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**IMPACTS OF DROPOUT
PREVENTION PROGRAMS**

FINAL REPORT

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A Research Report from the School Dropout
Demonstration Assistance Program Evaluation

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Dropping out of high school is an important economic and social problem. Since the early 1980s, the increasingly global and competitive nature of the world economy has increased the benefits of education. More highly educated workers have seen their incomes rise, and less educated workers have seen their incomes fall. Nevertheless, almost half a million youths dropped out of high school in 1995. Moreover, many youths who drop out are from low-income families and may be perpetuating a cycle of poverty. Without completing high school, most will remain at the bottom of the economic ladder.

Researchers have explored the roots of the dropout problem and evaluators have looked at programs to reduce dropping out. However, a better understanding of programmatic ways to address this problem continues to be an important objective for policy research. This report presents results from a rigorous evaluation of 16 dropout-prevention programs that were supported by grants from the U.S. Department of Education from 1991 to 1995. The programs provided services designed to help students perform better in school and stay in school, such as intensive instruction, attendance monitoring and followup, small-school settings, counseling and mentoring, links with social-service providers, and instruction in life skills and conflict resolution. The evaluation, conducted by Mathematica Policy Research, Inc. and its two subcontractors, Policy Studies Associates and RMC Research Corporation, looked at whether the programs improved academic outcomes, such as dropout rates, attendance rates, and test scores, as well as other outcomes, such as self-esteem, alcohol and drug use, pregnancies, and parent involvement in education.

Features of the Programs

Table 1 shows features of the 16 targeted programs in the study. The major distinction between programs is whether they operated in middle schools or in high schools. Middle school programs also had the additional distinction of being of high or low intensity. Students in high-intensity middle school programs generally remained in the program for the full school day. Their classes were smaller than those of regular middle school classes, and they were given accelerated curricula designed to help them to catch up to their age peers. Students in low-intensity middle school programs generally were in the program for only a small part of a school day or after school and were in regular middle school for the rest of the school day.

Two types of high school programs were in the study. One type, alternative high schools, focused on preparing students to obtain high school diplomas. The schools were small, typically enrolling no more than 400 students at a time, and gave students more access to counseling, more personalized attention, and better linkages with social services than did comprehensive high schools. Some alternative high schools developed their own curricula and instructional techniques. Others used conventional curricula combined with competency-based learning approaches. The second type focused on preparing students to obtain General Education Development (GED) certificates. Similar to alternative high schools, GED programs provided access to counseling, personalized attention, and linkages with social services. Unlike alternative high schools, GED programs were smaller,

TABLE 1

CHARACTERISTICS OF TARGETED PROGRAMS IN THE IN-DEPTH EVALUATION

Location/Grantee	Program Name	Grades Served	Characteristics of Target Population	Program Description
Albuquerque, NM Youth Development, Inc.	Middle School Leadership Program	8	Low math and English grades Poor attendance Suspension during previous year Leadership potential	Leadership workshop once weekly
Atlanta, GA Georgia Cities in Schools	Griffin-Spalding Middle School Academy	7, 8	Behind grade level	Alternative school with support services
Boston, MA Jobs for Youth	JFY High School and University High[a]	9-12	Dropped out or on the verge of dropping out	Two alternative high schools with competency-based curriculum and enhanced social services
Chicago, IL Chicago Teachers' Center and Chicago Public Schools	Northeastern Illinois University Dropout Prevention Educational Partnership Program	8-12	Low test scores Behind grade level	School-within-a-school, with block scheduling, group activities, and team teaching
Chula Vista, CA Sweetwater Union High School District	Twelve Together Program	7	Poor attendance Low grades Disciplinary problems	Weekly peer discussion groups with volunteer counselors
Flint, MI Flint Community Schools District	Accelerated Academics Academy	6-8	Behind by two grade levels	Alternative school with small classes and thematic curriculum
Las Vegas, NV Clark County School District	Horizon High Schools	9, 10	Low grades Low standardized test scores Behind grade level Ever dropped out	Four alternative high schools with flexible enrollment policies, enhanced social services, and accelerated credit accumulation
Long Beach, CA Long Beach Unified School District	Up with Literacy	6-8	Low standardized test scores	In-class and after-school tutoring, homework assistance, and counseling
Miami, FL Cities in Schools of Miami, Inc.	COMET Program	5	Poor attendance Low motivation Behavioral problems	Reduced class size, full-time teacher's aide, in-class career lab, social services, and mentoring

