)					
Enrolled in high school, junior high, or GED	57.2	100.0	n/a	n/a	n/a
Out of school	42.8	n/a	100.0	100.0	100.0
Out of school for 2 years or more (%)	9.2	n/a	21.5	n/a	40.0
Average number of months since last attended school (non–enrolled teens only)	15.71	n/a	15.71	6.04	24.03
Average highest grade completed	9.39	9.52	9.21	9.39	9.05
AFDC case status (%)					
Head of own AFDC case	46.4	33.4	63.7	51.9	73.9
On parent's AFDC case	47.9	60.6	30.9	41.6	21.7
On another's AFDC case	5.7	6.0	5.4	6.4	4.4
Ethnicity (%)					
Black	71.5	82.2	57.1	69.0	46.9
White	25.4	15.7	38.4	27.5	47.7
Hispanic	2.6	1.7	3.8	2.9	4.5
Other	0.6	0.4	0.7	0.6	0.8

(continued)

TABLE 2.4 (continued)

Characteristic at Random Assignment	Full Sample	School Enrollment Status at Random Assignment			
		Enrolled in School (a)	Out of School	Out of School: Less Than 1 Year	Out of School: At Least 1 Year
Marital status (%)					
Single, never married	95.7	98.3	92.3	95.9	89.2
Currently married	2.7	1.3	4.6	3.0	5.9
Divorced, separated, or widowed	1.6	0.4	3.1	1.1	4.8
Number of children (%)					
0	9.2	11.5	6.1	7.7	4.6
1	79.3	81.7	76.1	78.0	74.4
2 or more	11.5	6.8	17.9	14.3	21.0
Average number of children	1.03	0.96	1.14	1.08	1.19
Average age of youngest child in months (b)	9.63	9.49	9.80	8.10	11.19
Average age of oldest child in months (b)	12.05	10.92	13.45	11.06	15.41
Received any earnings during the prior 12 months (%)	13.5	14.3	12.4	12.4	12.5
City (%)					
Cleveland/East Cleveland	43.6	43.8	43.2	44.6	42.0
Cincinnati	23.2	22.6	23.9	24.0	23.9
Columbus	20.7	18.8	23.2	20.0	26.0
Toledo	12.5	14.7	9.6	11.5	8.0
Sample size	4,325	2,475	1,850	855	995

SOURCE: MDRC calculations using data from Teen Parent Information Sheets.

NOTES: N/a means that data are not applicable.
(a) Enrollment is defined as attending high school, junior high school, or GED classes at the time of random assignment.
(b) Excludes teens who reported having no children at the time of random assignment or for whom birthdate information for their children was incomplete.

As also shown in Appendix Table A.2, AFDC case status is also a function of age: Virtually all 19-year-olds headed their own case, while only 8 percent of teens under age 16 did. Also, younger teens tended to be African-American, and teens who were younger tended to have had only one child (or were pregnant with their first child). However, half of the 19-year-olds were white, and a fifth of the 19-year-olds had two or more children.

The ages of teens in the 5,575-person sample (Appendix Table A.2) also varied across the seven counties. Other characteristics (not shown in the table) are important to note because they may contribute to differences in teens' compliance with LEAP requirements and school behavior. In particular, the proportion of teens who were enrolled in school at the time they became eligible for LEAP varied by county. In Franklin County, half the teens were enrolled in school at the time they became eligible, compared to almost two-thirds in Lucas County. The proportion of teens who were enrolled was also high in Cuyahoga and Hamilton counties. In-school teens tended to be younger, to still be on their parent's AFDC case, and to have had fewer children.

The characteristics of teens in the school records sample were similar to those in the survey sample, with a few differences (see Tables 2.3 and 2.4) arising from the way the school records sample was defined. For example, by definition, teens in the school records sample were located in only four of the seven counties. Also, because that sample included teens who entered LEAP during its first year of operations, before the program had extended eligibility to pregnant teens, teens in the school records sample had more children, and, because fewer teens were age 18 or 19, they were less likely to head their own AFDC case than teens in the survey sample.

Table 2.4 shows that, within the school records sample, teens who were enrolled in school at random assignment were somewhat younger, were less likely to head their own AFDC case, were more likely to be African-American, and had fewer children than teens who were not in school at random assignment.

IV. Implications for the Analysis

The preceding discussion has two important implications for the analysis presented in the next three chapters. First, because many teens in the samples are young and the follow-up period covered by the data is limited to three years, the analysis will be far from final. Table 2.3 shows that over 30 percent of the survey teens were 16 or under at random assignment and more than half were 17 or under. As a result, at the time the survey was administered, they averaged 20.6 years of age and one in eight were still 18 or under. Because of their youth at follow-up, this report can tell only a partial story of progress along the LEAP "chain." For example, at the time of the survey:

- A teen who was 16 and in school but behind grade level at the time she became eligible for LEAP (the point of random assignment) might still be in high school, not working, and on welfare.
- A teen who was 17 and at grade level at random assignment might have completed high school, gone to community college, and still be on welfare.
- A dropout who was 17 at random assignment might have completed a GED program, gone to work, and left welfare.

- A dropout who was 18 might have been in and out of school, frequently sanctioned, and remain on welfare.

As the first two examples illustrate, it can easily take more than three years for LEAP's impact chain to take shape, even if teens respond to the LEAP treatment exactly as intended (it takes even longer for teens who start LEAP at age 15 or younger). As a result, it is not possible to determine, with roughly three years of follow-up data, whether or not LEAP achieved its full chain of effects on teen behavior. The final report will use larger samples and longer follow-up to examine the program's impacts on employment, welfare receipt, and other outcomes.

Second, most of the analysis depends on data from the survey, which have some limitations. The data are subject to nonresponse bias, which means that the graduation and GED receipt impacts presented in Chapter 4 may understate LEAP's true effects. The survey sample is also small enough to limit the subgroup analysis that could be done. This was not a major problem in assessing LEAP's impacts on high school graduation and GED receipt because school records data are available for a large sample, permitting the extensive subgroup analysis presented in Chapter 4 and Appendix C. However, this did constrain the analysis of LEAP's impacts on other outcomes. For example, it was not possible to estimate with confidence LEAP's impacts in specific geographic areas other than Cleveland (and East Cleveland) or on small subgroups such as teens who had been out of school for more than a year at the time of random assignment.

CHAPTER 3

EXPERIENCE WITH LEAP'S INCENTIVE STRUCTURE

This chapter offers a brief description of LEAP's implementation and then presents estimates of the frequency with which teens in the research sample qualified for bonuses and sanctions. As discussed in Chapter 2, the estimates are based on:

- LEAP casefile data collected on a sample of 263 program group members from Cuyahoga, Hamilton, and Franklin counties, covering the teens' first 18 months in LEAP. This information is summarized from an earlier report (Bloom et al., 1993).
- Cleveland casefile data collected on 170 program group teens. This analysis is based on follow-up of up to four years, which in most cases covered teens' entire period of eligibility for LEAP (summarized from Long, Wood, and Kopp, 1994).

The last section of the chapter assesses the immediate consequences of the grant adjustments for teens and their families. This is an important element of LEAP's effect that is not fully captured in the impact analysis presented in Chapters 4 and 5. The discussion is based on a special module included in the LEAP three-year survey for teens who had received at least four bonuses or sanctions.

I. The Operation of LEAP's Incentive Structure

LEAP's incentive structure was intended to create impacts on school enrollment and attendance, which in turn would lead to increased school completion, more employment and higher earnings, and reduced welfare receipt. Thus, the program's ability to accomplish its longer-term objectives has depended on its success in exposing eligible teens to the incentive structure.

LEAP began operations in the summer of 1989, and it eventually was successful in implementing its incentive system as planned. However, as discussed in earlier LEAP reports, this success was not achieved immediately. Especially during the first year of program operations in urban counties, many difficulties were encountered by LEAP staff, the most critical being:

- **Monitoring school attendance.** Although school districts were generally cooperative, county welfare agencies had trouble obtaining monthly school attendance reports, particularly in larger cities with many education providers. Especially during the first school year of operations, some counties were unable to consistently obtain timely information.
- **Processing AFDC grant adjustments.** In most of the counties where LEAP case managers were not income maintenance (IM) workers, and thus not responsible for processing grant adjustments, the program's financial incentives were not fully implemented. Many teens who failed to meet LEAP's requirements were not sanctioned, and some teens who earned bonuses did not receive them.

Despite these difficulties, most eligible teens were reached by the incentive structure; school attendance data were ultimately obtained for the vast majority of them; and a substantial fraction of the eligible caseload received the sanctions and bonuses they earned, even during the first year of operations. However, since the program was not yet functioning entirely as planned, teens randomly assigned during LEAP's first year of operations were excluded from the survey sample, as described in Chapter 2. Teens who became eligible for LEAP during the program's second year[1] experienced a more mature program.

CRIS-E (Client Registry Information System–Enhanced), a highly sophisticated statewide public assistance computer system, was fully implemented during the third year of LEAP operations. By the 1992-93 academic year, operational problems that had especially plagued large urban counties such as Cuyahoga were largely resolved, and almost all sanction and bonus requests made by LEAP staff were carried out.

II. Grant Adjustments

LEAP includes two kinds of bonus payments, each for $62:

- **Enrollment bonuses** are paid (1) when a teen first verifies that she is enrolled in a high school or GED preparation program, and (2) at the beginning of subsequent academic years as long as the teen remains enrolled.
- **Attendance bonuses** are earned for every month in which a teen meets LEAP's school attendance requirement – for high school students, two or fewer unexcused absences and four or fewer total absences in a month.

Teens can also receive three types of sanctions, each of which reduces the family's monthly AFDC grant by $62:

- **Assessment sanctions** are administered when a teen fails to come to (1) a scheduled assessment meeting (the event that commences LEAP participation), or (2) a scheduled reassessment meeting, which occurs prior to the start of subsequent school years. These sanctions remain in effect (and monthly grants continue to be reduced) until the teen appears for the meeting. Because eligibility for LEAP is usually verified at the assessment meeting, these sanctions can be applied to teens before eligibility is confirmed.
- **Enrollment sanctions** reduce grants when a teen has been assessed and either (1) fails to enroll in a qualifying school or education program, or (2) drops out of school. The sanction remains in place until the teen provides proof of enrollment or becomes exempt from or ineligible for LEAP.
- **Attendance sanctions** are requested for each month in which an enrolled teen does not meet LEAP's school attendance requirement and does not have an acceptable reason for failing to do so.

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[1]As indicated in Chapter 2, the survey sample is composed of teens who were randomly assigned between mid-August 1990 and September 1991, the second year of LEAP operations.

Based on the individual teen's compliance (or noncompliance) with these rules, her LEAP case manager issues a request for a bonus or sanction.[2] This request is carried out by the income maintenance staff. The focus is on sanction and bonus *requests*, rather than actual grant adjustments, because these measure intended program actions. In addition, given the improvements in the ability of counties to process grant adjustments since the introduction of the CRIS-E computer system, the data on requests better describe how LEAP operates under steady-state conditions.

Figure 3.1 graphically illustrates the experiences of 100 typical LEAP teens in the three counties during their first 18 months of program eligibility. As shown in the figure, 93 of the teens qualified for at least one bonus or sanction, with 75 earning at least one bonus and 56 qualifying for at least one sanction.[3] The proportion earning *many* sanctions or bonuses was also high: 68 earned four or more grant adjustments and 52 were scheduled for six or more. Staff requested an average of 3.5 bonuses and 2.8 sanctions per teen during the period.

Grant adjustments were examined for subsequent months of eligibility in Cleveland, in Cuyahoga County, based on a casefile sample of 170 teens (see Chapter 2). Cuyahoga's bonus and sanction rates in months 1 to 18 were very close to the average rates across all three counties: 4.0 bonus requests and 2.8 sanction requests per teen during the first 18 months of teens' eligibility, compared to 3.5 bonus requests and 2.8 sanction requests in all three counties. Over their entire period of LEAP eligibility,[4] Cleveland teens had an average of 5.7 bonus requests and 6.3 sanction requests. The number of sanction requests eventually exceeded the number of bonus requests.

Thus, Cleveland teens earned more bonuses than the three-county average during the early months of their LEAP eligibility and more sanctions during the later months, mainly because many of the teens who were enrolled during the first 18 months of their LEAP eligibility graduated or received a GED during that period. Thus, they were no longer eligible for LEAP by month 19. This means that cooperative teens, who generally earned more bonuses, became a smaller and smaller fraction of the teens still in LEAP.

Figure 3.2 summarizes bonus and sanction requests in Cleveland for 100 typical teens based on the longer follow-up. As before, virtually all teens were touched by LEAP's incentive structure: 94 percent of teens in Cleveland were slated for at least one bonus or sanction. However, more teens — 68 — received at least one sanction request, and almost half of these 68 teens received at least nine sanction requests during their time in LEAP; 10 received nine or more sanction requests and no bonuses.[5]

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[2]Teens who exceed the allowed number of total absences in a month, but not the allowed number of unexcused absences, receive neither a bonus nor a sanction for that month.

[3]This was the highest sanction rate MDRC has ever measured in programs for welfare recipients. The next highest sanction rate is 41 percent (45 percent were referred for sanction), which was estimated for the JOBS program in Grand Rapids, Michigan, based on two years of follow-up rather than 18 months (see U.S. Department of Health and Human Services and U.S. Department of Education, 1995). As indicated below, the LEAP sanction rate reached 68 percent in Cleveland, based on additional follow-up data.

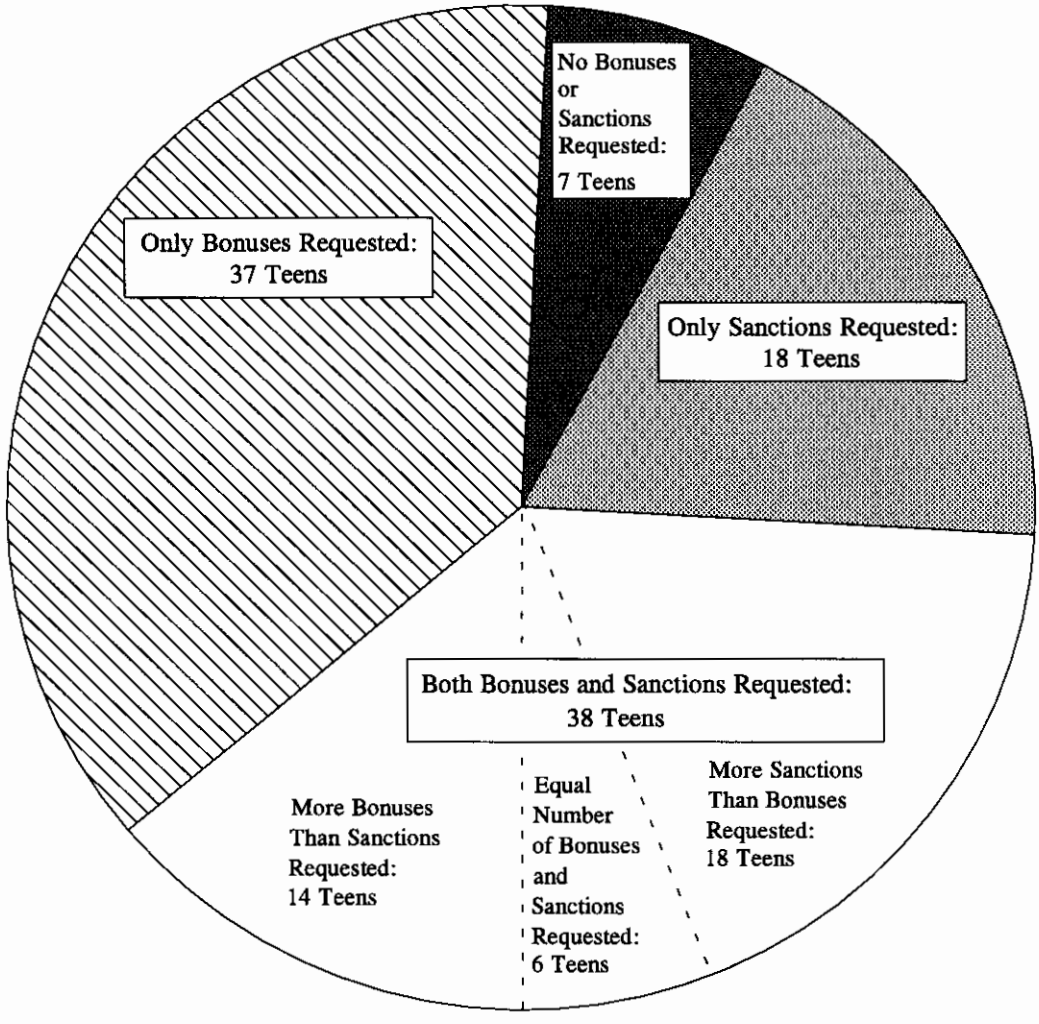
[4]The grant adjustment data cover the entire period of eligibility for 138 of the 170 teens. For the remaining 32 teens, the data cover the first 26 to 49 months of LEAP eligibility.

[5]Nine sanctions was chosen as the cutoff for this analysis for two reasons. First, because of the three-month lag in making grant adjustments (noted in Chapter 1), teens who were eligible for LEAP for less than

(continued...)

FIGURE 3.1

GRANT ADJUSTMENT REQUESTS FOR 100 TYPICAL LEAP TEENS WITHIN 18 MONTHS OF ELIGIBILITY VERIFICATION (RANDOM ASSIGNMENT) IN CUYAHOGA, FRANKLIN, AND HAMILTON COUNTIES

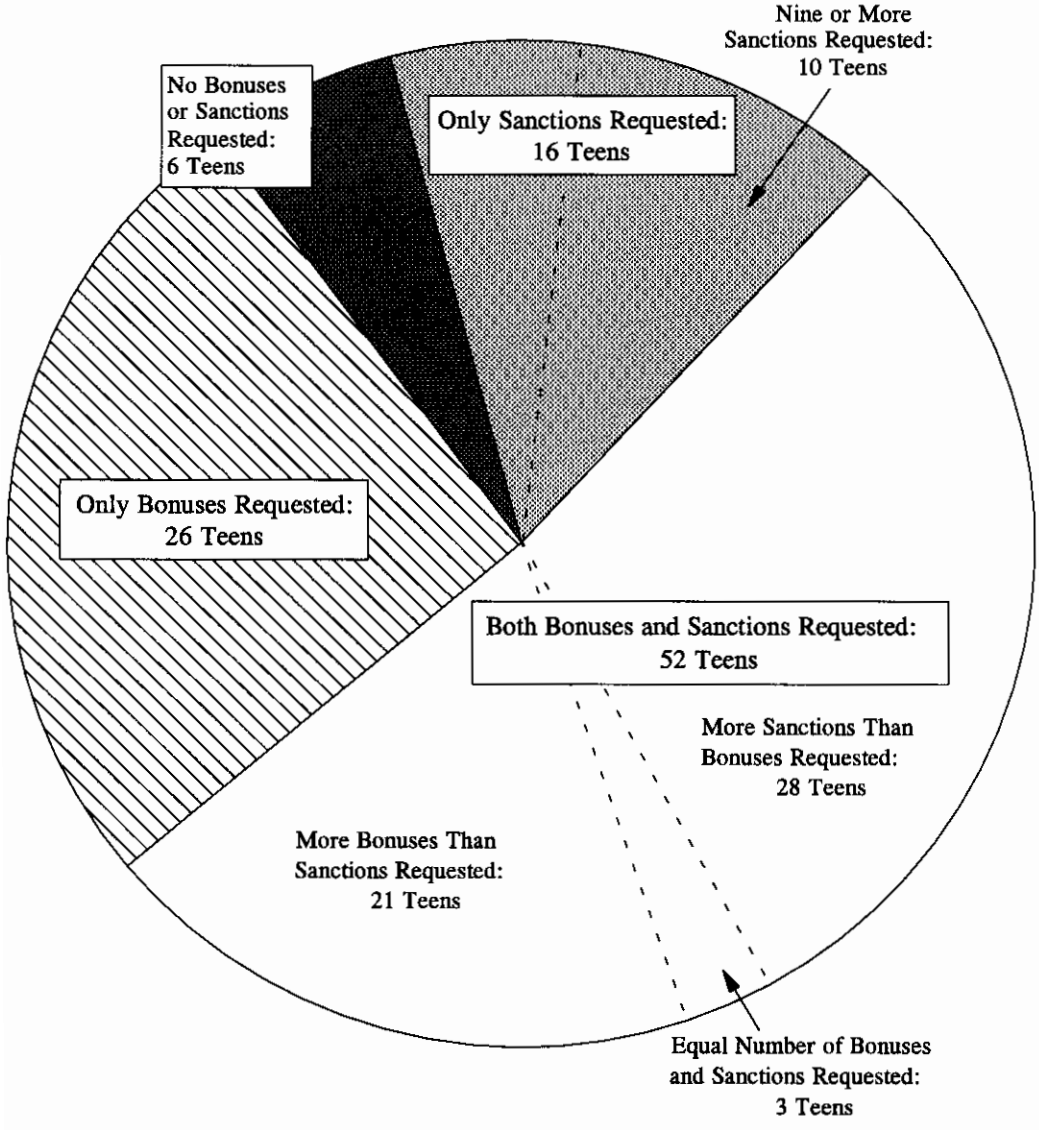


SOURCE: MDRC review of records for the LEAP casefile sample.

NOTE: Numbers are weighted averages reflecting the number of teens in the three counties who were randomly assigned through November 1990.

FIGURE 3.2

GRANT ADJUSTMENT REQUESTS FOR 100 TYPICAL LEAP TEENS IN CLEVELAND



SOURCE: MDRC review of records for the Cleveland casefile sample.

NOTE: Depending on the date of random assignment, follow-up ranged from 26 to 49 months. At the end of the follow-up, 19 percent of the teens were still eligible for LEAP.

Bonus and sanction rates differed markedly for Cleveland teens who were enrolled in school at random assignment versus those who were not. The brunt of LEAP's sanctioning has been borne by the latter group, more than three-quarters of whom qualified for at least one sanction (see Appendix Figure B.1). Over half of the teens who were dropouts when they became eligible for LEAP qualified for more sanctions than bonuses, while more than one in five qualified for nine or more sanctions and no bonuses. Approximately half of the dropouts never earned a bonus. In contrast, fewer than two-thirds of teens who were initially in school were referred for a sanction; fewer than one in 20 received nine or more sanction requests with no bonuses; and more than 90 percent of these teens earned at least one bonus.