Miami, FL
  Cities in Schools of Miami, Inc.
	Corporate Academy	9-12	Two or more of:
			  Low grades
			  Low test scores
			  Poor attendance
			  Behind grade level
			  Ever dropped out
			  Pregnant/parent
				Alternative high school with small classes, enhanced social services, and mentoring

TABLE 1 *(continued)*

Location/Grantee	Program Name	Grades Served	Characteristics of Target Population	Program Description
Newark, NJ Newark Public School District	Project ACCEL	6, 7	Behind grade level Sufficiently high skill and motivation levels	School within a school with team teaching, and extra counseling
Queens, NY Flowers with Care Youth Services	Flowers with Care	9-12	Dropped out	GED program with intensive counseling component
Rockford, IL Rockford Public Schools	Early Identification and Intervention Project	6-8	Low standardized test scores Poor attendance Behind grade level Dysfunctional family	General studies class one period a day for homework assistance and self-esteem sessions, and counseling
Seattle, WA Seattle Public Schools	Middle College High School	9-12	Ever dropped out Poor attendance	Alternative high school with team teaching, thematic curriculum, counseling, and a work experience program
St. Louis, MO Human Development Corporation of Metropolitan St. Louis	Metropolitan Youth Academy	9-12	Dropped out Drug abuse or delinquency Low family income Welfare receipt	GED program with counseling and social services
Tulsa, OK Tulsa County Area Vocational-Technical School District No. 18	Student Training and Reentry (STAR)	9-12	Dropped out or on the verge of dropping out	Nine weeks of skills reinforcement, career planning, and counseling

[a]University High was operated by Action for Boston Community Development (ABCD), a subcontractor to JFY.

GED = General Educational Development certificate.

typically enrolling no more than 100 students at a time, and shorter, leading to GED certificates within 9 to 24 months.

We used an experimental design to evaluate the targeted programs. We assigned students randomly to treatment or control group status in the 1992-1993 and 1993-1994 school years. Students assigned to treatment groups could participate in SDDAP-supported programs. Those assigned to control groups could attend school as they normally would and could participate in other education programs available in their local areas. We measured program impacts by comparing the outcomes of the treatment groups and the control groups. Because we used an experimental design, we can attribute differences in average outcomes to the effects of the programs. A finding that a program had an impact means that the program improved an outcome *more than* did other programs in which control group members may have participated. A finding that a program had no impact means that the program affected an outcome about the same as did the other programs.

We collected data for measuring impacts from surveys and from school records. Students completed baseline surveys around the time of random assignment (usually close to the beginning of the school year), and more than 85 percent completed second follow-up surveys about 16 to 20 months later. The baseline and follow-up surveys provided information about demographic and household characteristics, school attendance, grades, school climate, self-esteem, and education aspirations. For older students, the follow-up survey also provided information about pregnancies, drug use, and arrests. School records provided information about enrollment, attendance, grades, credit accumulation, and standardized test scores. Students who were randomly assigned during the 1992-1993 school year also completed third follow-up surveys 28 to 32 months after they were randomly assigned. We used the same survey instrument for all follow-up efforts. Second-year impacts are based on the full sample of almost 6,000 students. Third-year impacts are based on the sample of almost 3,000 students who were randomly assigned during the 1992-1993 school year.

FINDINGS FOR MIDDLE SCHOOL PROGRAMS

Two main findings emerged from extensive analyses of data from the eight SDDAP middle school programs:

1. Intensive programs can improve grade promotion and reduce the rate of dropping out

In three of the four intensive middle-school programs (in Atlanta, Flint, and Newark), more students were promoted to higher grade levels relative to promotion of control group students. For example, three years after students were randomly assigned to attend the Flint alternative middle school, their average grade level was 8.5 compared with 7.8 for the control group students. The average grade level after three years in the Newark ACCEL program was 8.7, compared with 8.4 for the control group. In addition, two of the four intensive programs (in Atlanta and Flint) had somewhat lower dropout rates. For example, three years after students were randomly assigned to attend the Flint alternative middle school, only 3 percent were dropouts, compared with 17 percent of control group students. However,

students in three of the four intensive programs were absent more often and did not have higher test scores, English grades, or mathematics grades.