These findings set up a potential policy trade-off. Initially enrolled teens in Cleveland earned many more bonuses than sanctions and, as discussed in the next chapter, LEAP's incentive structure has significantly increased the proportion of teens who finish high school or attain a GED. On the other hand, Cleveland dropouts who became eligible for LEAP incurred more sanctions but did not complete high school or a GED in greater numbers than they would have without LEAP (at least not within the three years covered by the analysis presented in Chapter 4). Thus, LEAP's success with initially enrolled teens may come at the expense of reducing income for poor families headed by teens who were dropouts when they became eligible for LEAP. This issue is revisited in Chapter 5.

III. Consequences of Sanctions and Bonuses

The overall financial effects of LEAP's AFDC grant adjustments are captured in the impact analysis presented in Chapter 5, which examines the program's impacts on AFDC assistance received and on household income, but the effects of *many* sanctions or bonuses on family well-being are not. In order to learn more about the consequences of multiple sanctions on teens and their children, as well as the effect of receiving multiple bonuses, a module of questions was included in the LEAP three-year survey of teens conducted in 1994. The findings presented below are based on teens' responses to these questions.

A. Sanctions

The first set of questions, which was administered to the 57 teens among the 446-member program group in the survey sample who reported having been sanctioned at least four times, examined the effect of these sanctions on the teens' families and the teens' coping strategies for dealing with lost income due to sanctions. The teens were asked whether they had done without essentials because of the sanctions and, if so, which household members were affected. As shown in Table 3.1, well over half of these teens reported that they went without essentials as a result of the grant reductions (an even larger proportion reported doing without "luxuries"). Disturbingly, children appear to have suffered at least as much as their teenage parents. The item that families did without most often was clothing, followed by food and medicine.

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[5](...continued)
a year (22 percent of the Cleveland casefile sample) could not have received more than nine sanctions even if they qualified for a sanction every month of their eligibility. Second, the proportion of teens who received at least 10 sanctions was lower than the fraction who received nine.

TABLE 3.1

WAYS OF COPING WITH SANCTIONS, AS REPORTED BY LEAP TEENS WHO WERE SANCTIONED MORE THAN THREE TIMES

Coping Method	Percentage Who Employed the Method	Number Who Employed the Method
Did without essentials	57.9	33 teens
Of those who did without essentials, the household members who were affected:		
LEAP teen	12.1	4
LEAP teen's children	27.3	9
Other household members	3.0	1
LEAP teen and her children	54.5	18
LEAP teen's children and other household members	3.0	1
Of those who did without essentials, the essentials that were sacrificed:		
Food	30.3	10
Clothing	78.8	26
Medicine	15.2	5
Shelter	9.1	3
Borrowed or obtained money from others	68.4	39
Of those who borrowed money, from whom they borrowed:		
Parents	64.1	25
Boyfriend	5.1	2
Other relative	17.9	7
Friend	12.8	5
Applied to other sources for assistance	40.4	23
Of those who applied to other sources, the other sources they applied to:		
Food Stamps	73.9	17
Medicaid	34.8	8
Child support	17.4	4
Food pantry	34.8	8
Soup kitchen	30.4	7
Church	8.7	2
Postponed paying bills	66.7	38
Of those who postponed paying bills, the bills they postponed:		
Rent	36.8	14
Groceries	5.3	2
Utilities	71.1	27
Loans	5.3	2
Medical	7.9	3
Credit card	2.6	1
Engaged in illegal activities	5.3	3

(continued)

TABLE 3.1 (continued)

Coping Method	Percentage Who Employed the Method	Number Who Employed the Method
Did without luxuries	66.7	38 teens
Of those who did without luxuries, the household members who were affected:		
LEAP teen	10.5	4
LEAP teen's children	39.5	15
Other household members	0.0	0
LEAP teen and her children	47.4	18
LEAP teen, her children, and other household members	2.6	1
Changed their daily routine	57.9	33
Of those who changed their daily routine, the ways in which they changed it:		
Walked rather than using public transportation	72.7	24
Used public transportation rather than driving	6.1	2
Ate at a friend's house	18.2	6
Skipped meals	9.1	3
Stayed home rather than going out	9.1	3
Got a job	7.0	4
Reduced general expenses	21.1	12
Bought less food	5.3	3
Ate less to save more food for the children	3.5	2
Did nothing because it wasn't much money	3.5	2
Had a friend or relative sit with the children rather than paying a sitter	3.5	2
Refrained from buying alcohol or cigarettes	3.5	2
Struggled to buy necessities	5.3	3
Stayed home from school	1.8	1
Struggled to pay rent and other bills	3.5	2
Pawned possessions	1.8	1
Sample size	57	

SOURCE: MDRC calculations using data from the LEAP three-year survey.

NOTES: Because this table is based on a relatively small sample (the 57 survey respondents who reported having been sanctioned more than three times), some of the percentages refer to very few LEAP teens. To make this clear, each item is shown with both the percentage and the absolute number of respondents who cited that coping method as one she employed.

Percentages may not sum to 100.0 because many respondents employed more than one coping method.

Responses to other questions on the consequences of grant reductions indicate that key coping methods also included borrowing money, postponing bill payments, and applying for other forms of public and private assistance. More than two-thirds of these teens borrowed money, usually from their parents. Similarly, two-thirds of the teens postponed paying bills, most often utilities bills or their rent. The form of public assistance most frequently sought was additional Food Stamps, which the teens were entitled to receive because of their loss in income (owing to a federal waiver, teens who received bonus payments did not lose Food Stamps). Teens also sought help from food pantries and soup kitchens and, interestingly, from child support (4 out of 57 teens reported seeking higher monthly child support payments).[6]

Among the more positive findings, only three teens reported engaging in illegal activities and four teens reported getting a job. Also, while more than half of the teens changed their daily routines, most changes were not too worrisome (an exception is that some teens reported skipping meals).

B. Bonuses

The second set of questions was directed to the 115 respondents who reported receiving at least four bonus payments. As shown in Table 3.2, the spending practices of teens who received multiple bonus payments is heartening. Close to 90 percent reported using the additional money from the bonus payments on essentials, and most often the beneficiaries were their children. Close to a quarter of the teens also reported being able to buy some luxuries, and again it was their children who usually benefited. Moreover, the "luxuries" that teens provided to their children included new clothing, outings (e.g., to the movies or to the zoo), and birthday parties.

Teens also were better able to pay their bills and save some money. Utility bills, rent, and payments on personal loans were the most noteworthy financial obligations that teens were able to meet. The additional savings mainly resulted in future spending on the teens' children, with some of the savings eventually being used to buy household essentials or cover unexpected emergencies.

[6]As discussed in Chapter 5, teens assigned to the program group received larger child support payments, on average, than teens in the control group.

TABLE 3.2

WAYS OF SPENDING BONUS PAYMENTS, AS REPORTED BY LEAP TEENS WHO EARNED MORE THAN THREE BONUSES

Spending Method	Percentage Who Employed the Method	Number Who Employed the Method
Spent the bonus on essentials	87.8	101 teens
Of those who spent the bonus on essentials, the household members who were affected:		
LEAP teen	7.9	8
LEAP teen's children	46.5	47
Other household members	2.0	2
LEAP teen and her children	41.6	42
LEAP teen, her children and other household members	2.0	2
Of those who spent the bonus on essentials, the essentials that were purchased:		
Food	44.6	45
Clothing	79.2	80
Medicine	29.7	30
Shelter	10.9	11
Spent the bonus on bills	35.7	41
Of those who spent the bonus on bills, the bills they spent the bonus on:		
Rent	24.4	10
Car payments	2.4	1
Personal loan payments	22.0	9
Groceries	2.4	1
Utilities	68.3	28
Medical	4.9	2
Lost library books	4.9	2
Spent the bonus on luxuries	22.6	26
Of those who spent the bonus on luxuries, the household members who were affected:		
LEAP teen	7.7	2
LEAP teen's children	23.1	6
Other household members	0.0	0
LEAP teen and her children	65.4	17
LEAP teen, her children and other household members	3.8	1
Of those who spent the bonus on luxuries, the luxuries that were purchased:		
Toys	11.5	3
Ice cream	15.4	4
Clothing	19.2	5
Movies	7.7	2
Trip to the zoo	7.7	2
Birthday party	3.8	1

(continued)

TABLE 3.2 (continued)

Spending Method	Percentage Who Employed the Method	Number Who Employed the Method
Saved the bonus	24.3	28 teens
Of those who saved the bonus, what they saved the bonus for:		
Purchasing essentials	21.4	6
Purchasing luxuries	3.6	1
The children	64.3	18
Unexpected emergencies	7.1	2
Moving expenses	3.6	1
Gave or lent the bonus to a family member or friend	11.3	13
Used the bonus as general household money	2.6	3
Used the bonus to pay for apartment or home repairs	0.9	1
Used the bonus for transportation or to purchase a bus pass	4.3	5
Used the bonus to purchase merchandise	2.6	3
Sample size	115	

SOURCE: MDRC calculations using data from the LEAP three-year survey.

NOTES: Because this table is based on a relatively small sample (the 115 survey respondents who reported having earned more than three bonuses), some of the percentages refer to very few LEAP teens. To make this clear, each item is shown with both the percentage and the absolute number of respondents who cited that spending method as one she employed.

Percentages may not sum to 100.0 because many respondents spent their bonuses in more than one way.

CHAPTER 4

THE IMPACTS OF LEAP ON HIGH SCHOOL GRADUATION AND GED RECEIPT

Findings from prior LEAP reports indicated that the program had a substantial impact on school enrollment and that, in Cleveland (for teens who were enrolled in school when they entered the program), this translated into significantly increased school completion.[1] This suggested that LEAP's intended chain of impacts was developing as hoped. It also pointed to the importance of examining separately the results for teens who were or were not in school at random assignment. In this chapter, the assessment of LEAP's impacts on school completion is extended beyond Cleveland to other school districts in the seven counties covered by this report. The chapter begins with a description of the analysis that was done, then discusses the school impact results, and finally assesses the potential for these impacts to grow over time.

I. Assessing LEAP's Impacts on School Completion

This chapter focuses on high school and GED completion (i.e., receipt of a high school diploma or a GED), although other related outcomes are also presented. The analysis uses data on two samples: the 913-person *survey sample* of teens in school districts throughout the seven research counties and the 4,325-person *school records sample* of teens in the Cleveland, East Cleveland, Cincinnati, Columbus, and Toledo school districts. (See Chapter 2 for a description of the important differences between the two samples.)

The education outcomes examined in this chapter include three measures of school completion:

- **High school graduation.** This outcome has been measured cumulatively — i.e., it shows whether teens ever completed high school during the entire follow-up period covered by the survey or by the school records data.
- **GED receipt.** Also measured cumulatively, this outcome shows whether teens have ever passed the GED test (and hence received a GED certificate).
- **High school or GED completion.** This combined outcome indicates whether teens have either finished high school or received a GED.

Both survey and school records data are available for these three outcomes. As discussed in Chapter 2, the primary impact estimates in this report are based on the survey data, mainly because they (1) cover all seven study counties, and (2) include information, for a consistent sample of teens, on all outcomes along the LEAP "impact chain" (the education outcomes examined in this chapter, as well as the employment, welfare, and other outcomes discussed in the next chapter). However, as indicated in Chapter 2 and discussed below, it appears that estimates of completion using this sample may be conservative — i.e., they may understate the program's impacts somewhat. This is because program group teens who did not respond to the survey (nonresponders) appeared to be more likely

[1]Bloom et al., 1993, and Long, Wood, and Kopp, 1994.

than nonresponding control group members to have graduated from high school or received a GED — information acquired by checking survey data against school records data.[2]

The school records data have been used for two purposes: (1) as just noted, to validate the survey results because surveys are subject to potential problems such as nonresponse bias and recall error, and (2) to extend the analysis across subgroups and over time. The results have generally proven to be very similar using the two data sources, which increases confidence in the conclusions drawn based on the survey results. Because school records were obtained for a much larger sample of teens and cover four years of follow-up for an early cohort of sample members, the records data are used to compare LEAP's school completion impacts across cities and to examine the school completion impacts beyond the three years covered by the survey.

The analysis in this chapter also includes two measures of school progress, both of which have been assessed using survey data:

- **Grade completion.** This outcome, which has been measured cumulatively, shows whether teens have ever completed the ninth, tenth, or eleventh grade. Particular attention has been paid to eleventh-grade completion, a measure of academic progress that falls just short of graduation. Another grade completion outcome measures the average number of grades completed by teens during the three years covered by the survey.
- **School enrollment status at the three-year point.** This outcome measures whether teens were enrolled in high school or a GED program at the end of the three-year period covered by the survey. Many sample members did not graduate from high school within this time period, so it is helpful to know how many teens were still actively pursuing a diploma or a GED. This is especially true for very young teens, who could not have finished school within three years.

As indicated below, these outcomes are important both to assessing LEAP's success in increasing school completion and to identifying reasons that this success was not greater.

II. School Completion Impacts for the Survey Sample

The 1993 report concluded that the program had a substantial impact on both school "retention" (among in-school teens) and "return" (among dropouts). For a sample of all teens in the seven research counties, LEAP significantly increased a combined measure of high school or GED program enrollment during the first year after they became eligible for the program. During the last three months of that year, 41.6 percent of the program group were enrolled in high school, compared to 34.9 percent of the control group, and another 15.0 percent of program group teens were in GED programs, compared to 9.1 percent of the control group.[3] Among teens who were already enrolled in school when they became eligible for LEAP (just over half of the sample), 61.3 percent of the

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[2]The records of two-thirds of the nonresponders were checked (i.e., those nonresponding teens who were randomly assigned in the five districts where school records data were collected, and for whom three years of these data were available).

[3]Bloom et al., 1993, Table 7.1, p. 127.

program group stayed in high school or a GED program for at least 10 of the 12 months after they became eligible for LEAP, compared to 51.1 percent of the control group. Among teens who were dropouts when they entered LEAP, 46.8 percent of the program group ever enrolled in a high school or GED program during their first year of eligibility, compared to 33.4 percent of the control group. The impacts for both subgroups — the initially enrolled and the dropouts — were also statistically significant.

A later report (Long, Wood, and Kopp, 1994), using school records data, showed that in Cleveland these impacts (especially the retention impact) translated into increased high school graduation and GED receipt for teens enrolled in school at random assignment. Among this group, 23.7 percent of program group members received their diploma within three years, compared to 18.1 percent of control group members, and 5.6 percent received their GED compared to 2.3 percent of the control group. Again, both differences were statistically significant. For teens not enrolled in school at random assignment, the gains were not significant.

The question addressed in this chapter is whether LEAP's seven-county effects on school enrollment translated into effects on high school and GED completion. The analysis begins with the full-sample impacts and then turns to the subgroup results.

A. Full-Sample Impacts

LEAP's impact on school enrollment has been followed by a statistically significant improvement in school progress for the full seven-county survey sample. As shown in Table 4.1, the average LEAP teen in the survey sample completed .12 grades more than her counterpart in the control group. In other words, about one in eight teens in the program group completed a full grade more in high school than she would have finished without LEAP. This is quite substantial considering that many teens in the program group never attended high school after becoming eligible for LEAP (some attended GED programs and others attended neither high school nor a GED program).

Consistent with this finding, LEAP increased ninth-, tenth-, and eleventh-grade completion. As shown in Table 4.1, LEAP's impact on the completion of each successive grade was statistically significant.[4] However, LEAP's impact on grade completion has not extended to the twelfth grade: LEAP teens did not complete high school more often than control group teens, at least by the three-year point. There are several possible explanations for these results. First, LEAP teens may have encountered problems in the twelfth (but not in the tenth or eleventh) grade that prevented them from graduating. For example, those who had failed courses prior to completing the eleventh grade had to make them up by the end of the twelfth grade.[5] One potential explanation — that students in Ohio must now pass a proficiency test to graduate from high school — could not have applied to most teens in the survey sample.[6]

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[4]An estimate that is "statistically significant" implies a high degree of confidence that the impact is a real program effect and not the result of statistical chance. In this report's tables, one asterisk indicates a 90 percent probability that a measured difference was the result of LEAP, and two or three asterisks indicate a 95 or 99 percent probability, respectively. Where sample sizes are small — e.g., for some subgroups and outcomes — impacts may not pass the test of statistical significance for that reason but may still be real; in such cases, however, one cannot be as confident that they are.

[5]Teens could advance to the twelfth grade if they had enough course credits, even if they had failed courses that they would eventually need to pass in order to graduate.

[6]This test was instituted at the beginning of the 1990-91 academic year for teens entering high school (i.e., starting the ninth grade) that year. Members of the survey sample who entered the ninth grade in 1990-91

(continued...)

TABLE 4.1

LEAP's THREE-YEAR EDUCATION IMPACTS FOR THE SURVEY SAMPLE, BY SCHOOL ENROLLMENT SUBGROUP

Sample and Its Status 3 Years After Random Assignment	Program Group	Control Group	Difference
All teens			
Average highest grade completed	10.34	10.22	0.12 *
Ever completed grade 9 (%)	89.4	86.1	3.2 *
Ever completed grade 10 (%)	74.0	69.0	5.0 **
Ever completed grade 11 (%)	50.0	45.4	4.6 *
Ever completed high school (%)	22.9	23.5	-0.6
Ever completed GED (%)	11.1	8.4	2.7
Ever completed high school or GED (%)	34.0	31.9	2.1
Currently enrolled in high school (%)	7.1	6.5	0.6
Currently enrolled in a GED program (%)	10.4	8.0	2.4
Currently enrolled in high school or GED program (%)	17.5	14.5	3.0
Ever completed high school or GED, or currently enrolled in high school or GED program (%)	51.6	46.5	5.1 *
Sample size	446	467	
Teens enrolled in school at random assignment			
Average highest grade completed	10.72	10.62	0.09
Ever completed grade 9 (%)	94.0	91.1	2.9
Ever completed grade 10 (%)	81.3	79.6	1.8
Ever completed grade 11 (%)	60.6	58.1	2.5
Ever completed high school (%)	35.6	34.2	1.4
Ever completed GED (%)	10.0	4.4	5.6 **
Ever completed high school or GED (%)	45.6	38.6	7.0 *
Currently enrolled in high school (%)	10.1	9.6	0.6
Currently enrolled in a GED program (%)	10.2	8.8	1.5
Currently enrolled in high school or GED program (%)	20.3	18.3	2.0
Ever completed high school or GED, or currently enrolled in high school or GED program (%)	65.9	56.9	9.0 **
Sample size	267	260	

(continued)

TABLE 4.1 (continued)

Sample and Its Status 3 Years After Random Assignment	Program Group	Control Group	Difference
Teens not enrolled in school at random assignment			
Average highest grade completed	9.81	9.70	0.12
Ever completed grade 9 (%)	81.5	80.8	0.7
Ever completed grade 10 (%)	62.8	55.8	6.9
Ever completed grade 11 (%)	35.8	28.0	7.8 *
Ever completed high school (%)	6.7	7.8	−1.1
Ever completed GED (%)	12.0	14.3	−2.3
Ever completed high school or GED (%)	18.6	22.1	−3.4
Currently enrolled in high school (%)	2.8	2.4	0.4
Currently enrolled in a GED program (%)	10.8	7.1	3.7
Currently enrolled in high school or GED program (%)	13.6	9.5	4.0
Ever completed high school or GED, or currently enrolled in high school or GED program (%)	32.2	31.6	0.6
Sample size	179	207	

SOURCE: MDRC calculations using data from Teen Parent Information Sheets and the LEAP three−year survey.

NOTES: "Completed GED" refers to passing the GED test.

Estimates of the program−control group differences are regression−adjusted using ordinary least squares, controlling for pre−random assignment background characteristics of sample members.

Rounding may cause slight discrepancies in calculating differences.

A two−tailed t−test was applied to the difference between the program and control groups. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; and * = 10 percent.

Second, some LEAP teens shifted from high school to a GED program or to a job after finishing the eleventh grade (state rules have prohibited students from enrolling in a GED program until they reached age 18). Teens who faced difficult course requirements to graduate (because of failing them earlier) would shed them in moving to a GED program, and GED programs require fewer hours of class time. Also, GED programs in some locations offered special services or instruction.[7]

Third, some of the teens whom LEAP induced to stay in or return to high school turned 20 while still in high school, making them no longer subject to the LEAP program and its incentive structure. This is particularly true for teens who were out of school at random assignment (and had not been enrolled for an average of more than a year).

Fourth, some LEAP teens who did not graduate within the three-year period covered by the survey may eventually graduate. As shown in Table 4.1, 7.1 percent of the LEAP teens were still enrolled in high school at the end of three years, and, based on school records for an early cohort of teens (see Section VI.B, below), there is some evidence that more teens in the program group graduated in the fourth year after they became eligible for LEAP than did teens in the control group.

Fifth, LEAP has offered no incentive to graduate. As indicated in Chapter 3, LEAP has offered bonuses for attending school and for reenrolling in school each academic year, but no bonus for graduating. In addition, a teen who was attending and receiving bonuses regularly stood to *lose* bonus payments if she graduated before turning 20. Starting at age 20, when LEAP eligibility ended, teens received neither bonuses for attending school, nor sanctions for failing to attend.

As also indicated in Table 4.1, LEAP teens' GED completion rate was 11.1 percent by the end of three years, compared to 8.4 percent for the control group. The difference, however, was not statistically significant.

Overall, 34.0 percent of the program group completed either a diploma or a GED, a not statistically significant 2.1 percentage points more than for the control group. A substantial proportion of teens, however, were enrolled in high school or GED programs at the end of three years: 17.5 percent of program group teens and 14.5 percent of control group teens. Thus, 51.6 percent of the program group had their high school diploma or GED or were working on one, compared to 46.5 percent of the control group. In this case the difference was statistically significant. As shown in the table, 7.1 percent of the program group and 6.5 percent of the control group were still enrolled in high school at the time of the survey, while 10.4 percent of the program group and 8.0 percent of the control group were enrolled in GED programs.

B. The Low High School and GED Completion Rates

In examining the results in Table 4.1, it is striking that two-thirds of the teens did not complete either a high school diploma or a GED within the three years of follow-up. Many factors undoubtedly contributed to this low rate of school completion, in addition to those discussed in exploring why eleventh-grade completion impacts did not translate into high school graduation impacts. One was the

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[6](...continued)
ordinarily would not have graduated until June 1994, which is after the time the survey was conducted with most teens.

[7]For example, some were geared to teen mothers and offered instruction in parenting and life skills as well as on-site babysitting, while others offered vocational training or remedial instruction. A few were residential programs for teen mothers that included GED preparation.

teens' feelings about attending high school, as reported in the earlier LEAP survey (administered in late 1990-early 1991 and in late 1991-early 1992).[8]

- **Lack of safety.** Close to one-third of teens who were enrolled in school at the time of the survey reported that they did not feel safe in the high school they attended. The proportion was higher in some urban areas.
- **High school atmosphere.** One-quarter of in-school teens said that other students or teachers "give me a hard time about being a parent." Almost three-quarters reported that other students often disrupt classes.
- **Lack of concern.** Of teens who were not in school when they were interviewed, fewer than 20 percent said that anyone offered to help them with personal problems, offered to help them make up work, or offered tutoring. Moreover, only about 30 percent of these out-of-school teens said that anyone from their high school had tried to talk them into staying in school when they stopped attending.

In addition, among program group teens attending high school, 20.4 percent agreed that they were doing so "because the welfare department wants me to go."

A second factor is teen circumstances. Among an early cohort of the first LEAP survey, 15 percent reported that they were pregnant at that time, and a previous report (Bloom et al., 1993) strongly indicated that LEAP had no impact on school enrollment for teen parents who had a second or third child. Other studies have pointed to situational and emotional problems than can make school attendance difficult for teen single mothers (see, e.g., Quint and Musick, 1994). LEAP staff concur, noting the disruptive role of problems such as unstable living arrangements and abusive relationships.

A third factor is the teens' youth. By the end of the three-year period covered by the survey, as shown in Table 4.2, the teens averaged 20.6 years of age, and almost a third were under 20 and thus still eligible for LEAP. (Table 4.2 also indicates that teens were even younger by the end of the third academic year covered by the school records data.) Moreover, as noted above and shown in Table 4.1, 17.5 percent of the program group (and 14.5 percent of the control group) were in high school or a GED program at the follow-up point. When these enrolled teens are excluded, 41 percent of the program group and 37 percent of the control group had completed high school or a GED.

A fourth factor is the strong tendency of teen parents in general not to finish high school. For example, David Ribar (1992) analyzed data on a nationally representative sample of young women from the National Longitudinal Survey of Youth (NLSY). His data included women who were 14 to 21 years old in 1979, and covered the period 1979 to 1985. Including women on and off welfare, Ribar found that 42 percent of women who gave birth before the age of 18 had graduated from high school or received a GED by the age of 20. In contrast, 84 percent of all women in his sample (teen mothers and non-teen mothers combined) had graduated from high school or gotten a GED by the age of 20.

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[8]See Bloom et al., 1993, especially pp. 149-50, Table 7.7 (p. 151), and Table 8.4 (p. 171).

TABLE 4.2

AGE OF LEAP TEENS IN THE SURVEY AND SCHOOL RECORDS SAMPLES AT THE END OF FOLLOW-UP

Characteristic	All Teens	Teens Enrolled in School at Random Assignment	Teens Not Enrolled in School at Random Assignment	Teens Not Enrolled in School at Random Assignment, Out Less Than One Year	Teens Not Enrolled in School at Random Assignment, Out One Year or More
Survey sample					
Age (years) (%)					
17 or under	4.1	6.3	1.0	--	--
18	8.3	12.3	2.8	--	--
19	18.0	22.2	12.2	--	--
20	23.4	24.9	21.5	--	--
21	31.5	26.9	37.8	--	--
22	14.7	7.4	24.6	--	--
Age 18 or less (%)	12.4	18.6	3.8	--	--
Average age (years)	20.6	20.2	21.1	--	--
Sample size	913	527	386		
School records sample					
Age (years) (%)					
16 or less	1.7	2.4	0.7	1.4	0.1
17	5.9	8.5	2.5	4.3	1.0
18	13.2	18.0	6.9	10.6	3.7
19	27.2	28.7	25.3	30.4	20.9
20	39.1	35.0	44.7	39.9	48.8
21	12.7	7.4	19.8	13.3	25.4
Age 18 or less (%)	20.8	28.9	10.1	16.3	4.8
Average age (years)	19.9	19.6	20.2	19.9	20.5
Sample size	4,325	2,475	1,850	855	995

SOURCE: MDRC calculations from Teen Parent Information Sheets.

NOTES: This table includes teens in both the program and the control groups.

Follow-up for the school records sample lasted for three academic years, counting the academic year in which a sample member was randomly assigned. Average length of follow-up for the survey sample was 37 months.

Distributions may not add up to 100.0 percent because of rounding.

Dashes indicate that these data were not analyzed for these two subgroups.

Finally, the completion rates shown in Table 4.1 do not seem quite so low when compared to the graduation rates for all students in high schools attended by LEAP teens. In 1994, the graduation rates in the five school districts where school records were collected ranged from 27 to 45 percent.[9]

C. Findings for Subgroups

In this and earlier LEAP reports, the results have been analyzed separately for two particularly important subgroups of teens: those who were already enrolled in high school or a GED program at the point they became eligible for LEAP (often referred to in this report as *initially enrolled teens*) and those who were not enrolled at the time (referred to as *out-of-school teens* or *dropouts)*. For initially enrolled teens, who make up 58 percent of the survey sample, LEAP's job is to keep them enrolled in school or a GED program, and attending regularly, until they complete their diploma or GED. The program's task with the dropouts is different: induce teens to return to high school or to enter a GED program and then keep them there until they eventually graduate or pass the GED test. It is noteworthy, too, that the dropouts on average are older, are further behind age-for-grade level, and have more children than initially enrolled teens (see Tables 2.3 and 2.4).

1. Initially enrolled teens. While LEAP's overall effect on school completion was negligible, its impact for teens who were enrolled in a high school or GED program when they became eligible for the program was statistically significant. As shown in the second panel of Table 4.1, 45.6 percent of initially enrolled program group teens received a high school diploma or GED within three years, compared to 38.6 percent of the control group — an impact of 7.0 percentage points. This increases to 9.0 percentage points if teens who were enrolled in school at the three-year point are taken into account: 65.9 percent of the program group completed school or were enrolled, significantly higher than the 56.9 percent of the control group.

This suggests that LEAP's treatment approach — which relies on financial incentives and the public school system, rather than developing new services or special assistance — works better with initially enrolled teens than with dropouts. The former are expected to stay in school and attend regularly, whereas, generally speaking, dropouts have to change their lives more substantially. (This is less the case for very recent dropouts or those who enroll in a GED program that requires only a few classroom hours each week. And for initially enrolled teens who are attending school only sporadically, the required behavior change could be considerable.)

In particular, LEAP's job is presumably easier with teens who were enrolled in school *and* at or close to the appropriate grade level for students of their age when they became eligible for the program than it is for enrolled teens who were a year or more behind their peers. The top half of Figure 4.1 divides initially enrolled teens into these two subgroups (with 42 percent of the full 913-person survey sample in the first group and 16 percent in the second). As shown in the figure, 72 percent of initially enrolled program group teens who were at or close to age-for-grade level had received a diploma or a GED, or were enrolled in school, at the three-year point, compared to 61

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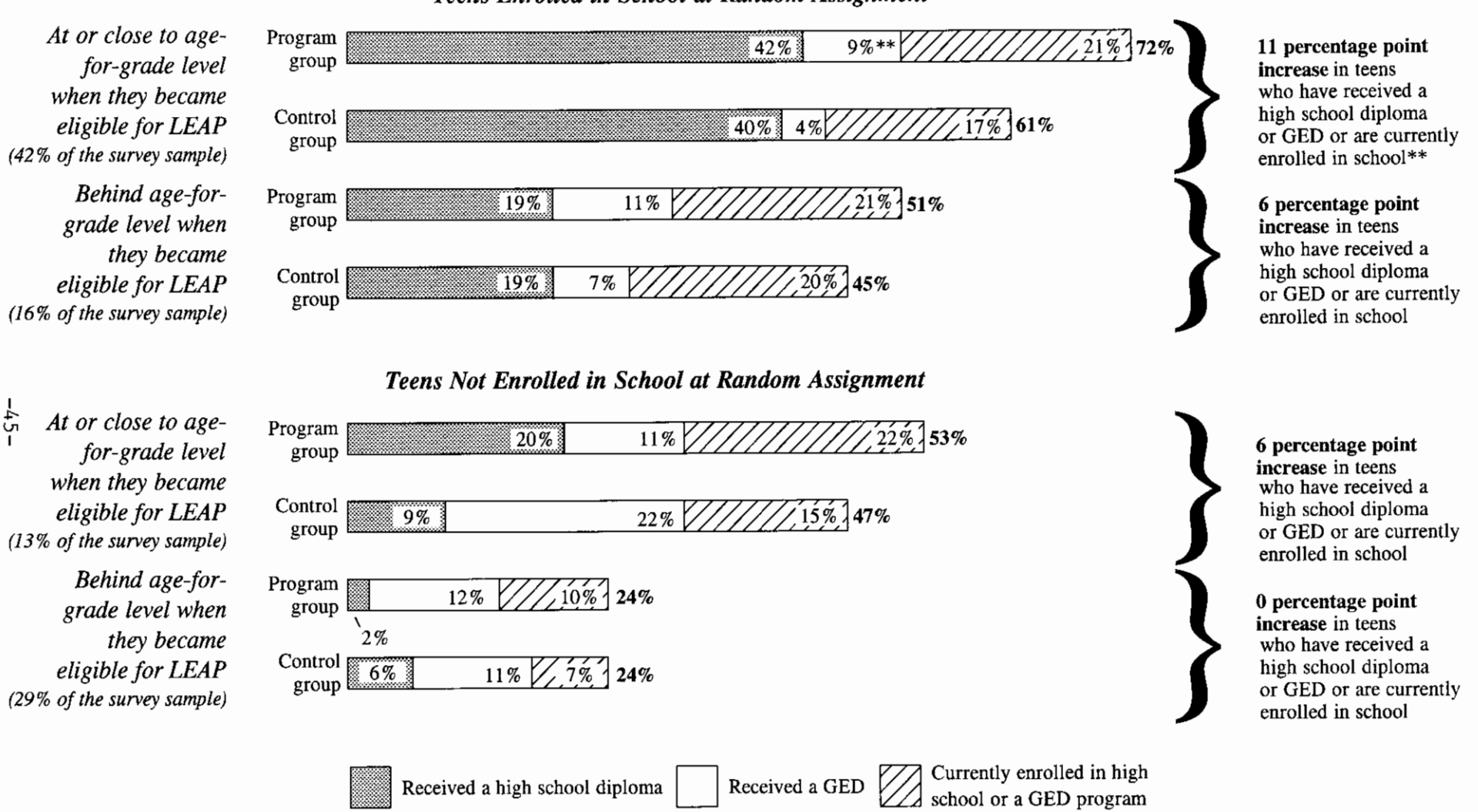
[9]According to state and district data, and using the definition of high school graduation prescribed by Ohio law, the 1994 graduation rates were 33.1 percent in Cleveland, 27.0 percent in East Cleveland, 44.6 percent in Columbus, 37.1 percent in Toledo, and 36.3 percent in Cincinnati. The numerator of this rate is all students in a district who graduated in 1994 (regardless of whether they started high school in that district), and the denominator is all students who started ninth grade in 1990-91 (including those who subsequently moved from the district).

FIGURE 4.1

LEAP's THREE-YEAR IMPACTS ON SCHOOL OUTCOMES FOR SUBGROUPS BASED ON SCHOOL ENROLLMENT AND AGE-FOR-GRADE STATUS AT RANDOM ASSIGNMENT



NOTES: This figure is based on the 913-member survey sample. "At or close to age-for-grade level" applies to 18-year-olds who have completed at least the eleventh grade, 17-year-olds who have completed at least the tenth grade, 16-year-olds who have completed at least the ninth grade, etc. All others are considered "behind age-for-grade level." Asterisks indicate that a difference is statistically significant (significance levels are indicated as *** = 1 percent; ** = 5 percent; and * = 10 percent). Rounding may cause slight discrepancies in calculating differences.

percent of their control group counterparts. The 11 percentage point difference is statistically significant. In contrast, there is a not significant 6-point difference for initially enrolled teens who were behind age-for-grade level.

Earlier analysis (Bloom et al., 1993) showed that LEAP's impact on high school enrollment was larger for teens who were younger when they became eligible for LEAP than for those who were older. As shown in Figure 4.2, LEAP had a 14 percentage point impact on school or GED completion or current enrollment for teens who were under 18, enrolled in school, and at or close to appropriate age-for-grade level at random assignment — a subgroup comprising one-third of the full sample. In contrast, the impact on older or behind-age-for-grade-level teens was small and not statistically significant.

It should be noted that Figures 4.1 and 4.2 combine numerous individual situations, such as an 18-year-old who had completed only the ninth grade at the time she became eligible for LEAP (and hence was two or more years behind her age-for-grade level) and who attained a GED by the time of the survey. Appendix Table C.7 provides a complete picture of these situations, indicating the educational attainment of teens at the three-year point, by age and highest grade completed at random assignment. It is also noteworthy that, while the analysis in Figures 4.1 and 4.2 is useful in identifying the teens for whom LEAP has been most and least effective, the results are not conclusive given the small size of the subgroup samples.

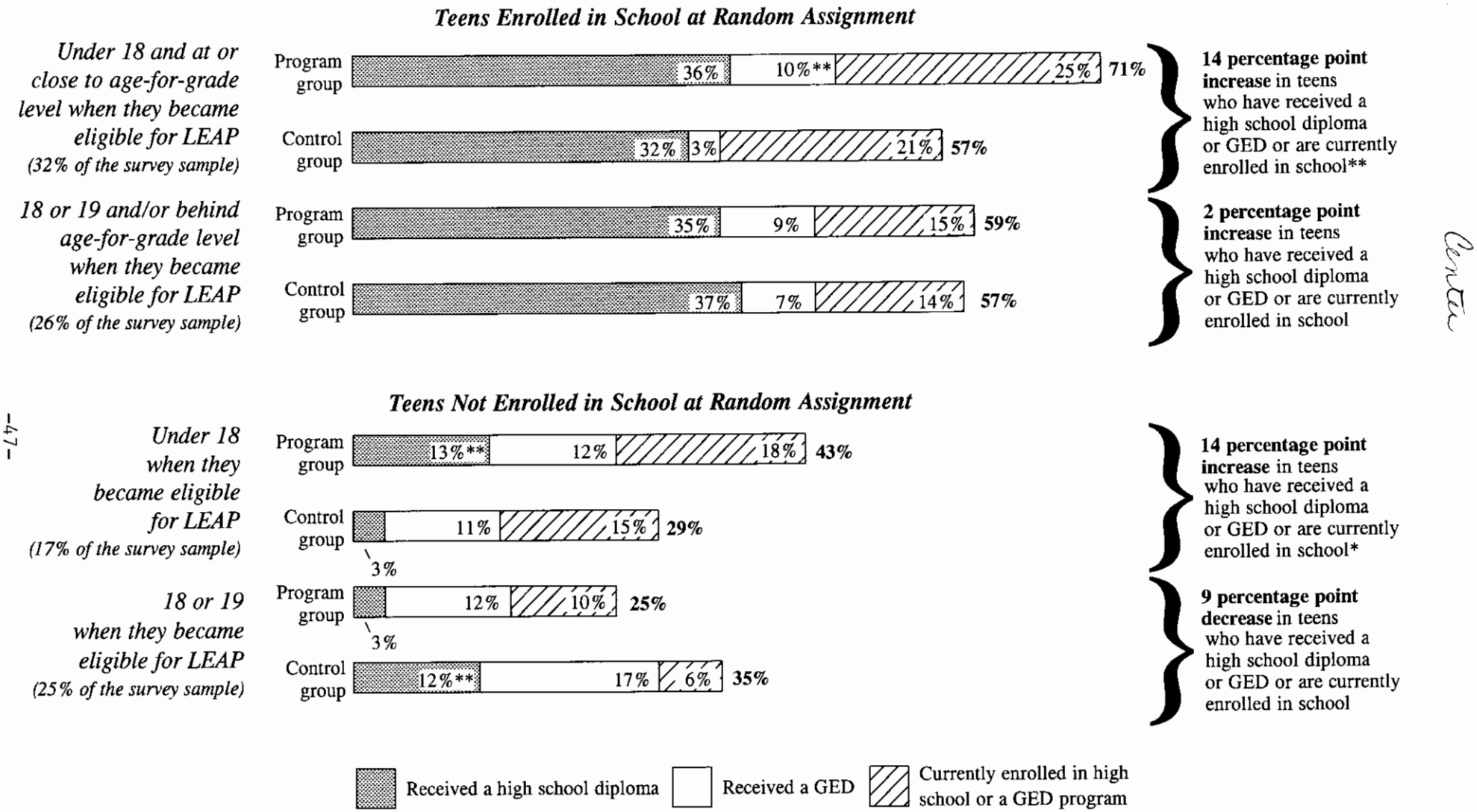
2. Teens who were out of school at random assignment. In contrast to its impacts on enrolled teens, LEAP has had no effect on school or GED completion by teens who were not enrolled in high school or a GED program at the time they became eligible for the program. As shown in the bottom panel of Table 4.1, only 18.6 percent of dropouts in the program group, and 22.1 percent of control group dropouts, received a diploma or GED within the three years covered by the survey. The difference was not statistically significant.

The program's impact on eleventh-grade completion, however, was sizable, positive, and statistically significant. Less than 20 percent of program group dropouts who eventually completed the eleventh grade, however, went on to receive their high school diplomas within three years (not shown in Table 4.1), and LEAP had no effect on the proportion that did. The others left school to earn a GED, left school (and did not return) without earning a diploma or GED, or were still enrolled in high school or were in a GED program at the end of the three years.

Nor was there a significant impact on LEAP's combined effect on high school or GED completion or enrollment for dropouts. Figures 4.1 and 4.2, however, provide suggestive evidence that LEAP was effective for *some* dropouts. In Figure 4.1, dropouts are divided into those who were at or close to age-for-grade level when they became eligible for LEAP (i.e., they had not been out of school long) and those who were behind age-for-grade level. LEAP did not increase combined high school/GED completion among dropouts who were at or close to age-for-grade level, but it did appear to increase the proportion of completers who earned a diploma rather than a GED. (The gain in high school completion for teens who were at or close to age-for-grade level and the reduction in GED completion for this group were significant at the .16 and .12 levels, respectively — quite close to the .10 level that represents statistical significance in this report.)

FIGURE 4.2

LEAP's THREE-YEAR IMPACTS ON SCHOOL OUTCOMES FOR SUBGROUPS BASED ON SCHOOL ENROLLMENT STATUS AND AGE AND AGE-FOR-GRADE STATUS AT RANDOM ASSIGNMENT



NOTES: This figure is based on the 913-member survey sample. "At or close to age-for-grade level" applies to 17-year-olds who have completed at least the tenth grade, 16-year-olds who have completed at least the ninth grade, 15-year-olds who have completed at least the eighth grade, etc. All others are considered "behind age-for-grade level." Asterisks indicate that a difference is statistically significant (significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent). Rounding may cause slight discrepancies in calculating differences.

In Figure 4.2, dropouts are divided into those who were 18 or 19 when they became eligible for LEAP and those who were under 18.[10] LEAP was successful with dropouts who were under 18 when they entered the program. Thirteen percent of these teens graduated from high school (significantly more than the 3 percent of control group teens), and significantly more (43 percent) of the program group received a diploma or GED or were in school than was the case for the control group (29 percent). In contrast, the results for older dropouts were negative.

III. Confidence To Be Placed in the Survey Results

The analysis based on the survey data is subject to three types of analytical limitations, discussed below.

A. Nonresponse to the Survey

The above analysis is based on the sample of teens who completed the survey. As with any survey, it is important to examine evidence of nonresponse bias, which could threaten the internal validity of the impact estimates.[11] As noted in Chapter 2, 22.5 percent of the teens in the sample that was fielded for the survey either could not be located or refused to be interviewed. This creates a potential for nonresponse bias, especially if program group members as a whole responded more or less to the survey than control group members, or there was a difference in response concentrated among teens with important characteristics (e.g., if academically successful teens in the program group were more likely to respond than their counterparts in the control group).

While the overall response rate was 77.5 percent, the rate for program group teens was 76.4 percent and the rate for control group members was 78.6 percent. Thus, the control group had a 2.2 percentage point higher response rate, a difference that was not statistically significant.

Another problem is that nonresponse may cause the survey sample to be unrepresentative of the eligible teen population, threatening the external validity of the impact estimates. For example, response rates were slightly higher in some counties, such as Hamilton (which includes Cincinnati), than in others. Also, it is likely that the rates were higher for some subgroups than others.

To test the effect of survey nonresponse on the school completion impact estimates, nonresponders' school records were examined — specifically, the records of the 175 program and control group nonresponders who were randomly assigned in the five school districts with school records data, and for whom there were three years of follow-up data. These teens constitute two-thirds of all the nonresponding teens. Based on this examination, LEAP's impact on the combined measure of high school graduation or GED completion appears to be *larger* for survey nonresponders than for

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[10]Unlike the breakdown provided for initially enrolled teens, results are not presented for teens who were under 18 and at or close to age-for-grade level because too few fell into this category, making impact estimates unreliable.

[11]"Internal validity" allows us to infer that measured impacts are entirely attributable to the program, not other factors such as differences in program and control group characteristics or responsiveness to a survey. "External validity" permits us to infer that impacts measured for the program are representative (i.e., the evaluation's sites and follow-up period are not exceptional).

shorter follow-up; and the follow-up years are defined differently than they are for the survey.[14] For all these reasons, estimates of the same measures (high school graduations, GED receipt) from these two data sources can be expected to differ, even if (as noted above) the survey results match the records data closely for particular teens in the sample.

A. Full-Sample Impacts

Table 4.3 reports LEAP's impacts on high school graduation and GED receipt across the five districts covered by the school records data. As seen in the first panel of the table, LEAP has had no significant effect on high school graduation. (By the end of the third year, 14.3 percent of program group members and 13.2 percent of control group members had graduated.) However, by the end of the third year, LEAP led to a significant, 2.1 percentage point increase in GED receipt. Further, a fourth year of GED follow-up data indicates that LEAP's impact on GED completion increased slightly in the fourth year, to 2.3 percentage points (see Appendix Table C.5).[15] This is very close to the 2.7 percentage point increase for the survey sample but, with the larger records sample, is statistically significant.

As also shown in Table 4.3's top panel, there was a significant 3.2 percentage point increase in the share of teens obtaining a high school diploma or GED certificate.

B. Subgroup Impacts

The other panels of Table 4.3 show completion impacts separately for those who were and were not enrolled in school at random assignment. At the end of three years, overall completion impacts were similar for the two groups; both had impacts of about 3 percentage points.

The additional year of GED follow-up reveals that LEAP's impact on GED completion increased in the fourth year for those who were enrolled in school at random assignment (see Appendix Table C.5). The fourth-year GED impact was a statistically significant 2.3 percentage points (up from 1.3 percentage points in year 3). In contrast, among teens who were not initially enrolled, LEAP's GED impact declined somewhat in the fourth year, to 2.5 percentage points (down from 3.2 percentage points in the third year).