2. *Low-intensity middle school programs did not improve outcomes*

Low-intensity programs in Albuquerque, Long Beach, Rockford, and Sweetwater did not improve attendance, grade promotion, staying in school, or other outcomes, such as self-esteem, locus of control, and students' expectations about completing high school.

These findings suggest that middle school dropout-prevention programs had to be intensive to have effects. They also suggest that intensive programs generally helped students stay in school but did not noticeably improve student learning, as indicated by grades and test scores.

FINDINGS FOR HIGH SCHOOL PROGRAMS

Extensive analyses of the data for the eight SDDAP high school programs led to three findings:

1. *GED programs helped students obtain GED certificates*

Students in all three GED programs were more likely than control group members to obtain GEDs. For example, in St. Louis, by the end of the third follow-up year, nearly 38 percent of treatment group students, but only 23 percent of control group members, had received GED certificates. Similarly, by the end of the third follow-up year, nearly 31 percent of treatment group students in Tulsa had received GED certificates, compared with 16 percent of control group members. However, nearly all students who had not completed their GED by the end of the follow-up period had dropped out. Even when GED programs were more effective, two out of every three of their students eventually dropped out.

2. *Alternative high school programs did not noticeably reduce dropping out or improve other outcomes*

None of the five alternative high schools reduced the dropout rate or increased the rate of high school completion by a statistically significant amount.

3. *High school programs did not affect personal and social outcomes*

The programs did not improve students' self-esteem or locus of control. They also failed to reduce pregnancy, drug use, or arrest rates. In a few cases, treatment group students were

more likely than control group students to have become pregnant, used drugs, or been arrested.

INTERPRETING THE IMPACT FINDINGS

The absence of impacts for alternative high school programs was striking, as the programs offered innovative and comprehensive services to students and generally were well implemented. One explanation is that, after being turned away from SDDAP programs, many control group members actively sought and quickly identified educational alternatives to the SDDAP programs. Some returned to regular high schools; others found non-SDDAP program options. SDDAP programs presumably were initiated because existing programs were perceived as failing to meet the needs of at-risk students in a local area or as having insufficient slots for the number of at-risk youths in the area. Our findings suggest that existing programs for high-risk students may be more effective or more widely available than designers of the SDDAP programs had believed.

Why did the alternative middle school programs in Atlanta and Flint but not the alternative high school programs reduce the dropout rate? One explanation is that alternative middle school programs are intensive interventions at a point in the lives of high-risk students at which they can benefit from the intervention. In contrast, alternative high schools work with older students, who may be far behind their age cohort in school and whose problems and pressures are more serious than those of middle school students.

Why were GED programs effective, whereas alternative high school programs were not? The answer may be in the level of commitment the programs require. Because many of their students are so far behind, alternative high schools may need two or more years to prepare students to obtain their diplomas. This period may be too long, given the substantial obstacles that these youths may face in staying in school and the limited resources that are available to mitigate these obstacles. In contrast, many students in GED programs can receive a GED certificate within one year.

Recent research casts doubt on the economic value of the GED certificate, posing a dilemma for education policy. Programs that work to help high-risk youths obtain these certificates may be successful in the short term because of the limited commitment that they require. However, GED recipients may be inadequately prepared for the demands of the modern economy. Alternative high school programs may prepare youths better for the long term but may help few students because of the greater commitment they require. Educators and policymakers need to consider the trade-off between diplomas and GED certificates in helping high-risk youths prepare for adulthood.

IMPLICATIONS FOR POLICY

The evaluation examined the effectiveness of a program providing federal funding in the form of loosely prescriptive grants to local school districts and community organizations to support dropout-prevention activities. It found that programs had generally weak results. What should we do with the findings?

A finding that a program has no impact is sometimes interpreted to mean that the program "does not work." However, this interpretation commingles the policy objectives of funding demonstration programs and of funding ongoing programs. Ongoing programs reflect the state of knowledge about how to address a social issue, such as dropping out. Demonstration programs represent attempts to improve the state of knowledge about how to address a social issue. A finding that demonstration programs are no more effective than ongoing programs is not evidence that funding for the *ongoing* programs should be cut. Instead, it signals a need for additional thinking and testing to advance the state of knowledge, if the willingness to do so continues.