This pattern of growing impacts in later years among initially enrolled teens and steady or declining impacts among teens who entered as dropouts may be related to the fact that the initially enrolled teens are younger on average. For example, at the end of the third year of follow-up, 57.6 percent of this group were younger than 20 and thus still subject to LEAP's attendance mandate, compared to only 35.4 percent of those who entered LEAP as dropouts (see Table 4.2). If this pattern persists, then, although overall completion impacts did not vary by initial enrollment status at the end

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[14]For the records data, the first academic year of follow-up is that in which random assignment occurred: For example, if someone was randomly assigned on February 1, 1990, then her first academic year was July 1, 1989, through June 30, 1990. Since random assignment for most teens occurred part-way through the first academic year, first-year impacts may be smaller than they would have been if they had been measured for the first 12 months after random assignment (the first-year survey data do cover all 12 months).

[15]The fourth academic year of follow-up data on GED receipt is available for the full school records sample; a fourth year of high school graduation data is available only for an early cohort. Appendix Table C.5 shows that, at the end of the fourth year, 8.4 percent of the program group in the five districts, compared to 6.1 percent of the control group, had obtained a GED, for a statistically significant impact of 2.3 percentage points.

responders. This suggests that the survey results may understate LEAP's impacts on the combined measure of high school graduation or GED completion.[12]

B. The Accuracy of Self-Reported Data

The high school and GED completion results presented earlier are based on the self-reports of survey respondents, which may over- or understate the true outcomes. Thus, it is possible that respondents may introduce bias to the survey results in addition to the bias caused by nonresponders. To test this possibility, individually reported high school graduations by survey respondents were compared to the graduation information in the school records for those same teens. An 87 percent match rate was found — i.e., in almost 87 percent of the 913 cases in the survey sample, the teen's response matched that teen's school record. In virtually all of the cases that did not match, the teen said she graduated from high school. The vast majority of these graduations were found to have been from schools outside the five districts for which school records were examined. It was concluded that the self-reported survey data were accurate.

C. The Size of the Survey Sample

Finally, the survey sample of 913 teens is relatively small. This affects one's conclusions about *whether* LEAP had impacts on the school completion of the full sample or of subgroups within the full sample, and also about the *size* of those impacts. The relatively small sample makes it (1) less likely that impacts will be identified, because it is less likely that measured differences in outcomes will be found to be statistically significant, and (2) hard to be sure that the magnitude of a given impact estimate is correct.[13] Both of these issues are addressed below by estimating school completion impacts using the much larger school records sample.

IV. School Completion Impacts for the School Records Sample

As discussed in Chapter 2, the school records sample differs in important ways from the survey sample: It includes all teens (not a subsample) randomly assigned in certain areas; it includes teens enrolled during an earlier period (when the program was operating less smoothly); and it is limited to five urban school districts in four counties. Also, the school records data do not capture graduations for teens who moved out of the school district they were in at random assignment; there is slightly

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[12]Among these 175 teens, 10 percent of the program group graduated from high school and 7 percent earned their GED; among the control group, only 7 percent graduated and 2 percent received a GED. Combining these 175 cases with the survey sample of 913 (producing a total sample of 1,088) would increase the overall impact estimates by approximately one percentage point.

[13]These two issues are related. An impact on high school graduation measured with a small sample might be 10 percentage points, plus or minus 11 percentage points (the statistical "confidence interval"). This impact would be statistically not significant because the confidence interval includes zero — i.e., we would not be confident that the impact was 10 points rather than zero. If the sample were increased, the impact estimate might remain the same, but the confidence interval would be reduced, say, to 5 percentage points. The impact would now be statistically significant (the confidence interval does not include zero), and we would also be more confident that the impact estimate was close to the true impact (the impact would be 10 percentage points plus or minus 5 percentage points).

TABLE 4.3

LEAP's THREE-YEAR IMPACTS ON HIGH SCHOOL AND GED COMPLETION FOR THE SCHOOL RECORDS SAMPLE, BY SCHOOL ENROLLMENT SUBGROUP

Sample and Its Status 3 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
All teens			
Ever completed high school			
as of June 30, year 1	6.9	6.4	0.5
as of June 30, year 2	11.9	10.8	1.1
as of June 30, year 3	14.3	13.2	1.1
Ever completed GED			
as of June 30, year 1	1.5	1.1	0.3
as of June 30, year 2	4.3	2.5	1.8 **
as of June 30, year 3	6.7	4.6	2.1 **
Ever completed high school or GED			
as of June 30, year 1	8.4	7.5	0.8
as of June 30, year 2	16.2	13.3	2.9 **
as of June 30, year 3	21.1	17.8	3.2 **
Sample size	3,471	854	
Teens enrolled in school at random assignment			
Ever completed high school			
as of June 30, year 1	11.3	10.8	0.5
as of June 30, year 2	19.3	18.3	1.0
as of June 30, year 3	23.4	21.8	1.6
Ever completed GED			
as of June 30, year 1	1.0	1.4	-0.4
as of June 30, year 2	3.3	2.4	0.9
as of June 30, year 3	5.1	3.7	1.3
Ever completed high school or GED			
as of June 30, year 1	12.3	12.2	0.1
as of June 30, year 2	22.6	20.7	1.9
as of June 30, year 3	28.5	25.5	2.9
Sample size	2,001	474	
Teens not enrolled in school at random assignment			
Ever completed high school			
as of June 30, year 1	1.0	0.7	0.2
as of June 30, year 2	1.8	1.3	0.6
as of June 30, year 3	2.0	2.3	-0.3
Ever completed GED			
as of June 30, year 1	2.1	0.7	1.4 *
as of June 30, year 2	5.6	2.5	3.2 **
as of June 30, year 3	8.9	5.7	3.2 **
Ever completed high school or GED			
as of June 30, year 1	3.0	1.4	1.6 *
as of June 30, year 2	7.5	3.7	3.7 ***
as of June 30, year 3	11.0	8.0	2.9 *
Sample size	1,470	380	

(continued)

TABLE 4.3 (continued)

SOURCES: MDRC calculations using data from Teen Parent Information Sheets, automated school records from the Cleveland, Cincinnati, Columbus, and Toledo public school districts, graduation data from the East Cleveland public school district, and automated GED testing data from the Ohio Department of Education.

NOTES: "June 30, year 1" denotes the first June 30th after random assignment; "June 30, year 2" and "June 30, year 3," the second and third June 30ths after random assignment, respectively.

"Completed GED" refers to passing the GED test.

Differences, as well as program and control group means, are regression-adjusted to correct for slight differences between program and control groups in baseline characteristics.

Rounding may cause slight discrepancies in calculating differences.

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

of the third year of follow-up, differences in impacts between these two groups may emerge in the fourth year and later, with larger impacts appearing among teens who were enrolled in school when they entered LEAP.

Table 4.4 divides dropouts into those who had been out of school less than a year at random assignment (short-term dropouts) and those who had been out a year or more at random assignment (longer-term dropouts). As seen in the table, by the second and third years of follow-up, LEAP's impact on out-of-school teens consisted primarily of increasing GED completion by short-term dropouts.

C. Low Completion Rates

A comparison of Tables 4.1 and 4.3 shows that the proportion of teens in both the program and control groups who completed high school or a GED was even lower for the school records sample than for the survey sample. However, the magnitudes of the impact estimates made with these two data sources are very similar.

The low completion rate estimates based on the school records data are conspicuous: Only 21.1 percent of the program group and 17.8 percent of the control group had either graduated from high school or received a GED (see Table 4.3). Data on an early cohort of the school records sample, discussed below, indicate that these rates rose to only 24.0 and 19.9 percent, respectively, by the end of four years (see Table 4.11).

There are several reasons that these completion rates are even lower than those estimated using survey data. First, as discussed in Chapter 2, the length of follow-up is slightly shorter for the school records data. Second, a larger fraction of school records sample members were still in their teens at the end of the follow-up period (see Table 4.2). Thus, there is a larger number of younger sample members who may graduate from high school or earn a GED in later years. Third, in the school records data, there is some underreporting of high school completion, since these data do not cover teens who started in the LEAP program in one of the five urban districts covered but who then moved to another city. It is difficult to estimate the number of graduations missed.

V. Differences in School Completion Impacts Across Counties and Cities

Previous LEAP reports have shown that the program can be operated in different ways and under different local conditions, notably differences in school district policies. It is therefore important for policymakers and program administrators to know what implications these practices and conditions may have for LEAP's effects on teen behavior. The analysis in this section assesses whether LEAP's impacts on school completion were larger in some school districts than in others. School records are available for five urban school districts — Cleveland, East Cleveland, Cincinnati, Columbus, and Toledo — and survey data are available for these districts plus all other districts in the seven research counties.

Before embarking on a comparison of impacts in different school districts, several limitations should be noted. First, because the data are available only for five cities, it is not possible to rigorously isolate the effects of any particular factor (such as county welfare agencies' use of staff who combined the functions of LEAP caseworker and income maintenance workers, which was the practice only in Columbus). Second, it is impossible to identify all relevant aspects of county LEAP programs, school district policies, and the local environment. Third, the conclusions of this analysis may change

TABLE 4.4

LEAP's THREE-YEAR IMPACTS ON HIGH SCHOOL AND GED COMPLETION FOR THE SCHOOL RECORDS SAMPLE, BY TIME OUT OF SCHOOL AT RANDOM ASSIGNMENT

Subgroup and Its Status 3 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
Teens not enrolled, out of school less than one year at random assignment			
Ever completed high school			
as of June 30, year 1	1.3	1.6	−0.3
as of June 30, year 2	2.7	2.7	0.0
as of June 30, year 3	3.1	3.2	−0.1
Ever completed GED			
as of June 30, year 1	1.3	0.0	1.3
as of June 30, year 2	4.2	0.0	4.2 ***
as of June 30, year 3	7.9	2.7	5.3 **
Ever completed high school or GED			
as of June 30, year 1	2.7	1.6	1.1
as of June 30, year 2	6.9	2.7	4.2 **
as of June 30, year 3	11.1	5.9	5.2 **
Sample size	668	187	
Teens not enrolled, out of school one year or more at random assignment			
Ever completed high school			
as of June 30, year 1	0.6	0.0	0.6
as of June 30, year 2	1.1	0.0	1.1
as of June 30, year 3	1.1	1.6	−0.4
Ever completed GED			
as of June 30, year 1	2.7	1.0	1.7
as of June 30, year 2	6.9	4.7	2.2
as of June 30, year 3	9.9	8.3	1.6
Ever completed high school or GED			
as of June 30, year 1	3.4	1.0	2.3 *
as of June 30, year 2	8.0	4.7	3.3
as of June 30, year 3	11.0	9.8	1.1
Sample size	802	193	

SOURCES: MDRC calculations using data from Teen Parent Information Sheets, automated school records from the Cleveland, Cincinnati, Columbus, and Toledo public school districts, graduation data from the East Cleveland public school district, and automated GED testing data from the Ohio Department of Education.

NOTES: "June 30, year 1" denotes the first June 30th after random assignment; "June 30, year 2" and "June 30, year 3," the second and third June 30ths after random assignment, respectively.

"Completed GED" refers to passing the GED test.

Rounding may cause slight discrepancies in calculating differences.

An F-test was applied to differences between program and control groups. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

once additional data become available. The final LEAP report will have data on GED completion, employment, and AFDC receipt for the full LEAP sample across all 12 counties in the evaluation, and high school graduation data for at least four counties. These data will provide the basis for a more complete analysis.

A. School Completion Differences Between Cleveland and the Other Districts

1. School records data. LEAP's school impacts varied substantially across geographic areas. Based on school records data, the program significantly increased both high school graduations and GED receipt in Cleveland and East Cleveland and produced no significant effects in Cincinnati, Columbus, and Toledo (see Table 4.5).[16] The Cleveland impacts were driven by relatively large gains for teens who were enrolled in school at random assignment (see Table 4.6.)

Table 4.7 shows that the differences in completion impacts *between* Cleveland/East Cleveland and the other districts were statistically significant. Moreover, adjusting for initial differences in the school records sample across school districts in enrollment status, ethnicity, highest grade completed, age, and number of children had no effect on the differences in impacts across districts. In other words, differences in the LEAP caseload between Cleveland/East Cleveland and the other urban districts, as measured by these initial characteristics, do not explain the difference in impacts across districts. This can be seen by comparing the impacts in the top panel (which are not adjusted for differences across districts) to impacts in the bottom panel (which are adjusted for such differences).

2. Survey data. Table 4.8 provides survey data on education outcomes for teens in Cleveland/East Cleveland, and teens in the six other survey counties and other parts of Cuyahoga County. This smaller sample (which covers more counties than the school records sample, as well as non-urban areas) shows that LEAP produced a significant 6.6 percentage point increase in high school graduations in Cleveland/East Cleveland (see Table 4.8), as well as a positive impact on GED completions outside of Cleveland (due mainly to an impact in non-urban areas, which were not included in the school records sample). As discussed in the next chapter, there is another important difference: For initially enrolled teens in Cleveland, LEAP produced a significant increase in college enrollment, something that did not occur in the other counties.

B. Reasons for the Cross-County Difference

There are several possible reasons why Cleveland/East Cleveland produced significant impacts while the other districts did not. First, the Cleveland public schools have strictly enforced a state regulation that teenagers under age 18 cannot leave high school to prepare for the GED test. In ontrast, it was much easier for teen parents in Toledo and Columbus to withdraw from high school to attend an adult education program preparing them to take the GED test.[17] This may have lifted the impact on high school graduations in Cleveland.

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[16]See Appendix Tables C.1 through C.4 for education outcomes for individual cities.

[17]A state rule makes teens under 18 years old ineligible either to enroll in adult education classes (to prepare for the GED test) or to take the GED test. However, this age restriction is not universally applied. Many adult education providers are willing to accept 16- and 17-year-olds as long as they have been officially released from their "home school." Some will accept all 16- and 17-year-olds who have been released, while others will accept only "hardship cases," in which a youth has been out of school for a period of time or is far behind in grade level for her age.

TABLE 4.5

LEAP's THREE-YEAR IMPACTS ON HIGH SCHOOL AND GED COMPLETION FOR THE SCHOOL RECORDS SAMPLE, BY URBAN AREA

Sample and Its Status 3 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
All teens			
Cincinnati			
Ever completed high school	13.1	11.4	1.6
Ever completed GED	6.4	5.3	1.1
Ever completed high school or GED	19.5	16.7	2.8
Sample size	803	200	
Cleveland and East Cleveland			
Ever completed high school	15.0	11.6	3.4 *
Ever completed GED	7.0	4.2	2.8 **
Ever completed high school or GED	22.0	15.8	6.2 ***
Sample size	1,522	362	
Columbus			
Ever completed high school	13.5	14.6	-1.1
Ever completed GED	7.4	5.6	1.8
Ever completed high school or GED	20.9	20.2	0.7
Sample size	719	177	
Toledo			
Ever completed high school	15.6	19.3	-3.6
Ever completed GED	4.9	4.5	0.3
Ever completed high school or GED	20.5	23.8	-3.3
Sample size	427	115	

SOURCES: MDRC calculations using data from Teen Parent Information Sheets, automated school records from the Cleveland, Cincinnati, Columbus, and Toledo public school districts, graduation data from the East Cleveland public school district, and automated GED testing data from the Ohio Department of Education.

NOTES: "Completed GED" refers to passing the GED test.

Differences, as well as program and control group means, are regression-adjusted to correct for slight differences between program and control groups in baseline characteristics.

Rounding may cause slight discrepancies in calculating differences.

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

TABLE 4.6

LEAP's THREE-YEAR IMPACTS ON HIGH SCHOOL AND GED COMPLETION FOR THE SCHOOL RECORDS SAMPLE, BY SCHOOL ENROLLMENT SUBGROUP AND URBAN AREA

Subgroup and Its Status 3 Years After Random Assigment	Program Group (%)	Control Group (%)	Difference
Teens enrolled in school at random assignment			
Cincinnati			
Ever completed high school	22.3	18.6	3.7
Ever completed GED	5.1	5.4	−0.3
Ever completed high school or GED	27.4	24.1	3.4
Sample size	452	108	
Cleveland and East Cleveland			
Ever completed high school	24.5	18.9	5.6 *
Ever completed GED	5.7	2.6	3.1 *
Ever completed high school or GED	30.2	21.5	8.6 ***
Sample size	875	210	
Columbus			
Ever completed high school	23.5	25.4	−2.0
Ever completed GED	4.0	5.6	−1.6
Ever completed high school or GED	27.5	31.1	−3.6
Sample size	382	84	
Toledo			
Ever completed high school	22.4	28.8	−6.4
Ever completed GED	4.2	3.7	0.6
Ever completed high school or GED	26.6	32.5	−5.9
Sample size	292	72	
Teens not enrolled in school at random assignment			
Cincinnati			
Ever completed high school	1.6	1.6	−0.0
Ever completed GED	7.9	5.6	2.4
Ever completed high school or GED	9.5	7.2	2.4
Sample size	351	92	
Cleveland and East Cleveland			
Ever completed high school	2.3	1.5	0.8
Ever completed GED	8.7	6.3	2.4
Ever completed high school or GED	11.0	7.8	3.3
Sample size	647	152	

(continued)

TABLE 4.6 (continued)

Subgroup and Its Status 3 Years After Random Assigment	Program Group (%)	Control Group (%)	Difference
Columbus			
Ever completed high school	2.3	4.4	−2.1
Ever completed GED	10.9	6.7	4.2
Ever completed high school or GED	13.3	11.1	2.1
Sample size	337	93	
Toledo			
Ever completed high school	1.6	2.1	−0.5
Ever completed GED	6.8	4.1	2.8
Ever completed high school or GED	8.4	6.2	2.2
Sample size	135	43	

SOURCES: MDRC calculations using data from Teen Parent Information Sheets, automated school records from the Cleveland, Cincinnati, Columbus, and Toledo public school districts, graduation data from the East Cleveland public school district, and automated GED testing data from the Ohio Department of Education.

NOTES: "Completed GED" refers to passing the GED test.

Differences, as well as program and control group means, are regression−adjusted to correct for slight differences between program and control groups in baseline characteristics.

Rounding may cause slight discrepancies in calculating differences.

A two−tailed t−test was applied to differences between program and control groups. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

TABLE 4.7

COMPARISONS OF LEAP's THREE-YEAR IMPACTS ON HIGH SCHOOL AND GED COMPLETION IN CLEVELAND AND EAST CLEVELAND VS. OTHER LARGE URBAN SCHOOL DISTRICTS

	Impact of LEAP in Cleveland and East Cleveland (%)	Impact of LEAP in Other Districts (%)	Difference in Impacts
Not Adjusting for Initial Differences Across Districts in the Research Sample			
All teens			
Ever completed high school	3.2	−0.5	−3.7
Ever completed GED	3.0	1.4	−1.5
Ever completed high school or GED	6.2	1.0	−5.2 *
Sample size	1,884	2,441	
Teens enrolled in school at random assignment			
Ever completed high school	5.0	−1.1	−6.0
Ever completed GED	3.3	−0.2	−3.5 *
Ever completed high school or GED	8.3	−1.3	−9.6 **
Sample size	1,085	1,390	
Teens not enrolled in school at random assignment			
Ever completed high school	0.8	−1.1	−1.9
Ever completed GED	2.4	3.8	1.4
Ever completed high school or GED	3.2	2.7	−0.5
Sample size	799	1,051	
Adjusting for Initial Differences Across Districts in the Research Sample (a)			
All teens			
Ever completed high school	3.2	−0.5	−3.8
Ever completed GED	3.0	1.4	−1.7
Ever completed high school or GED	6.3	0.8	−5.5 *
Sample size	1,884	2,441	
Teens enrolled in school at random assignment			
Ever completed high school	4.5	−1.0	−5.5
Ever completed GED	3.5	−0.1	−3.6 *
Ever completed high school or GED	7.9	−1.2	−9.1 **
Sample size	1,085	1,390	
Teens not enrolled in school at random assignment			
Ever completed high school	1.0	−1.1	−2.1
Ever completed GED	2.5	3.6	1.1
Ever completed high school or GED	3.5	2.5	−1.0
Sample size	799	1,051	

(continued)

TABLE 4.7 (Continued)

SOURCES: MDRC calculations using data from Teen Parent Information Sheets, automated school records from the Cleveland, Cincinnati, Columbus, and Toledo public school districts, graduation data from the East Cleveland public school district, and automated GED testing data from the Ohio Department of Education.

NOTES: "Other Large Urban School Districts" include Cincinnati, Columbus, and Toledo public school districts.

"Completed GED" refers to passing the GED test.

Rounding may cause slight discrepancies in calculating differences.

A two-tailed t-test was applied to differences between LEAP's impact in Cleveland and East Cleveland and LEAP's impact in other districts. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

(a) Impacts in the lower panel are adjusted for differences across districts in the initial characteristics of the research sample. These initial characteristics include: enrollment status, ethnicity, highest grade completed, age, and number of children.

TABLE 4.8

LEAP's THREE-YEAR IMPACTS IN CLEVELAND AND EAST CLEVELAND AND IN OTHER AREAS IN THE SEVEN COUNTIES FOR THE SURVEY SAMPLE, BY SCHOOL ENROLLMENT SUBGROUP

Sample and Its Status 3 Years After Random Assignment	Cleveland and East Cleveland			All Seven Counties (Excluding the Cities of Cleveland and East Cleveland)		
	Program Group	Control Group	Difference	Program Group	Control Group	Difference
All teens						
Average highest grade completed	10.40	10.13	0.27 **	10.30	10.29	0.01
Ever completed grade 9 (%)	93.1	85.4	7.7 **	87.2	86.8	0.4
Ever completed grade 10 (%)	76.4	68.1	8.3 *	72.4	69.8	2.6
Ever completed grade 11 (%)	49.2	45.2	4.1	50.2	45.7	4.5
Ever completed high school (%)	23.5	16.9	6.6 *	22.7	27.3	−4.6
Ever completed GED (%)	6.6	9.7	−3.1	13.7	7.6	6.1 **
Ever completed high school or GED (%)	30.1	26.6	3.5	36.4	34.9	1.5
Currently enrolled in high school (%)	9.1	9.7	−0.6	5.9	4.7	1.2
Currently enrolled in a GED program (%)	5.5	11.8	−6.3 *	13.0	5.9	7.2 ***
Currently enrolled in high school or GED program (%)	14.7	21.5	−6.9 *	18.9	10.6	8.4 ***
Ever completed high school or GED, or currently enrolled in high school or GED program (%)	44.8	48.1	−3.4	55.3	45.5	9.9 **
Sample size	157	172		289	295	
Teens enrolled in school at random assignment						
Average highest grade completed	10.65	10.50	0.14	10.76	10.69	0.08
Ever completed grade 9 (%)	94.9	90.9	4.0	93.4	91.3	2.1
Ever completed grade 10 (%)	79.4	80.2	−0.8	82.9	78.7	4.2
Ever completed grade 11 (%)	57.2	55.9	1.3	62.8	59.3	3.5
Ever completed high school (%)	33.3	24.3	9.0 *	37.3	39.9	−2.6
Ever completed GED (%)	7.1	3.0	4.2	11.5	5.4	6.1 **
Ever completed high school or GED (%)	40.5	27.2	13.2 **	48.8	45.3	3.5

(continued)

TABLE 4.8 (continued)

Sample and Its Status 3 Years After Random Assignment	Cleveland and East Cleveland			All Seven Counties (Excluding the Cities of Cleveland and East Cleveland)		
	Program Group	Control Group	Difference	Program Group	Control Group	Difference
Currently enrolled in high school (%)	12.4	13.9	−1.5	8.4	7.4	1.1
Currently enrolled in a GED program (%)	6.2	12.0	−5.7	12.1	7.3	4.8
Currently enrolled in high school or GED program (%)	18.6	25.8	−7.2	20.5	14.6	5.9
Ever completed high school or GED, or currently enrolled in high school or GED program (%)	59.1	53.1	6.0	69.3	59.9	9.4 *
Sample size	99	99		168	161	
Teens not enrolled in school at random assignment						
Average highest grade completed	10.08	9.55	0.53 ***	9.70	9.76	−0.06
Ever completed grade 9 (%)	90.8	77.2	13.6 **	78.0	81.8	−3.8
Ever completed grade 10 (%)	72.5	50.6	21.9 ***	59.2	57.7	1.5
Ever completed grade 11 (%)	38.6	28.2	10.4	34.5	27.8	6.6
Ever completed high school (%)	10.8	3.8	7.0	4.7	9.9	−5.2
Ever completed GED (%)	2.4	21.4	−18.9 ***	16.4	10.6	5.8
Ever completed high school or GED (%)	13.2	25.1	−12.0	21.1	20.5	0.6
Currently enrolled in high school (%)	4.2	3.5	0.7	2.4	1.6	0.8
Currently enrolled in a GED program (%)	4.1	11.8	−7.8	15.0	3.6	11.5 ***
Currently enrolled in high school or GED program (%)	8.3	15.3	−7.0	17.4	5.2	12.2 ***
Ever completed high school or GED, or currently enrolled in high school or GED program (%)	21.5	40.5	−19.0 **	38.5	25.7	12.8 **
Sample size	58	73		121	134	

SOURCE: MDRC calculations using data from Teen Parent Information Sheets and the LEAP three-year survey.

NOTES: "Completed GED" refers to passing the GED test.

Estimates of the program-control group differences are regression-adjusted using ordinary least squares, controlling for pre-random assignment background characteristics of sample members.

Rounding may cause slight discrepancies in calculating differences.

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

Second, the teens' option of withdrawing to prepare for the GED test was often very attractive, especially in Toledo and Columbus. Adult education programs are much more flexible than high schools, and require many fewer hours in the classroom. Moreover, in the first survey administered to the LEAP sample, respondents indicated that they felt these programs were much safer than high schools.[18] The Toledo and Columbus districts operated large-scale adult education programs, with several appealing features; many LEAP teens attended these programs. In contrast, as indicated in Chapter 2, Cleveland had a large number of GED programs operated or supported by the Cleveland public schools; none was as large as the programs in Toledo and Columbus, and LEAP teens were scattered through many of these programs throughout the city. It is quite possible that, because of the flexible school withdrawal policies and attractive adult education programs in the Toledo and Columbus school districts, more teens left school to prepare for the GED test. Some failed the test and did not return to high school, thus neither receiving a GED nor retaining the possibility of graduating from high school.

Third, the relative attractiveness of alternatives to regular high schools that led to a *high school diploma* rather than a GED was probably equally important. As noted in Chapter 2, Cleveland had many such alternatives. These included a special night school program and several alternative high schools with more flexible hours and/or strong vocational education components. The Cincinnati public school system had three such diploma-granting options to regular high school, including one that received substantial federal funding as part of a national demonstration program. In contrast, Toledo and Columbus had only one diploma-granting alternative each.

Fourth, a special demonstration project in Cleveland provided just over half the program group with special in-school and community-based services (on-site daycare, GRADS programs, on-site LEAP case management, and teen-focused GED programs) in addition to the LEAP treatment. These services significantly increased the probability that teens who attended school eventually graduated or received a GED[19] and, as a result, undoubtedly contributed to the stronger school completion impacts in Cleveland.

Fifth, there are noteworthy differences in high school and GED completion rates between districts for members of the *control group*. By definition, an impact is the *difference* between outcomes for the program and control groups. This is one reason why districts with lower control group completion rates (such as Cleveland/East Cleveland) showed larger completion impacts.[20] The differences in completion rates for the control groups probably reflect differences in the characteristics of both the teen parents and the schools in these districts.

Finally, the labor market may have lured fewer teens out of school in Cleveland than it did in the other locations. The unemployment rate in Cleveland was consistently higher than in Cincinnati and Columbus, and mostly higher than in Toledo, during the period covered by the analysis.[21]

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[18]Bloom et al., 1993, Table 7.7 (p. 151).

[19]See Long, Wood, and Kopp, 1994, for details on these services and the results of the impact analysis in Cleveland.

[20]In Cleveland/East Cleveland, where the control group's high school/GED completion rate was lowest (15.8), the impact was largest (6.2 percentage points) and statistically significant. The next lowest control group completion rate was in Cincinnati, which also recorded the next highest impact (2.8 percentage points, although not statistically significant), followed by Columbus and Toledo (where the measured program-control group difference was actually negative).

[21]U.S. Bureau of Labor Statistics, *Employment and Earnings* (January 1990-September 1994).

VI. Will LEAP's Impacts Grow in Later Years?

LEAP's impact on high school and GED completion, as measured at the end of three years of follow-up, appears to have been modest — an increase in completion rates of only about 3 percentage points. This raises the question: Will LEAP's effect on completion rates increase in subsequent years? One important factor to consider is the age of sample members at the end of the follow-up period. Specifically, are the large majority of sample members old enough to have finished high school at this point, so that LEAP should have had its full effect on high school and GED completion?

Table 4.2 presented the age distribution of school records sample members at the end of the third year of school records follow-up: 20.8 percent of sample members were 18 or younger at this point, including 28.9 percent of initially enrolled teens and 10.1 percent of those who were not initially enrolled. Table 4.2 also showed that 12.4 percent of survey sample members were 18 or younger. It is quite possible that LEAP will have an effect on the completion rates of these younger sample members (a number of whom were in school at the end of follow-up) that was not observed within the three-year follow-up period.

The next several tables attempt to address the issue of the limited duration of follow-up in two different ways. First, Tables 4.9 and 4.10 report school completion impacts for sample members who were 19 or older at the end of the three-year follow-up period. Second, Tables 4.11 and 4.12 show the impacts for an early cohort for whom an additional year of school records data is available (making the follow-up period four academic years). The vast majority of teens in this early cohort were 19 or older at the end of four years of follow-up. These two perspectives on LEAP's potential future school completion impacts will be discussed in turn.

A. Impacts Among Older Teens

Completion impacts at the end of the third year were slightly larger among those who were 19 or older at the end of this follow-up period than they were for the full sample — 3.5 versus 3.2 percentage points (compare Table 4.9 with Table 4.3). The larger impacts among those 19 or older were most pronounced for teens who were enrolled in school when they entered LEAP. For this group, the third-year impact was 3.7 percentage points, compared with 2.9 percentage points when those who had not yet turned 19 are included (compare the top panel of Table 4.10 and the middle panel of Table 4.3). Nonetheless, LEAP's effect on completion remains relatively small regardless of initial enrollment status — an impact of less than 4 percentage points for both groups.

B. Impacts for an Early Cohort

Focusing on teens who entered LEAP during the first year of random assignment — July 1989 through June 1990 — makes it possible to examine high school and GED completion impacts for an additional year. As shown in Table 4.11, the overall completion impact for this early cohort was 4.1 percentage points at the end of the fourth year, with 24.0 percent of the program group and 19.9 percent of the control group either graduating from high school or receiving a GED. (Table 4.12 presents the impacts separately for the initially enrolled and not initially enrolled subgroups.) Two-thirds of this impact (2.7 of 4.1 percentage points) was due to additional high school graduations; the remaining third was due to additional GEDs received. LEAP's impact on the early cohort was somewhat larger and more concentrated on high school graduation than it was for the full sample. However, this does not appear to have been a function of the additional year of follow-up: These differences between the early cohort and the full sample had emerged by the end of the third year. Although this evidence does not suggest that LEAP's effect on school completion will grow

TABLE 4.9

LEAP's THREE-YEAR IMPACTS ON HIGH SCHOOL AND GED COMPLETION FOR THE SCHOOL RECORDS SAMPLE

TEENS 19 OR OLDER BY THE THIRD YEAR OF FOLLOW-UP

Sample and Its Status 3 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
All teens			
Ever completed high school			
as of June 30, year 1	8.7	7.9	0.8
as of June 30, year 2	14.1	13.0	1.1
as of June 30, year 3	15.6	14.4	1.2
Ever completed GED			
as of June 30, year 1	1.8	1.2	0.6
as of June 30, year 2	5.1	2.7	2.3 ***
as of June 30, year 3	7.7	5.4	2.3 **
Ever completed high school or GED			
as of June 30, year 1	10.5	9.1	1.4
as of June 30, year 2	19.1	15.7	3.4 **
as of June 30, year 3	23.3	19.8	3.5 **
Sample size	2,770	652	

SOURCES: MDRC calculations using data from Teen Parent Information Sheets, automated school records from the Cleveland, Cincinnati, Columbus, and Toledo public school districts, graduation data from the East Cleveland public school district, and automated GED testing data from the Ohio Department of Education.

NOTES: "June 30, year 1" denotes the first June 30th after random assignment; "June 30, year 2" and "June 30, year 3," the second and third June 30ths after random assignment, respectively.

"Completed GED" refers to passing the GED test.

Differences, as well as program and control group means, are regression-adjusted to correct for slight differences between program and control groups in baseline characteristics.

Rounding may cause slight discrepancies in calculating differences.

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

TABLE 4.10

LEAP's THREE-YEAR IMPACTS ON HIGH SCHOOL AND GED COMPLETION FOR THE SCHOOL RECORDS SAMPLE, BY SCHOOL ENROLLMENT SUBGROUP

TEENS 19 OR OLDER BY THE THIRD YEAR OF FOLLOW-UP

Subgroup and Its Status 3 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
Teens enrolled in school at random assignment			
Ever completed high school			
as of June 30, year 1	15.9	14.7	1.2
as of June 30, year 2	25.5	24.1	1.3
as of June 30, year 3	28.2	26.0	2.2
Ever completed GED			
as of June 30, year 1	1.3	1.8	-0.5
as of June 30, year 2	4.2	3.1	1.1
as of June 30, year 3	6.2	4.7	1.4
Ever completed high school or GED			
as of June 30, year 1	17.2	16.5	0.8
as of June 30, year 2	29.6	27.2	2.4
as of June 30, year 3	34.4	30.7	3.7
Sample size	1,443	317	
Teens not enrolled in school at random assignment			
Ever completed high school			
as of June 30, year 1	1.1	0.8	0.3
as of June 30, year 2	1.9	1.4	0.5
as of June 30, year 3	2.1	2.3	-0.2
Ever completed GED			
as of June 30, year 1	2.3	0.7	1.6 *
as of June 30, year 2	6.0	2.3	3.7 ***
as of June 30, year 3	9.4	6.0	3.4 **
Ever completed high school or GED			
as of June 30, year 1	3.4	1.5	1.9 *
as of June 30, year 2	7.9	3.7	4.2 ***
as of June 30, year 3	11.5	8.3	3.2 *
Sample size	1,327	335	

SOURCES: MDRC calculations using data from Teen Parent Information Sheets, automated school records from the Cleveland, Cincinnati, Columbus, and Toledo public school districts, graduation data from the East Cleveland public school district, and automated GED testing data from the Ohio Department of Education.

NOTES: "June 30, year 1" denotes the first June 30th after random assignment; "June 30, year 2" and "June 30, year 3," the second and third June 30ths after random assignment, respectively.

"Completed GED" refers to passing the GED test.

Differences, as well as program and control group means, are regression-adjusted to correct for slight differences between program and control groups in baseline characteristics.

Rounding may cause slight discrepancies in calculating differences.

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

TABLE 4.11

LEAP's FOUR-YEAR IMPACTS ON HIGH SCHOOL AND GED COMPLETION FOR AN EARLY COHORT OF THE SCHOOL RECORDS SAMPLE

Sample and Its Status 4 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
All teens			
Ever completed high school			
as of June 30, year 1	7.5	5.3	2.2 *
as of June 30, year 2	13.3	10.9	2.3
as of June 30, year 3	16.5	14.1	2.3
as of June 30, year 4	17.7	15.0	2.7
Ever completed GED			
as of June 30, year 1	0.6	0.5	0.0
as of June 30, year 2	2.9	1.1	1.8 **
as of June 30, year 3	5.0	3.1	1.9
as of June 30, year 4	6.3	4.9	1.4
Ever completed high school or GED			
as of June 30, year 1	8.1	5.8	2.3 *
as of June 30, year 2	16.2	12.0	4.2 **
as of June 30, year 3	21.4	17.2	4.2 **
as of June 30, year 4	24.0	19.9	4.1 *
Sample size	1,618	407	

SOURCES: MDRC calculations using data from Teen Parent Information Sheets, automated school records from the Cleveland, Cincinnati, Columbus, and Toledo public school districts, graduation data from the East Cleveland public school district, and automated GED testing data from the Ohio Department of Education.

NOTES: The early cohort of the school records sample consists of teens who were randomly assigned between July 1989 and June 1990.

"June 30, year 1" denotes the first June 30th after random assignment; "June 30, year 2," "June 30, year 3," and "June 30, year 4" the second, third, and fourth June 30ths after random assignment, respectively.

"Completed GED" refers to passing the GED test.

Differences, as well as program and control group means, are regression-adjusted to correct for slight differences between program and control groups in baseline characteristics.

Rounding may cause slight discrepancies in calculating differences.

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

TABLE 4.12

LEAP's FOUR-YEAR IMPACTS ON HIGH SCHOOL AND GED COMPLETION FOR AN EARLY COHORT OF THE SCHOOL RECORDS SAMPLE, BY SCHOOL ENROLLMENT SUBGROUP

Subgroup and Its Status 4 Years After Random Assigment	Program Group (%)	Control Group (%)	Difference
Teens enrolled in school at random assignment			
Ever completed high school			
as of June 30, year 1	11.9	9.8	2.1
as of June 30, year 2	20.8	19.5	1.3
as of June 30, year 3	26.0	23.7	2.3
as of June 30, year 4	27.8	25.1	2.8
Ever completed GED			
as of June 30, year 1	0.5	0.9	-0.4
as of June 30, year 2	2.3	1.5	0.9
as of June 30, year 3	3.6	3.5	0.1
as of June 30, year 4	5.0	3.9	1.1
Ever completed high school or GED			
as of June 30, year 1	12.4	10.7	1.7
as of June 30, year 2	23.1	20.9	2.2
as of June 30, year 3	29.6	27.2	2.4
as of June 30, year 4	32.8	28.9	3.9
Sample size	974	240	
Teens not enrolled in school at random assignment			
Ever completed high school			
as of June 30, year 1	0.5	0.4	0.1
as of June 30, year 2	1.5	0.2	1.3
as of June 30, year 3	1.7	1.9	-0.2
as of June 30, year 4	2.0	1.9	0.1
Ever completed GED			
as of June 30, year 1	0.6	0.0	0.6
as of June 30, year 2	3.9	0.7	3.2 **
as of June 30, year 3	7.2	2.3	4.9 **
as of June 30, year 4	8.4	5.9	2.4
Ever completed high school or GED			
as of June 30, year 1	1.1	0.4	0.7
as of June 30, year 2	5.4	0.9	4.5 **
as of June 30, year 3	8.9	4.1	4.7 **
as of June 30, year 4	10.4	7.8	2.6
Sample size	644	167	

SOURCES: MDRC calculations using data from Teen Parent Information Sheets, automated school records from the Cleveland, Cincinnati, Columbus, and Toledo public school districts, graduation data from the East Cleveland public school district, and automated GED testing data from the Ohio Department of Education.

NOTES: The early cohort of the school records sample consists of teens who were randomly assigned between July 1989 and June 1990.

"June 30, year 1" denotes the first June 30th after random assignment; "June 30, year 2," "June 30, year 3," and "June 30, year 4" the second, third, and fourth June 30ths after random assignment, respectively.

"Completed GED" refers to passing the GED test.

Differences, as well as program and control group means, are regression-adjusted to correct for slight differences between program and control groups in baseline characteristics.

Rounding may cause slight discrepancies in calculating differences.

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

substantially in later years, it does indicate that LEAP's completion impact should persist through at least the fourth year.

As has been mentioned several times, LEAP was intended to produce a chain of impacts, beginning with high school or GED program enrollment and attendance and ending with reduced welfare receipt and increased self-sufficiency. The high school graduation impact results presented in this chapter were small and statistically not significant, whereas LEAP's impacts on high school enrollment and attendance were large and significant. What happened between the time LEAP teens attended school in significantly greater numbers and the end of the follow-up period, when their graduation rate was not appreciably higher than that of the control group? Did the LEAP teens who attended school because of the program's incentives merely put in "seat time" and fail to make academic progress? Or did these teens make progress, but not enough to complete school? The answer probably includes both explanations, as well as others, but there is solid evidence that teens did indeed make progress. As indicated in Table 4.1, LEAP had consistent, statistically significant effects on grade completion until teens reached the twelfth grade, where there was no difference. Several possible explanations for this were advanced. However, the relative importance of these and other specific explanations is a matter of speculation at this juncture.

The fact that LEAP teens made more progress in school that they would have without the program, but did not receive more diplomas, has two important implications. First, the task for LEAP is to improve the "follow through" of LEAP teens who attend school. In the special demonstration project in Cleveland, school-based services were provided to LEAP teens in half of the city's high schools, and these services significantly increased the completion rate of teens who attended school. This or other changes, such as offering a graduation bonus payment, might substantially increase LEAP's effectiveness.

Second, teens did make significant progress in school, which should be expected to improve their financial self-sufficiency. In the general population, completing one to three years of high school is associated with higher earnings, even if students do not receive their high school diploma (Levy and Murnane, 1992). The probability of a woman (age 25 to 54) being poor drops substantially if she has completed the ninth, tenth, or eleventh grade as opposed to completing only the eighth grade or less (Danziger, 1989). In addition, LEAP had a significant impact on GED receipt (based on the school records), which may also produce employment and earnings gains. For many dropouts, who will not return to regular high school, a GED may be the education credential they can most realistically attain. Still, diplomas are clearly preferable – graduating from high school would probably produce even greater earnings and a lower probability of being poor than either school grade or GED completion — and few teen parents induced by LEAP to go to school have earned them.

Finally, LEAP was much more successful in working with teens who began LEAP with an attachment to the school system than with teens whose initial attachment was weak. In Cleveland, LEAP increased the proportion of initially enrolled teens who received high school diplomas within three years from less than a quarter to a third. Across all seven counties, LEAP appears to have increased the likelihood of high school graduation by initially enrolled teens who were at or close to age-for-grade level, and substantially increased this likelihood for under-age-18 dropouts, most of whom had been out of school for less than a year. For these teens, LEAP's impact extended through high school graduation. The next chapter will assess whether it extended beyond graduation to college enrollment, employment, and welfare receipt.

CHAPTER 5

THE IMPACTS OF LEAP ON SELF-SUFFICIENCY

LEAP's designers believed that a high school diploma or GED would provide teen parents with a springboard to college, job training, employment, and ultimately reduced welfare dependence and increased family income. This chapter presents estimates of LEAP's impacts on these and other outcomes. The basis for the analysis are data from the LEAP survey administered to teens approximately three years after they were determined to be eligible for the program.

I. What Should One Expect To Find?

As discussed in Chapter 4, LEAP's overall impact on high school and GED completion was not statistically significant by the end of three years. Still, there were significant effects in some school districts and a significant impact on completion of the eleventh grade and, for initially enrolled teens, significant impacts on GED receipt. These impacts, although less substantial than what was expected, might nonetheless be expected to lead to improvement in the outcomes discussed in this chapter.

Two points should be kept in mind:

- **It is too early for LEAP to have had a sizable impact on the employment and welfare receipt of very young teens.** Even if they were enrolled in school, on grade level for their age, and attended regularly, many teens who were under the age of 16 at random assignment (13 percent of the survey sample) could not have completed high school within three years, let alone have found a job or left welfare. The same is true for many 16- or 17-year-olds who started LEAP as dropouts (15 percent of the survey sample) or who began well behind their age-for-grade level.

- **Full self-sufficiency for teens has a long lead time.** Even if the teens avoided all pitfalls (second pregnancies before graduating or receiving a GED, family crises, etc.), the average LEAP teen needed at least two and a half years from random assignment to complete high school.[1] Then, even if a teen immediately finds employment, it could easily take a year or more before she leaves welfare entirely. If she goes to college, enrolls in a job training program, or starts with part-time rather than full-time work (all of which are judged to be positive outcomes), even more time is required.

Thus, it is not possible to determine, at this juncture, the extent to which LEAP is achieving its intended full chain of effects on the teens' behavior. The final report will reexamine LEAP's success in producing this impact chain four and a half years after teens became eligible for LEAP.

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[1]As indicated in Table 2.3, the average teen in the survey sample had completed 9.5 grades when she became eligible for LEAP. Teens who pursued a GED could have received it in less than two and a half years, although, under state law, they were not supposed to attend GED preparation classes until they turned 18.

II. College and Training

A. College Enrollment

Possession of a high school diploma or GED is generally a prerequisite for attending college. Because of its expected impact on school completion, LEAP might also increase college enrollment (which, however, was not required by the program). Completing one to three years of college substantially increases the earnings prospects of women in the general population (Levy and Murnane, 1992).

Consistent with LEAP's not having had a significant overall impact on school completion, the program did not increase overall enrollment in college, which was relatively low: As shown in Table 5.1, about one in eight teens enrolled during the three-year follow-up period, and less than one in 16 were enrolled at the three-year point. LEAP had a significant impact on school completion by teens who were enrolled in high school or a GED program when they became eligible for the program (see Table 4.1), but, thus far, the program has had no significant impact on their rate of college enrollment.

As with the high school and GED completion results discussed in Chapter 4, there is a different impact story in Cleveland/East Cleveland than elsewhere. As shown in Table 5.1, the full-sample ("all teens") rates of college enrollment were not significantly different for program and control group members in or outside of Cleveland.[2]

However, as shown in the middle panel of the table, twice as many initially enrolled teens in Cleveland/East Cleveland's program group enrolled in college than did their counterparts in the control group (20.6 percent compared to 11.8 percent). The 8.8 percentage point difference was statistically significant. As shown in Table 4.8, LEAP had a significant impact on high school graduations by initially enrolled teens in Cleveland/East Cleveland, and this appears to have led to more college enrollment. Outside Cleveland/East Cleveland, however, LEAP generated more GEDs, which was not followed by more college enrollment.

B. Training

Job training can supplement or substitute for attainment of a high school diploma, GED, or college degree. Table 5.2 lists several types of employment-related training. Job clubs are group sessions, and job search assistance is supervised individual activity. Both seek to improve participants' job search skills and thereby to increase their likelihood of finding employment. Work experience programs are intended to improve job-readiness skills as well as to provide recent job experience that can be listed on a résumé. Finally, vocational and on-the-job training can improve job skills, and hence earnings. Although LEAP had no training requirements, it was expected to increase the use of vocational training in particular, because many training classes are available only to people who have received a high school diploma or GED.

As indicated in Table 5.2, LEAP did have a statistically significant impact on current enrollment in vocational training, but it was a negative effect: More than 4 percent of control group teens enrolled in training classes, compared to less than 2 percent of the program group. Almost all the other program-control group differences in the table were also negative, although not statistically

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[2]The lack of statistical significance of this and other impacts discussed in this chapter may well reflect the relatively small size of the survey sample.

TABLE 5.1

LEAP's THREE-YEAR IMPACTS ON COLLEGE ENROLLMENT FOR THE SURVEY SAMPLE, BY SCHOOL ENROLLMENT SUBGROUP AND AREA

Sample and Its Status 3 Years After Random Assignment	Cleveland and East Cleveland			All Seven Counties (Excluding the Cities of Cleveland and East Cleveland)			All Seven Counties		
	Program Group (%)	Control Group (%)	Difference	Program Group (%)	Control Group (%)	Difference	Program Group (%)	Control Group (%)	Difference
All teens									
Ever enrolled in college	14.2	11.4	2.8	11.2	12.4	-1.3	11.8	12.5	-0.6
Currently enrolled in college	6.4	5.2	1.3	5.6	7.7	-2.2	5.7	7.0	-1.3
Sample size	157	172		289	295		446	467	
Teens enrolled in school at random assignment									
Ever enrolled in college	20.6	11.8	8.8 *	17.3	18.6	-1.3	18.0	16.6	1.4
Currently enrolled in college	8.3	5.9	2.4	8.9	11.2	-2.3	8.3	9.5	-1.2
Sample size	99	99		168	161		267	260	
Teens not enrolled in school at random assignment									
Ever enrolled in college	4.8	9.9	-5.0	4.5	3.4	1.1	4.4	5.9	-1.5
Currently enrolled in college	3.9	3.7	0.2	2.3	2.4	-0.1	2.5	3.1	-0.6
Sample size	58	73		121	134		179	207	

SOURCE: MDRC calculations using data from Teen Parent Information Sheets and the LEAP three-year survey.

NOTES: Estimates of the program-control group differences are regression-adjusted using ordinary least squares, controlling for pre-random assignment background characteristics of sample members.

Rounding may cause slight discrepancies in calculating differences.

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

TABLE 5.2

LEAP's THREE-YEAR IMPACTS ON TRAINING FOR THE SURVEY SAMPLE, BY SCHOOL ENROLLMENT SUBGROUP

Sample and Its Status 3 Years After Random Assigment	Program Group (%)	Control Group (%)	Difference
All Teens			
Ever in job club/job search	5.4	6.0	-0.7
Currently in job club/job search	0.3	1.0	-0.6
Ever in unpaid work experience	2.5	2.9	-0.4
Currently in unpaid work experience	0.2	0.7	-0.5
Ever in on-the-job-training	3.6	5.8	-2.2
Currently in on-the-job-training	0.7	0.2	0.4
Ever in vocational training	17.5	19.3	-1.8
Currently in vocational training	1.7	4.2	-2.4 **
Ever received a trade license	8.2	10.8	-2.6
Sample size	446	467	
Teens enrolled in school at random assignment			
Ever in job club/job search	6.0	3.8	2.2
Currently in job club/job search	0.7	1.2	-0.5
Ever in unpaid work experience	3.3	3.1	0.2
Currently in unpaid work experience	0.4	0.7	-0.3
Ever in on-the-job-training	4.1	6.6	-2.5
Currently in on-the-job-training	0.8	0.0	0.8
Ever in vocational training	20.6	21.1	-0.5
Currently in vocational training	2.1	4.7	-2.6
Ever received a trade license	9.6	12.1	-2.5
Sample size	267	260	
Teens not enrolled in school at random assignment			
Ever in job club/job search	4.5	8.7	-4.2
Currently in job club/job search	0.0	0.5	-0.5
Ever in unpaid work experience	1.1	2.9	-1.8
Currently in unpaid work experience	-0.1	0.6	-0.7
Ever in on-the-job-training	3.2	4.5	-1.3
Currently in on-the-job-training	0.7	0.4	0.3
Ever in vocational training	13.7	16.2	-2.5
Currently in vocational training	1.2	3.3	-2.0
Ever received a trade license	6.3	9.1	-2.8
Sample size	179	207	

SOURCE: MDRC calculations using data from Teen Parent Information Sheets and the LEAP three-year survey.

NOTES: Estimates of the program-control group differences are regression-adjusted using ordinary least squares, controlling for pre-random assignment background characteristics of sample members.

Rounding may cause slight discrepancies in calculating differences.

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

significant. The findings for initially enrolled teens and dropouts were essentially the same, and none of the subgroup impacts were statistically significant.

One possible reason for this result is that many county human services agencies did not permit LEAP teens to enroll in programs that offered joint GED preparation and vocational training (these were usually proprietary programs). Another is that the program group spent significantly more time than the control group enrolled in both high schools and GED programs (Bloom et al., 1993), leaving them less time for training. Both explanations suggest that, for control group teens, training substituted for school rather than supplementing it.

III. Employment and Earnings

Employment is obviously a critical link in LEAP's impact chain. The program increased academic progress, graduations (in Cleveland/East Cleveland), and GEDs (for initially enrolled teens), but, unless these effects translate into gains in employment and earnings, there is little or no hope of LEAP's achieving its long-term goals.

A. Employment

A substantial proportion of teens in the survey sample were employed during the last three months of the follow-up period, and an even larger proportion held jobs at some time during the third year. As shown in Table 5.3, 33.2 percent of the program group were employed during the three months prior to the survey, compared to 27.6 percent of the control group. The 5.5 percentage point difference was statistically significant.

As can be seen in the table, all of this impact was generated by teens who were enrolled in school at the time they became eligible for LEAP, the group that also completed a GED more often (see Table 4.1).

This impact was fairly large, given that close to a quarter of the sample was enrolled in high school, a GED program, or college at the end of the three-year follow-up period. On the other hand, most of this impact resulted from part-time rather than full-time employment. Because of the way welfare checks are calculated, such jobs generally result in only modest welfare savings.[3]

So far it appears that LEAP has had little effect on the types of jobs held, the number of hours worked, or the average wage rate received by teen parents (these findings are not shown in the table).[4] For some reason, however, twice as many teens in the program group became cashiers. The

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[3]According to federal regulations, $30 plus one-third of earnings are not counted in calculating the AFDC grant during the first four months an AFDC recipient works. Income counted in determining the amount of assistance is also reduced by $90 for work expenses, plus (for a family with two children) up to $350 per month for child care expenses during these four months and later. Beyond this disregarded income, each dollar of monthly earnings reduces the monthly AFDC grant by one dollar. Thus, a teen parent in Ohio with one child could earn over $700 per month and still be eligible to receive an AFDC grant during her first four months of work (and could earn over $400 per month after the first four months). If she had more than one child, she could earn even more than these amounts and still receive welfare. This is based on AFDC rules in place during 1993 (see U.S. House of Representatives, 1993).

[4]The average wage rates for the program and control groups were determined by dividing earnings by hours worked. Similarly, average hours worked by the two groups, cited below, were determined by dividing

(continued...)

TABLE 5.3

LEAP's THREE-YEAR IMPACTS ON EMPLOYMENT IN THE THREE MONTHS PRIOR TO THE SURVEY, BY SCHOOL ENROLLMENT SUBGROUP

Sample and Its Status 3 Years After Random Assignment	Program Group	Control Group	Difference	Percentage Change
All teens				
Ever employed in past 3 months (%)	33.2	27.6	5.5 *	20.0%
Ever employed full time in past 3 months (%)	19.7	18.7	1.0	5.5%
Total hours worked in past 3 months	77.07	71.84	5.23	7.3%
Total earnings in past 3 months ($)	409	380	29	7.6%
Sample size	446	467		
Teens enrolled in school at random assignment				
Ever employed in past 3 months (%)	38.9	27.4	11.5 ***	42.0%
Ever employed full time in past 3 months (%)	23.6	19.6	4.0	20.4%
Total hours worked in past 3 months	86.33	73.76	12.57	17.0%
Total earnings in past 3 months ($)	461	371	90	24.3%
Sample size	267	260		
Teens not enrolled in school at random assignment				
Ever employed in past 3 months (%)	26.3	26.5	-0.1	-0.5%
Ever employed full time in past 3 months (%)	15.8	15.8	-0.1	-0.5%
Total hours worked in past 3 months	67.36	65.88	1.48	2.2%
Total earnings in past 3 months ($)	356	369	-13	-3.5%
Sample size	179	207		

SOURCE: MDRC calculations using data from Teen Parent Information Sheets and the LEAP three-year survey.

NOTES: Estimates of the program-control group differences are regression-adjusted using ordinary least squares, controlling for pre-random assignment background characteristics of sample members.

Rounding may cause slight discrepancies in calculating differences.

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

next most common jobs among survey sample members were nurse's aides, bellhops, salespeople, and packers.

The small (and statistically not significant) impact on hours worked was driven entirely by the program's effect on the number of jobs held rather than the hours worked per job (or the combination of jobs an individual teen might have held). In other words, more teens worked as a result of LEAP, but the average number of hours worked per employed teen did not increase. Indeed, the average hours worked by the 33.2 percent of program group teens who were employed during the three months before the survey (see Table 5.3) were lower than for the employed members of the control group.

LEAP's impact on employment appears to have emerged during the last (third) year of follow-up.[5] This is not surprising, given that more program group teens were enrolled in high school or a GED program in the first two years of follow-up than control group teens. For example, in months 10 to 12 of the follow-up period, 27 percent more program group teens attended school or a GED program (or had already completed high school or received a GED) than control group teens (Bloom et al., 1993).

Finally, the impact on employment in Cleveland/East Cleveland was smaller than that found elsewhere (as shown in Table 2 of the Executive Summary, which compares impacts in Cleveland/East Cleveland to those in other places). This was true for both the full sample and the initially enrolled subgroup, whose high school graduation rate in Cleveland/East Cleveland was substantially raised by LEAP. One possible reason for this is LEAP's impact on college enrollment in Cleveland/East Cleveland (discussed above), which may mean that teens were attending college rather than working. Another reason may be that more of Cleveland/East Cleveland's impact on school completion occurred during teens' third year after becoming eligible for LEAP than in other school districts (see Appendix C, which presents year-by-year impacts on school completion for each of the urban school districts where school records were collected). Thus, since many teens were in school during most or all of the follow-up period, they had less time to find employment. This left less time in Cleveland for LEAP's school completion impact to translate into employment gains.

B. Did School Completion Lead to the Employment Impacts?

LEAP's joint impacts on school completion and employment were examined to explore whether the link between these two impacts is strong in this teenage parent sample. Table 5.4 presents LEAP's joint impacts on (1) school completion, defined as high school graduation or GED receipt by the time of the three-year survey, and (2) employment, defined as employment during the three months prior to the survey.

The table shows that LEAP had a small, statistically not significant overall effect on teens' jointly achieving these two key outcomes. However, among teens who were enrolled in school at the time of random assignment, LEAP had a larger (and statistically significant) 8.1 percentage point impact: 22.6 percent of program group members, compared to 14.5 percent of the control group, achieved both outcomes. LEAP's impact on the employment of the initially enrolled teens, when not

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[4](...continued)
hours worked by the employment rate. Earnings, hours worked, and the employment rate, which all correspond to the three months before the survey, are shown in Table 5.3.

[5]The program's employment impact estimated from an early cohort of the first LEAP survey, administered on average 14 months after random assignment, was negative.

TABLE 5.4

LEAP's THREE-YEAR IMPACTS ON EMPLOYMENT IN THE THREE MONTHS PRIOR TO THE SURVEY AND DEGREE COMPLETION AT THE TIME OF THE SURVEY, BY SCHOOL ENROLLMENT SUBGROUP

Sample and Its Status 3 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
All teens			
Employed in past 3 months and has high school diploma or GED	15.8	12.8	3.0
Employed in past 3 months and does not have high school diploma or GED	17.4	14.9	2.5
Not employed in past 3 months and has high school diploma or GED	18.3	19.2	-0.9
Not employed in past 3 months and does not have high school diploma or GED	48.6	53.2	-4.6
Sample size	446	467	
Teens enrolled in school at random assignment			
Employed in past 3 months and has high school diploma or GED	22.6	14.5	8.1 **
Employed in past 3 months and does not have high school diploma or GED	16.3	12.9	3.4
Not employed in past 3 months and has high school diploma or GED	23.0	24.1	-1.1
Not employed in past 3 months and does not have high school diploma or GED	38.1	48.5	-10.4 ***
Sample size	267	260	
Teens not enrolled in school at random assignment			
Employed in past 3 months and has high school diploma or GED	7.1	9.3	-2.2
Employed in past 3 months and does not have high school diploma or GED	19.2	17.2	2.0
Not employed in past 3 months and has high school diploma or GED	11.5	12.8	-1.3
Not employed in past 3 months and does not have high school diploma or GED	62.1	60.8	1.3
Sample size	179	207	

SOURCE: MDRC calculations using data from Teen Parent Information Sheets and the LEAP three-year survey.

NOTES: Estimates of the program-control group differences are regression-adjusted using ordinary least squares, controlling for pre-random assignment background characteristics of sample members.
Rounding may cause slight discrepancies in calculating differences.
A two-tailed t-test was applied to the difference between the program and control groups.
Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; and * = 10 percent.

coupled with school completion, was small and not significant. This suggests that the program's significant effect on eleventh-grade completion may have improved the employment prospects of teens who finished only the eleventh grade, but apparently not as much as high school and GED completions.

Interestingly, the largest of the impacts shown in Table 5.4 was the reduction in the proportion of initially enrolled teens who made little or no progress toward self-sufficiency — i.e., they were neither working nor had a diploma or GED. Nearly half the teens in the control group fell into this category, compared to only 38 percent of the program group teens, a substantial improvement.

C. Earnings

As shown in Table 5.3, the program group's earnings in the three months before the survey were 7.6 percent higher than those of the control group — $409 compared to $380 — but the difference was not statistically significant. The low level of earnings by both the program and control groups partly reflects the fact that average earnings were calculated for all sample members, including those who did not work (and whose earnings were consequently counted as zero). The measured difference between the program and control groups in earnings was entirely due to teens who were in school at the time of random assignment, and who were thus more likely to receive a high school diploma or GED. For these teens, the measured program-control group difference was $90 over the three-month period. Still, this difference was not statistically significant, and was proportionately smaller than the 11.5 percentage point impact on *employment* for initially enrolled teens. This is probably due primarily to the fact that most of the employment gain was in part-time jobs.

In Cleveland/East Cleveland, where the program was more successful in inducing teens to attain their high school diplomas, the effect on earnings was no larger than in other communities. As it was across all seven counties, the earnings impact in Cleveland was not statistically significant. (These results are not shown in the table.) This may possibly reflect the fact that some LEAP teens were enrolled in college (see Table 5.1) and thus less likely to be working enough to receive substantial earnings.

IV. Welfare Receipt and Economic Well-Being

The simplest measure of LEAP's impact on teen parents' economic self-sufficiency is its success in reducing welfare receipt. However, as discussed at the outset of this chapter, self-sufficiency is a long-term goal for younger teen parents. Thus, evidence of lower AFDC receipt during the period covered by the survey provides an important, but short-term, indicator of potential longer-term success.[6] Arguably a better indicator of self-sufficiency couples lower AFDC and Food Stamp receipt with gains in earnings and other sources of income, such as child support. If AFDC and Food Stamps together become a smaller share of total income, this signals a shift from dependence on public assistance to greater reliance on earnings. If, in addition, total income increases, it is more likely that reduced welfare dependence will be sustained. The reason for this is that, were income not to increase, the typical teen parent would face the prospect of working more, but not receiving more income, which would make a return to welfare attractive.

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[6]Although the survey represented an average follow-up period of three years, the average length of *post-secondary* LEAP follow-up for school and GED completers was about one year.

A. AFDC Receipt

At the time of the survey, as shown in Table 5.5, fewer teen parents in the program group (83.3 percent) were receiving AFDC than control group teens (87.6 percent), for a 4.3 percentage point impact (statistically significant).

However, these case closure rates (16.7 percent for the program group and 12.4 percent for the control group) are much lower than those typically found for adults (see Friedlander and Burtless, 1995). There are probably many reasons, including the fact that (1) some teens were young, had young children, and were still in LEAP and were attending school at the end of the three years; (2) many teens were employed part time instead of full time (see Table 5.3), and consequently were often eligible to receive an AFDC grant (see footnote 3); and (3) some teens were still on their mother's welfare case, which could remain open even if the teen had earnings.

In addition to the program-induced drop in AFDC receipt, there was a significant, $21 reduction in the average AFDC payment in the month prior to the survey. As indicated in the table, the payment reduction was virtually identical in size for the two subgroups. However, the reasons for these effects were probably different: Dropouts received a greater number of sanctions (grant reductions) for not complying with LEAP's requirements,[7] while initially enrolled teens had somewhat more earnings.

There was no appreciable difference in welfare impacts between Cleveland/East Cleveland teens and other teens (not shown in the table). Differences may emerge later, given the concentration of LEAP's school completion and college enrollment impacts in the initially enrolled subgroup and in Cleveland and the lead time needed to translate those impacts into increased self-sufficiency.

B. Household Income

LEAP affected teens in a variety of ways that could directly or indirectly change their household income. However, through the approximately three years covered by the survey, the program neither boosted nor reduced teens' family income. As shown in Figure 5.1, the total income of households headed by or including program group members was $982 in the month before the survey; the corresponding figure for control group households was virtually identical, $977.

The story seemed to differ somewhat for the initially enrolled and dropout subgroups. AFDC benefits were reduced by virtually the same amount for the two groups. However, the loss to initially enrolled teens appears to have resulted from and been offset by increased earnings. The loss to the dropouts was caused in part by AFDC grant reductions due to LEAP sanctions, which were discussed in Chapter 3. Out-of-school program group members received many more sanctions than initially enrolled teens during the time covered by the survey. Teens whose grants were reduced by sanctions were eligible to receive more Food Stamps, and the teens reported that they did receive more. This probably explains why dropouts in the program group received more Food Stamps, and contributes to their significantly higher total income (see the note to Figure 5.1).

A substantial portion of the household income shown in Figure 5.1 falls in the "other income" category, which includes such sources as child support (discussed below), other forms of public

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[7]More than two-thirds of the teens were no longer eligible for LEAP at the time of the survey, but the teens who *were* still eligible received many sanctions. As discussed in Chapter 3, and shown in Appendix Figure B.1, sanctions were frequent for LEAP teens in Cleveland in months 19 to 49 following random assignment.

TABLE 5.5

LEAP's THREE-YEAR IMPACTS ON AFDC RECEIPT FOR THE SURVEY SAMPLE, BY SCHOOL ENROLLMENT SUBGROUP

Sample and Its Status 3 Years After Random Assignment	Program Group	Control Group	Difference	Percentage Change
All teens				
Received any AFDC in the past:				
year (%)	92.3	92.1	0.2	0.2%
6 months (%)	90.2	92.0	-1.8	-1.9%
3 months (%)	87.5	90.1	-2.5	-2.8%
Currently receiving AFDC (%)	83.3	87.6	-4.3 *	-4.9%
Average total AFDC received in the past year ($)	3,205	3,321	-116	-3.5%
Average number of months receiving AFDC in the past year	9.92	10.30	-0.38	-3.7%
Average total AFDC received in the past month ($)	268	289	-21 **	-7.3%
Sample size	446	467		
Teens enrolled in school at random assignment				
Received any AFDC in the past:				
year (%)	92.7	91.0	1.7	1.8%
6 months (%)	90.0	91.4	-1.4	-1.6%
3 months (%)	87.7	89.2	-1.5	-1.7%
Currently receiving AFDC (%)	82.6	87.1	-4.6	-5.3%
Average total AFDC received in the past year ($)	3,127	3,213	-86	-2.7%
Average number of months receiving AFDC in the past year	9.78	10.03	-0.25	-2.5%
Average total AFDC received in the past month ($)	264	287	-23	-8.0%
Sample size	267	260		
Teens not enrolled in school at random assignment				
Received any AFDC in the past:				
year (%)	91.5	93.8	-2.4	-2.5%
6 months (%)	90.2	93.0	-2.9	-3.1%
3 months (%)	86.8	91.6	-4.7	-5.2%
Currently receiving AFDC (%)	83.6	89.1	-5.5	-6.2%
Average total AFDC received in the past year ($)	3,325	3,453	-128	-3.7%
Average number of months receiving AFDC in the past year	10.10	10.67	-0.56	-5.3%
Average total AFDC received in the past month ($)	272	293	-21	-7.2%
Sample size	179	207		

SOURCE: MDRC calculations using data from Teen Parent Information Sheets and the LEAP three-year survey.

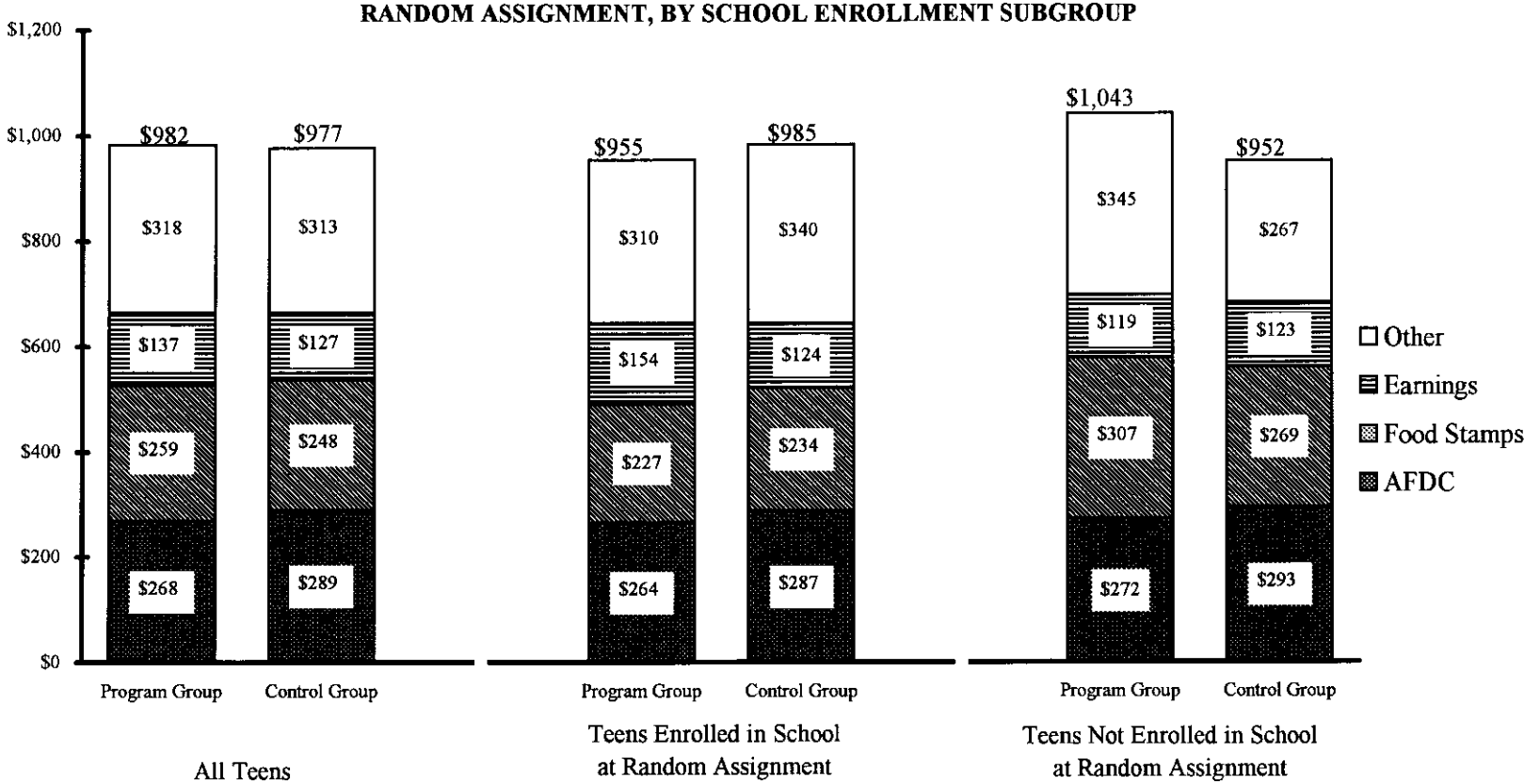
NOTES: Estimates of the program-control group differences are regression-adjusted using ordinary least squares, controlling for pre-random assignment background characteristics of sample members.

Rounding may cause slight discrepancies in calculating differences.

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

FIGURE 5.1

COMPONENTS OF MONTHLY INCOME FOR THE LEAP SURVEY SAMPLE THREE YEARS AFTER RANDOM ASSIGNMENT, BY SCHOOL ENROLLMENT SUBGROUP



SOURCE: MDRC calculations using data from Teen Parent Information Sheets and the LEAP three-year survey.

NOTE: Total income amounts for the full survey sample and the "enrolled" and "not enrolled" subgroups were derived by combining information from different LEAP survey questions (regarding AFDC, Food Stamps, earnings, and other income). A test of the statistical significance of the difference between the program group and the control group was not conducted for this composite measure of total income. However, the LEAP survey also included a summary question about total household income. The composite and summary measures proved to be very close (with the former being 6 to 11 percent higher than the latter). A test of the significance of the difference between the program group and the control group was conducted of the summary measure; the difference between the two groups was statistically significant only for the "not enrolled" subgroup (*p* -value, the probability that average outcomes are different only because of random error, is .0616).

assistance (such as Unemployment Insurance), and earnings and public assistance received by other household members. This serves as a reminder that teens' AFDC grants and earnings are often not their only sources of income.

The findings suggest that LEAP did promote movement toward short-term self-sufficiency. There was a significant increase in enrollment (and a corresponding, but not significant, increase in earnings) and a significant reduction in AFDC. These results suggest less dependence on public assistance and more reliance on employment. However, overall income did not change appreciably, which diminishes one's confidence that this increased self-sufficiency will last beyond the time period covered by the survey.

This pattern of program effects — increased employment, reduced welfare, and little or no net change in income — has also been observed in the Teenage Parent Demonstration (Maynard, Nicholson, and Rangarajan, 1993) as well as numerous programs serving adults (see, e.g., Kemple, Friedlander, and Fellerath, 1995; Friedlander and Hamilton, 1993; Friedlander et al., 1985). These programs, while generating modest or no gains for welfare recipients, have often produced large net savings for federal and state government treasuries.

C. Child Support

The survey data (not shown in tables) suggest that LEAP did not affect the probability of a teen parent's receiving child support from the father of her children. However, the size of the average monthly child support payment to program group teens, $111, was 50 percent higher than the average $74 payment to control group members, which is consistent with the fact that LEAP survey respondents who were sanctioned reported seeking higher child support payments (see Chapter 3). As a result, the average amount of child support, across all teens in the survey sample, was higher for the program group than for the control group ($8 versus $5).

V. Family Composition

An important pitfall on the road to self-sufficiency is bearing additional children without gaining additional financial and social support from their fathers. This event reduces the likelihood of school completion, makes entry into the labor market and then maintaining stable employment more difficult (because of child care needs), and increases the financial needs of the family without appreciably changing its financial resources. No significant differences in either childbirth or marriage were found during the three years covered by the survey.

A. Marriage and Births

As indicated in Table 5.6, LEAP has not had a statistically significant effect on marriage. Only 9.4 percent of the program group and 8.4 percent of the control group were married at the time of the survey (see the top panel of the table); nor did LEAP have a significant effect on marriage for initially enrolled teens or dropouts.

LEAP also had no effect on repeat births during the last year of follow-up. However, there is some evidence of a potential longer-term effect: As shown in Table 5.6, the overall impact on whether teens were pregnant at the time of the survey interview was 3.6 percentage points and barely missed being statistically significant (it was significant at the .105 level). Moreover, the impact on the out-of-school subgroup was large (7.5 percentage points) and significant.

TABLE 5.6

LEAP's THREE-YEAR IMPACTS ON MARRIAGE, PREGNANCIES, AND BIRTHS AT THE TIME OF THE SURVEY, BY SCHOOL ENROLLMENT SUBGROUP

Sample and Its Status 3 Years After Random Assignment	Program Group	Control Group	Difference
All teens			
Currently pregnant (%)	10.3	13.9	-3.6
Has given birth to a child in the last year (%)	26.7	25.7	1.1
Age of youngest child in months (a)	25.57	26.38	-0.81
Currently married (%)	9.4	8.4	0.9
Sample size	446	467	
Teens enrolled in school at random assignment			
Currently pregnant (%)	11.9	13.1	-1.2
Has given birth to a child in the last year (%)	24.7	22.3	2.4
Age of youngest child in months (a)	26.71	27.66	-0.95
Currently married (%)	7.2	7.6	-0.5
Sample size	267	260	
Teens not enrolled in school at random assignment			
Currently pregnant (%)	7.6	15.2	-7.5 **
Has given birth to a child in the last year (%)	28.8	30.6	-1.8
Age of youngest child in months (a)	24.73	24.05	0.68
Currently married (%)	12.1	9.8	2.3
Sample size	179	207	

SOURCE: MDRC calculations using data from Teen Parent Information Sheets and the LEAP three-year survey.

NOTES: Estimates of the program-control group differences are regression-adjusted using ordinary least squares, controlling for pre-random assignment background characteristics of sample members.

Rounding may cause slight discrepancies in calculating differences.

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

(a) This outcome measure excludes a small fraction of the sample who reported having no children.

B. Economic Prospects and Out-of-Wedlock Children

LEAP's financial incentive structure would not be expected to have a direct impact on childbearing. Any effect would be indirect and would take time to unfold. The specific hypothesis is that if LEAP increases the probability that teens complete school (or make substantial academic progress) and consequently improves their labor market prospects, teens would have fewer children. An economist would attribute this indirect effect on pregnancies to higher "opportunity costs,"[8] and a psychologist might point to teens' improved stability and self-concept.

The fact that most of the measured impact on current pregnancy was concentrated on dropouts suggests that the program's potential long-term impact on childbirth is not associated with its direct impact on school completion, because LEAP had no impact on completion for this subgroup. However, better evidence can be obtained by assessing LEAP's joint impact on school completion and childbearing, which is presented in Table 5.7. Childbearing has been defined as having given birth out of wedlock during the year before the survey; this is done because childbearing with a present spouse does not necessarily reduce the likelihood of self-sufficiency (the presence of a father or stepfather indicates possible financial and caregiving support).

As indicated in the table, LEAP significantly reduced the proportion of teens who failed to complete high school or a GED and gave birth to an out-of-wedlock child during the last year before the survey. As indicated in Chapter 1, the prospect of self-sufficiency for a single mother who does not complete school is dim; it is even dimmer if she bears other children without financial support from a spouse. This program effect is consequently noteworthy.

However, unlike LEAP's joint effect on school completion and employment (see Table 5.4), this joint effect is driven primarily by the impact on dropouts: 24.6 percent of dropouts in the program did not complete school and had out-of-wedlock children, compared to 33.8 percent of dropouts in the control group, a significant difference of 9.2 percentage points. Moreover, the largest impact reported in Table 5.7 is the much larger proportion of dropouts in the program group who did not finish school and who also did not have an out-of-wedlock birth in the last year of follow-up.

VI. Self-Sufficiency and LEAP's Impacts to Date

LEAP was intended to produce a chain of impacts, starting with increased school enrollment and culminating in reduced welfare dependence. For the full sample, LEAP has generated some of the impacts (statistically significant effects on high school and GED program enrollment and attendance, high school grade completion, employment, and welfare receipt), but not others (high school graduation, GED attainment, earnings, and income). Since the analysis is based on only three years of follow-up, the impact chain may eventually become more developed. At this point, however, it is too early to draw a conclusion. The final report, which will follow virtually all teens into their twenties, will reassess LEAP's impacts based on longer follow-up.

LEAP's partial success in producing the intended impacts was almost entirely due to its accomplishments with teens who were already enrolled in school at the time they were determined to

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[8]A young woman whose labor market prospects have improved can earn more. Thus she gives up the "opportunity" of gaining more income if she has a child. (Time that could have been devoted to employment is instead devoted to childbirth and child care.)

TABLE 5.7

LEAP's IMPACTS ON OUT-OF-WEDLOCK BIRTHS IN THE YEAR PRIOR TO THE SURVEY AND DEGREE COMPLETION AT THE TIME OF THE SURVEY, BY SCHOOL ENROLLMENT SUBGROUP

Sample and Its Status 3 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
All teens			
No out-of-wedlock births in the past year and has high school diploma or GED	24.9	24.4	0.5
No out-of-wedlock births in the past year and does not have high school diploma or GED	43.1	40.4	2.7
Out-of-wedlock births in the past year and has high school diploma or GED	9.1	7.5	1.6
Out-of-wedlock births in the past year and does not have high school diploma or GED	22.8	27.6	-4.8 *
Sample size	446	467	
Teens enrolled in school at random assignment			
No out-of-wedlock births in the past year and has high school diploma or GED	34.2	30.2	4.0
No out-of-wedlock births in the past year and does not have high school diploma or GED	33.5	37.9	-4.4
Out-of-wedlock births in the past year and has high school diploma or GED	11.3	8.3	3.0
Out-of-wedlock births in the past year and does not have high school diploma or GED	20.9	23.5	-2.6
Sample size	267	260	
Teens not enrolled in school at random assignment			
No out-of-wedlock births in the past year and has high school diploma or GED	12.5	15.7	-3.2
No out-of-wedlock births in the past year and does not have high school diploma or GED	56.8	44.1	12.7 **
Out-of-wedlock births in the past year and has high school diploma or GED	6.1	6.3	-0.2
Out-of-wedlock births in the past year and does not have high school diploma or GED	24.6	33.8	-9.2 *
Sample size	179	207	

SOURCE: MDRC calculations using data from Teen Parent Information Sheets and the LEAP three-year survey.

NOTES: In this table, a birth is defined as "out-of-wedlock" if the mother was (1) unmarried at the time of the survey, and (2) gave birth during the prior year or was pregnant at the time of the survey.

Estimates of the program-control group differences are regression-adjusted using ordinary least squares, controlling for pre-random assignment background characteristics of sample members.

Rounding may cause slight discrepancies in calculating differences.

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

be eligible for the program. For this group, LEAP generated a significant impact on combined high school and GED completion as well as GED receipt alone. Moreover, the impact on employment was substantial in addition to being statistically significant.

LEAP's limited impacts may in part reflect the program's immaturity at the time sample members were eligible for the program. As indicated in Chapter 3, the operation of LEAP's incentive structure has improved over time. In addition, the program now enrolls teens sooner after they become eligible, which means that teens are more likely to first encounter LEAP's incentives before they have fallen far behind their age-for-grade level or have dropped out of school. However, it is not clear that LEAP's financial incentives, by themselves, are capable of producing dramatic changes for the eligible teen population as a whole. The incentives have been effective in increasing the combined measure of high school or GED completion by initially enrolled teens, as opposed to dropouts, and most effective for enrolled teens who started LEAP at or close to their age-for-grade level. Moreover, the results in Cleveland/East Cleveland suggest that the program's impact on high school completion for initially enrolled teens might be increased using services provided in high schools. This might also increase LEAP's impact on employment and welfare dependence, although Cleveland's substantial impacts on high school completion by initially enrolled teens have not yet translated into employment and welfare impacts that are greater than in other locations.

However, for dropouts – particularly those who were beyond the age range when teenagers in the general population typically go to school – the incentives were simply ineffective. Modest changes in or additions to LEAP might not improve its performance with this group, which may require greater changes in LEAP, the welfare system, or the public schools.

APPENDIX A

SUPPLEMENTAL TABLES TO CHAPTER 2

TABLE A.1

SELECTED CHARACTERISTICS OF TEENS IN THE LEAP RESEARCH SAMPLE AT THE TIME OF RANDOM ASSIGNMENT, BY SCHOOL ENROLLMENT STATUS

Characteristic at Random Assignment	Full Sample	School Enrollment Status at Random Assignment			
				Out of School	
		Enrolled in School (a)	Out of School	Less Than 1 Year	At Least 1 Year
Age in years (%)					
15 or less	12.5	18.4	4.9	8.4	2.0
16	20.1	24.7	14.3	20.6	8.9
17	33.9	33.8	34.0	34.9	33.2
18	27.9	20.8	37.2	32.3	41.3
19	5.5	2.3	9.7	3.8	14.6
Average age in years	17.39	17.07	17.81	17.50	18.07
Female (%)	98.9	99.1	98.7	98.8	98.6
Schooling status (%)					
Enrolled in high school, junior high, or GED	56.6	100.0	n/a	n/a	n/a
Out of school	43.4	n/a	100.0	100.0	100.0
Out of school for 2 years or more (%)	9.7	n/a	22.2	n/a	40.8
Average number of months since last attended school (non-enrolled teens only)	15.89	n/a	15.89	6.05	24.08
Average highest grade completed	9.46	9.60	9.28	9.47	9.12
AFDC case status (%)					
Head of own AFDC case	49.0	35.7	66.2	54.5	75.9
On parent's AFDC case	44.9	57.9	28.0	38.4	19.4
On another's AFDC case	6.1	6.4	5.8	7.1	4.7
Ethnicity (%)					
Black	65.3	76.1	51.2	63.0	41.4
White	31.8	22.0	44.7	33.8	53.7
Hispanic	2.3	1.4	3.4	2.7	3.9
Other	0.6	0.6	0.7	0.5	0.9

(continued)

TABLE A.1 (continued)

Characteristic at Random Assignment	Full Sample	School Enrollment Status at Random Assignment			
		Enrolled in School (a)	Out of School	Out of School	
				Less Than 1 Year	At Least 1 Year
Marital status (%)					
Single, never married	93.9	97.1	89.7	93.3	86.7
Currently married	4.0	2.3	6.2	5.3	7.0
Divorced, separated, or widowed	2.1	0.6	4.1	1.5	6.3
Number of children (%)					
0	10.1	12.5	7.1	9.4	5.2
1	79.0	81.3	76.1	78.1	74.4
2 or more	10.9	6.2	16.9	12.5	20.5
Average number of children	1.02	0.94	1.12	1.04	1.18
Average age of youngest child in months (b)	9.39	9.18	9.65	7.96	10.97
Average age of oldest child in months (b)	11.70	10.51	13.14	10.63	15.12
Received any earnings during the prior 12 months (%)	13.5	14.3	12.6	12.5	12.7
County (%)					
Cuyahoga	39.2	39.4	38.9	41.1	37.0
Franklin	19.6	17.9	21.8	17.9	25.1
Hamilton	20.7	20.2	21.4	21.8	21.1
Lawrence	1.4	1.5	1.4	1.0	1.7
Lucas	10.5	12.3	8.2	9.7	6.9
Muskingum	1.8	2.0	1.5	1.5	1.4
Stark	6.8	6.7	6.9	6.9	6.8
Sample size	5,575	3,155	2,420	1,100	1,320

SOURCE: MDRC calculations using data from Teen Parent Information Sheets.

NOTES: A total of 7,017 teens were randomly assigned in the seven Tier 1 counties. The sample for this table (5,575 teens) excludes the 1,442 "older" teens, as discussed in Chapter 2 and depicted in Figure 2.2.

N/a means that data are not applicable.

(a) Enrollment is defined as attending high school, junior high school, or GED classes at the time of random assignment.

(b) Excludes approximately 700 teens who reported having no children at the time of random assignment or for whom birthdate information for their children was incomplete.

TABLE A.2

SELECTED CHARACTERISTICS OF TEENS IN THE LEAP RESEARCH SAMPLE AT THE TIME OF RANDOM ASSIGNMENT, BY AGE

Characteristic at Random Assignment	Full Sample	Age				
		15 or Under	16	17	18	19
Female (%)	98.9	100.0	99.3	99.2	98.5	95.8
Schooling status (%)						
Enrolled in high school, junior high, or GED	56.6	83.1	69.3	56.5	42.2	23.7
Out of school less than 1 year	19.7	13.2	20.2	20.3	22.8	13.6
Out of school at least 1 year but less than 2	14.0	3.4	7.2	15.1	19.0	30.8
Out of school 2 years or more	9.7	0.3	3.3	8.0	16.0	31.8
Average number of months since last attended school (non–enrolled teens only)	15.89	7.48	10.90	14.87	17.54	24.67
Average highest grade completed	9.46	8.08	9.03	9.68	10.01	10.00
AFDC case status (%)						
Head of own AFDC case	49.0	8.3	19.3	42.5	87.3	94.5
On parent's AFDC case	44.9	83.4	72.0	50.9	9.5	1.3
On another's AFDC case	6.1	8.3	8.6	6.6	3.1	4.2
Ethnicity (%)						
Black	65.3	77.8	71.8	66.6	56.6	49.4
White	31.8	19.8	25.3	30.2	40.6	48.7
Hispanic	2.3	2.1	2.4	2.4	2.2	1.0
Other	0.6	0.3	0.5	0.8	0.6	1.0
Marital status (%)						
Single, never married	93.9	98.4	96.1	92.6	92.9	89.0
Currently married	4.0	1.1	2.8	4.7	4.7	6.8
Divorced, separated, or widowed	2.1	0.4	1.2	2.7	2.4	4.2
Number of children (%)						
0	10.1	18.3	11.2	7.8	8.5	10.1
1	79.0	78.4	81.3	80.6	77.5	69.8
2 or more	10.9	3.3	7.5	11.5	14.0	20.1

(continued)

TABLE A.2 (continued)

Characteristic at Random Assignment	Full Sample	Age				
		15 or Under	16	17	18	19
Average number of children	1.02	0.85	0.97	1.05	1.07	1.14
Average age of youngest child in months (a)	9.39	6.19	7.86	10.58	10.02	10.62
Average age of oldest child in months (a)	11.70	6.63	9.19	12.91	13.23	15.32
Received any earnings during the prior 12 months (%)	13.5	9.9	12.0	14.4	15.2	14.0
County (%)						
Cuyahoga	39.2	38.4	35.9	38.9	42.3	39.3
Franklin	19.6	21.1	23.5	18.7	16.3	24.0
Hamilton	20.7	22.2	21.7	19.6	20.7	20.5
Lawrence	1.4	1.1	0.8	1.5	1.6	2.9
Lucas	10.5	10.9	10.8	12.5	8.7	5.8
Muskingum	1.8	0.6	1.7	2.1	1.8	2.3
Stark	6.8	5.7	5.6	6.6	8.6	5.2
Sample size	5,575	698	1,123	1,889	1,557	308

SOURCE: MDRC calculations using data from Teen Parent Information Sheets.

NOTES: A total of 7,017 teens were randomly assigned in the seven Tier 1 counties. The sample for this table (5,575 teens) excludes the 1,442 "older" teens, as discussed in Chapter 2 and depicted in Figure 2.2.

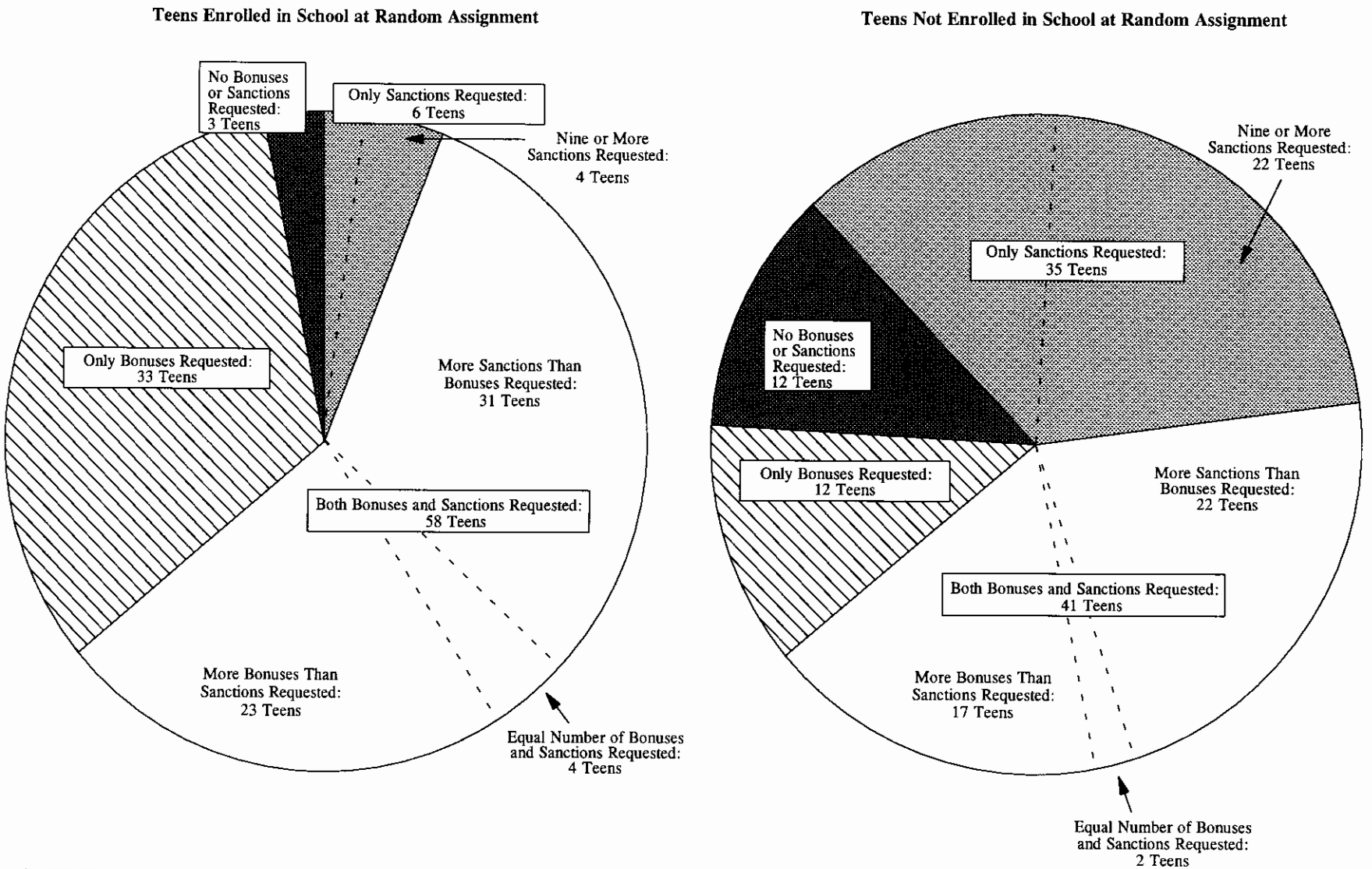
(a) Excludes approximately 700 teens who reported having no children at the time of random assignment or for whom birthdate information for their children was incomplete.

APPENDIX B

SUPPLEMENTAL FIGURE TO CHAPTER 3

FIGURE B.1

GRANT ADJUSTMENT REQUESTS FOR 100 TYPICAL LEAP TEENS IN CLEVELAND, BY SCHOOL ENROLLMENT STATUS AT RANDOM ASSIGNMENT



SOURCE: MDRC review of records for the Cleveland casefile sample.

NOTE: Depending on the date of random assignment, follow-up ranged from 26 to 49 months. At the end of the follow-up, 19 percent of the teens were still eligible for LEAP.

APPENDIX C

SUPPLEMENTAL TABLES TO CHAPTER 4

TABLE C.1

LEAP's THREE-YEAR IMPACTS ON HIGH SCHOOL AND GED COMPLETION FOR THE SCHOOL RECORDS SAMPLE IN CINCINNATI, BY SCHOOL ENROLLMENT SUBGROUP

Sample and Its Status 3 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
All teens			
Ever completed high school			
as of June 30, year 1	6.4	5.8	0.6
as of June 30, year 2	10.4	8.3	2.1
as of June 30, year 3	13.1	11.4	1.6
Ever completed GED			
as of June 30, year 1	1.4	1.7	−0.3
as of June 30, year 2	3.9	3.7	0.2
as of June 30, year 3	6.4	5.3	1.1
Ever completed high school or GED			
as of June 30, year 1	7.8	7.5	0.3
as of June 30, year 2	14.3	12.0	2.3
as of June 30, year 3	19.5	16.7	2.8
Sample size	803	200	
Teens enrolled in school at random assignment			
Ever completed high school			
as of June 30, year 1	10.8	10.2	0.6
as of June 30, year 2	17.6	13.3	4.3
as of June 30, year 3	22.3	18.6	3.7
Ever completed GED			
as of June 30, year 1	1.1	2.8	−1.7
as of June 30, year 2	3.1	4.6	−1.5
as of June 30, year 3	5.1	5.4	−0.3
Ever completed high school or GED			
as of June 30, year 1	11.9	13.0	−1.1
as of June 30, year 2	20.7	17.9	2.8
as of June 30, year 3	27.4	24.1	3.4
Sample size	452	108	
Teens not enrolled in school at random assignment			
Ever completed high school			
as of June 30, year 1	0.6	0.8	−0.1
as of June 30, year 2	1.3	1.7	−0.4
as of June 30, year 3	1.6	1.6	−0.0
Ever completed GED			
as of June 30, year 1	1.9	0.3	1.7
as of June 30, year 2	4.9	3.2	1.7
as of June 30, year 3	7.9	5.6	2.4

(continued)

TABLE C.1 (continued)

Sample and Its Status 3 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
Ever completed high school or GED			
as of June 30, year 1	2.6	1.1	1.5
as of June 30, year 2	6.1	4.9	1.3
as of June 30, year 3	9.5	7.2	2.4
Sample size	351	92	

SOURCES: MDRC calculations using data from Teen Parent Information Sheets, automated school records from the Cincinnati public school district, and automated GED testing data from the Ohio Department of Education.

NOTES: "June 30, year 1" denotes the first June 30th after random assignment; "June 30, year 2" and "June 30, year 3," the second and third June 30ths after random assignment, respectively.

"Completed GED" refers to passing the GED test.

Differences, as well as program and control group means, are regression-adjusted to correct for slight differences between program and control groups in baseline characteristics.

Rounding may cause slight discrepancies in calculating differences.

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

TABLE C.2

LEAP's THREE-YEAR IMPACTS ON HIGH SCHOOL AND GED COMPLETION FOR THE SCHOOL RECORDS SAMPLE IN CLEVELAND AND EAST CLEVELAND, BY SCHOOL ENROLLMENT SUBGROUP

Sample and Its Status 3 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
All teens			
Ever completed high school			
as of June 30, year 1	7.5	5.0	2.4 *
as of June 30, year 2	12.6	10.6	2.0
as of June 30, year 3	15.0	11.6	3.4 *
Ever completed GED			
as of June 30, year 1	1.5	0.9	0.6
as of June 30, year 2	4.2	2.5	1.7
as of June 30, year 3	7.0	4.2	2.8 **
Ever completed high school or GED			
as of June 30, year 1	9.0	5.9	3.0 **
as of June 30, year 2	16.8	13.0	3.8 *
as of June 30, year 3	22.0	15.8	6.2 ***
Sample size	1,522	362	
Teens enrolled in school at random assignment			
Ever completed high school			
as of June 30, year 1	12.5	8.4	4.1 *
as of June 30, year 2	20.4	17.5	2.9
as of June 30, year 3	24.5	18.9	5.6 *
Ever completed GED			
as of June 30, year 1	1.3	0.7	0.6
as of June 30, year 2	3.9	2.0	1.9
as of June 30, year 3	5.7	2.6	3.1 *
Ever completed high school or GED			
as of June 30, year 1	13.8	9.1	4.7 **
as of June 30, year 2	24.2	19.5	4.8
as of June 30, year 3	30.2	21.5	8.6 ***
Sample size	875	210	
Teens not enrolled in school at random assignment			
Ever completed high school			
as of June 30, year 1	0.8	0.1	0.7
as of June 30, year 2	2.1	0.8	1.3
as of June 30, year 3	2.3	1.5	0.8
Ever completed GED			
as of June 30, year 1	1.8	0.9	0.9
as of June 30, year 2	4.7	3.0	1.7
as of June 30, year 3	8.7	6.3	2.4

(continued)

TABLE C.2 (continued)

Sample and Its Status 3 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
Ever completed high school or GED			
as of June 30, year 1	2.6	1.0	1.6
as of June 30, year 2	6.8	3.8	3.0
as of June 30, year 3	11.0	7.8	3.3
Sample size	647	152	

SOURCES: MDRC calculations using data from Teen Parent Information Sheets, automated school records from the Cleveland public school district, graduation data from the East Cleveland public school district, and automated GED testing data from the Ohio Department of Education.

NOTES: "June 30, year 1" denotes the first June 30th after random assignment; "June 30, year 2" and "June 30, year 3," the second and third June 30ths after random assignment, respectively.

"Completed GED" refers to passing the GED test.

Differences, as well as program and control group means, are regression-adjusted to correct for slight differences between program and control groups in baseline characteristics.

Rounding may cause slight discrepancies in calculating differences.

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

TABLE C.3

LEAP's THREE-YEAR IMPACTS ON HIGH SCHOOL AND GED COMPLETION FOR THE SCHOOL RECORDS SAMPLE IN COLUMBUS, BY SCHOOL ENROLLMENT SUBGROUP

Sample and Its Status 3 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
All teens			
Ever completed high school			
as of June 30, year 1	6.2	7.4	−1.2
as of June 30, year 2	11.5	11.3	0.2
as of June 30, year 3	13.5	14.6	−1.1
Ever completed GED			
as of June 30, year 1	1.8	−0.1	1.9 *
as of June 30, year 2	5.4	0.7	4.6 ***
as of June 30, year 3	7.4	5.6	1.8
Ever completed high school or GED			
as of June 30, year 1	8.1	7.4	0.7
as of June 30, year 2	16.9	12.1	4.8 *
as of June 30, year 3	20.9	20.2	0.7
Sample size	719	177	
Teens enrolled in school at random assignment			
Ever completed high school			
as of June 30, year 1	10.4	13.5	−3.1
as of June 30, year 2	19.9	21.5	−1.7
as of June 30, year 3	23.5	25.4	−2.0
Ever completed GED			
as of June 30, year 1	0.8	0.0	0.8
as of June 30, year 2	2.6	0.3	2.3
as of June 30, year 3	4.0	5.6	−1.6
Ever completed high school or GED			
as of June 30, year 1	11.2	13.5	−2.4
as of June 30, year 2	22.4	21.8	0.6
as of June 30, year 3	27.5	31.1	−3.6
Sample size	382	84	
Teens not enrolled in school at random assignment			
Ever completed high school			
as of June 30, year 1	1.8	1.0	0.7
as of June 30, year 2	2.4	1.0	1.3
as of June 30, year 3	2.3	4.4	−2.1
Ever completed GED			
as of June 30, year 1	3.0	−0.1	3.1 *
as of June 30, year 2	8.4	1.8	6.6 **
as of June 30, year 3	10.9	6.7	4.2

(continued)

TABLE C.3 (continued)

Sample and Its Status 3 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
Ever completed high school or GED			
as of June 30, year 1	4.8	0.9	3.9 *
as of June 30, year 2	10.8	2.9	7.9 **
as of June 30, year 3	13.3	11.1	2.1
Sample size	337	93	

SOURCES: MDRC calculations using data from Teen Parent Information Sheets, automated school records from the Columbus public school district, and automated GED testing data from the Ohio Department of Education.

NOTES: "June 30, year 1" denotes the first June 30th after random assignment; "June 30, year 2" and "June 30, year 3," the second and third June 30ths after random assignment, respectively.

"Completed GED" refers to passing the GED test.

Differences, as well as program and control group means, are regression-adjusted to correct for slight differences between program and control groups in baseline characteristics.

Rounding may cause slight discrepancies in calculating differences.

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

TABLE C.4

LEAP's THREE-YEAR IMPACTS ON HIGH SCHOOL AND GED COMPLETION FOR THE SCHOOL RECORDS SAMPLE IN TOLEDO, BY SCHOOL ENROLLMENT SUBGROUP

Sample and Its Status 3 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
All teens			
Ever completed high school			
as of June 30, year 1	7.0	9.7	−2.7
as of June 30, year 2	12.7	15.4	−2.7
as of June 30, year 3	15.6	19.3	−3.6
Ever completed GED			
as of June 30, year 1	0.6	2.8	−2.2 *
as of June 30, year 2	3.1	3.2	−0.1
as of June 30, year 3	4.9	4.5	0.3
Ever completed high school or GED			
as of June 30, year 1	7.6	12.5	−4.9 *
as of June 30, year 2	15.8	18.7	−2.8
as of June 30, year 3	20.5	23.8	−3.3
Sample size	427	115	
Teens enrolled in school at random assignment			
Ever completed high school			
as of June 30, year 1	10.0	13.8	−3.8
as of June 30, year 2	18.2	23.4	−5.2
as of June 30, year 3	22.4	28.8	−6.4
Ever completed GED			
as of June 30, year 1	0.3	2.9	−2.6 **
as of June 30, year 2	2.6	3.3	−0.7
as of June 30, year 3	4.2	3.7	0.6
Ever completed high school or GED			
as of June 30, year 1	10.3	16.7	−6.4 *
as of June 30, year 2	20.8	26.7	−5.9
as of June 30, year 3	26.6	32.5	−5.9
Sample size	292	72	
Teens not enrolled in school at random assignment			
Ever completed high school			
as of June 30, year 1	0.7	2.4	−1.7
as of June 30, year 2	0.7	2.4	−1.7
as of June 30, year 3	1.6	2.1	−0.5
Ever completed GED			
as of June 30, year 1	1.5	2.4	−1.0
as of June 30, year 2	4.8	1.4	3.4
as of June 30, year 3	6.8	4.1	2.8

(continued)

TABLE C.4 (continued)

Sample and Its Status 3 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
Ever completed high school or GED			
as of June 30, year 1	2.2	4.8	−2.6
as of June 30, year 2	5.5	3.8	1.7
as of June 30, year 3	8.4	6.2	2.2
Sample size	135	43	

SOURCES: MDRC calculations using data from Teen Parent Information Sheets, automated school records from the Toledo public school district, and automated GED testing data from the Ohio Department of Education.

NOTES: "June 30, year 1" denotes the first June 30th after random assignment; "June 30, year 2" and "June 30, year 3," the second and third June 30ths after random assignment, respectively.

"Completed GED" refers to passing the GED test.

Differences, as well as program and control group means, are regression−adjusted to correct for slight differences between program and control groups in baseline characteristics.

Rounding may cause slight discrepancies in calculating differences.

A two−tailed t−test was applied to differences between program and control groups. Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent; * = 10 percent.

TABLE C.5

LEAP's FOUR-YEAR IMPACTS ON GED COMPLETION FOR THE SCHOOL RECORDS SAMPLE, BY SCHOOL ENROLLMENT SUBGROUP

Sample and Its Status 4 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
All teens			
Ever completed GED			
as of June 30, year 1	1.5	1.1	0.3
as of June 30, year 2	4.3	2.5	1.8 **
as of June 30, year 3	6.7	4.6	2.1 **
as of June 30, year 4	8.4	6.1	2.3 **
Sample size	3,471	854	
Teens enrolled in school at random assignment			
Ever completed GED			
as of June 30, year 1	1.0	1.4	-0.4
as of June 30, year 2	3.3	2.4	0.9
as of June 30, year 3	5.1	3.7	1.3
as of June 30, year 4	6.9	4.5	2.3 *
Sample size	2,001	474	
Teens not enrolled in school at random assignment			
Ever completed GED			
as of June 30, year 1	2.1	0.7	1.4 *
as of June 30, year 2	5.6	2.5	3.2 **
as of June 30, year 3	8.9	5.7	3.2 **
as of June 30, year 4	10.6	8.1	2.5
Sample size	1,470	380	

SOURCES: MDRC calculations using data from Teen Parent Information Sheets and automated GED testing data from the Ohio Department of Education.

NOTES: "June 30, year 1" denotes the first June 30th after random assignment; "June 30, year 2," "June 30, year 3," and "June 30, year 4," the second, third and fourth June 30ths after random assignment, respectively.

"Completed GED" refers to passing the GED test.

Differences, as well as program and control group means, are regression-adjusted to correct for slight differences between program and control groups in baseline characteristics.

Rounding may cause slight discrepancies in calculating differences.

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

TABLE C.6

LEAP's FOUR-YEAR IMPACTS ON GED COMPLETION FOR TEENS IN ALL SEVEN COUNTIES, BY SCHOOL ENROLLMENT SUBGROUP

Sample and Its Status 4 Years After Random Assignment	Program Group (%)	Control Group (%)	Difference
All teens			
Ever completed GED			
as of June 30, year 1	1.5	1.4	0.2
as of June 30, year 2	4.7	2.7	2.1 ***
as of June 30, year 3	7.3	5.0	2.3 ***
as of June 30, year 4	9.3	6.6	2.7 ***
Sample size	4,023	982	
Teens enrolled in school at random assignment			
Ever completed GED			
as of June 30, year 1	1.0	2.0	-1.0 **
as of June 30, year 2	3.3	2.8	0.5
as of June 30, year 3	5.3	4.4	1.0
as of June 30, year 4	7.3	5.2	2.1 *
Sample size	2,319	549	
Teens not enrolled in school at random assignment			
Ever completed GED			
as of June 30, year 1	2.3	0.6	1.7 **
as of June 30, year 2	6.7	2.5	4.2 ***
as of June 30, year 3	9.9	5.8	4.1 ***
as of June 30, year 4	12.0	8.3	3.6 **
Sample size	1,704	433	

SOURCES: MDRC calculations using data from Teen Parent Information Sheets and automated GED testing data from the Ohio Department of Education.

NOTES: "June 30, year 1" denotes the first June 30th after random assignment; "June 30, year 2," "June 30 year 3," and "June 30, year 4," the second, third and fourth June 30ths after random assignment, respectively.

"Completed GED" refers to passing the GED test.

Differences, as well as program and control group means, are regression-adjusted to correct for slight differences between program and control groups in baseline characteristics.

Rounding may cause slight discrepancies in calculating differences.

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

TABLE C.7

SCHOOL STATUS AT THE TIME OF THE LEAP THREE–YEAR SURVEY FOR TEENS IN THE SURVEY SAMPLE, BY AGE AND GRADE COMPLETED AT RANDOM ASSIGNMENT

Age and Grade Completed at Random Assignment		Percentage Distribution of School Status at the Time of the Survey						
		Completed High School	Completed GED	Currently Enrolled in High School or GED Program	Completed High School, GED, or Currently Enrolled	Not Enrolled, Completed 11th Grade	Not Enrolled, Completed 10th Grade	Not Enrolled, Completed 9th Grade or Less
Age 16 or younger at random assignment and had completed:								
Grade 8 or less	(N=131)	1.5	3.8	42.0	47.3	1.5	14.5	36.6
Grade 9	(N=95)	17.9	5.3	30.5	53.7	9.5	20.0	16.8
Grade 10 or more	(N=60)	40.0	16.7	10.0	66.7	20.0	13.3	n/a
Age 17 or younger at random assignment and had completed:								
Grade 9 or less	(N=86)	3.5	8.1	12.8	24.4	9.3	18.6	47.7
Grade 10	(N=82)	28.1	11.0	14.6	53.7	12.2	34.2	n/a
Grade 11	(N=68)	64.7	7.4	4.4	76.5	23.5	n/a	n/a
Age 18 or younger at random assignment and had completed:								
Grade 9 or less	(N=80)	3.8	15.0	5.0	23.8	5.0	18.8	52.5
Grade 10	(N=80)	15.0	12.5	10.0	37.5	23.8	38.8	n/a
Grade 11	(N=131)	48.1	10.7	9.2	67.9	32.1	n/a	n/a
Age 19 or younger at random assignment and had completed:								
Grade 9 or less	(N=18)	0.0	11.1	0.0	11.1	0.0	11.1	77.8
Grade 10	(N=39)	7.7	15.4	10.3	33.3	10.3	56.4	n/a
Grade 11	(N=43)	41.9	9.3	4.7	55.8	44.2	n/a	n/a
Sample size (total = 913)								

SOURCES: MDRC calculations using data from Teen Parent Information Sheets and the LEAP three–year survey.

NOTES: This table includes teens in both the program and control groups.
Distributions may not add to 100.0 percent because of rounding.
N/a means that the item is not applicable.

APPENDIX D

SUPPLEMENTAL TABLE TO CHAPTER 5

TABLE D.1

LEAP's THREE-YEAR IMPACTS ON ATTITUDINAL MEASURES FOR THE SURVEY SAMPLE

Outcome	Program Group (%)	Control Group (%)	Difference
Currently "satisfied" or "very satisfied" with overall standard of living	67.5	62.7	4.7
Currently unhappy, sad, or depressed "very often" or "fairly often"	35.8	37.3	-1.5
Currently "satisfied" or "very satisfied" with life as a whole	69.8	65.9	3.9
Feel that a college degree is "likely" or "very likely" within 5 years	66.1	64.4	1.7
and are enrolled in school, or have a high school diploma or GED	39.6	38.4	1.2
and are not enrolled in school, and do not have a high school diploma	26.5	26.0	0.5
Feel that leaving welfare is "likely" or "very likely" within 5 years	93.5	93.2	0.3
and are enrolled in school, have a high school diploma or GED, or are employed	56.3	51.3	5.0
and are not enrolled in school, do not have a high school diploma, and are not employed	37.1	41.8	-4.7
Feel that a well-paying job is "likely" or "very likely" within 5 years	93.6	94.1	-0.5
and are enrolled in school, have a high school diploma or GED, or are employed	55.5	51.7	3.8
and are not enrolled in school, do not have a high school diploma, and are not employed	38.1	42.4	-4.3
Feel that life as a whole will be "much better" or "a little better" 5 years from now	97.6	98.3	-0.7
and are enrolled in school, have a high school diploma or GED, or are employed	57.5	53.0	4.5
and are not enrolled in school, do not have a high school diploma, and are not employed	40.1	45.3	-5.2 *
Sample size	446	467	

SOURCE: MDRC calculations using data from Teen Parent Information Sheets and the LEAP three-year survey.

NOTES: Estimates of the program-control group differences are regression-adjusted using ordinary least squares, controlling for pre-random assignment background characteristics of sample members.
Rounding may cause slight discrepancies in calculating differences.
A two-tailed t-test was applied to the difference between the program and control groups.
Statistical significance levels are indicated as *** = 1 percent; ** = 5 percent, and * = 10 percent.

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