Our findings of "no impact" for most of the dropout prevention programs we evaluated means that the demonstration programs were about as effective as existing approaches for helping high-risk students. We must think about new directions for research to improve dropout prevention programs. Our findings suggest two promising areas for future research. The first area is on developing intensive programs for middle school students. Most programs for high-risk middle school students focus on improving skills and building self-esteem and leadership qualities. Our evidence suggests that the more-intensive approach embodied by alternative middle schools may be a better way to help these students.

The second research area is a reconsideration of efforts to help older at-risk students obtain high school diplomas. Our evidence and the weight of evidence from other program evaluations shows that programs can help students obtain GEDs but are rarely able to help students obtain high school diplomas. The issue is whether policymakers should adopt the strategy of promoting the diploma over the GED, in effect adopting a higher standard but one that few at-risk students will attain. Research can examine the relative value of the GED and the diploma, the likelihood that a youth entering to a program attains one or the other, and the ultimate social benefits from a strategy of encouraging diplomas over GEDs.

I. INTRODUCTION

Dropping out of high school is an important economic and social problem. Since the early 1980s, the increasingly global and competitive nature of the world economy has increased the benefits of education. More highly educated workers have seen their incomes rise, whereas less educated workers have seen their incomes fall. However, almost half a million youths dropped out of high school in 1995 (MacMillen 1997). Furthermore, many youths who drop out are from low-income families and may be perpetuating a cycle of poverty. Without completing high school, most will remain at the bottom of the economic ladder.

Researchers have explored the roots of the dropout problem, and evaluators have examined programs designed to reduce it.[1] Nevertheless, a better understanding of programmatic methods to address the dropout problem continues to be an important objective for policy research. This report presents results from a rigorous evaluation of 16 dropout-prevention programs that were supported by grants from the U.S. Department of Education (ED) from 1991 to 1995. The programs provided services designed to help students perform better in school and stay in school, such as intensive instruction, attendance monitoring and followup, small school settings, counseling and mentoring, links with social service providers, and instruction in life skills and conflict resolution. The evaluation, conducted by Mathematica Policy Research, Inc. and its two subcontractors, Policy Studies Associates and RMC Research Corporation, assessed whether the programs improved academic outcomes, such as dropout rates, attendance rates, and test scores, and whether they

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[1]Natriello (1987) and Natriello et al. (1990) survey the literature on the roots of the dropout problem and on programmatic strategies for addressing it. Orr (1987) describes exemplary dropout-prevention programs. Hayward and Tallmadge (1995) and Rossi (1994) present results from evaluations of dropout-prevention demonstration programs funded by the U.S. Department of Education.

improved other outcomes, such as employment rates, college enrollment rates, self-esteem, and alcohol and drug use.

The evidence shows that intensive intervention is necessary to help middle-school students stay in school, but that not all intensive interventions will be effective. Intensive programs operating as alternative middle schools yielded moderate results. Programs operating as schools within schools and programs that sought to improve skills and self-esteem by working with students in a limited way after school or during the regular school day yielded no results.

The evidence also shows that programs that helped high-school students obtain their General Education Development (GED) certificates achieved moderate results. Programs operating as alternative high schools and oriented to helping students obtain high school diplomas did not yield results. Although some programs were more effective than others, an important finding is that the programs were not successful with many students. Three years after entering the dropout-prevention programs we studied, most students had dropped out. More remains to be done to design and evaluate effective programs for dropout-prone youths.

A. THE SCHOOL DROPOUT DEMONSTRATION ASSISTANCE PROGRAM

Students drop out for a variety of reasons. Some students have trouble with academic work and believe that they cannot do well no matter how hard they try. Talented students may be bored in schools that emphasize rote learning and basic skills. Whatever their talents, students in high-poverty communities may have few role models whose success shows the value of education. They may have difficulty perceiving the rewards of education and motivating themselves to work hard in school. Some students live in dysfunctional family settings that undermine their ability to attend school and do academic work. The background of a typical at-risk student is likely to contain more than one of these factors.

Programs to help students stay in and finish school typically provide services to mitigate the influence of negative factors.[2] For example, programs can support counselors' efforts to learn about personal and family problems plaguing individual students, and link the students with social services to address the problems. They can support efforts to design curriculum and instruction methods that better suit students who have different learning styles or who need more flexible scheduling to do their academic work. They can strive to create a family-like context in which staff are mentors to students, providing positive messages about their futures and reinforcing them in their accomplishments.

Federal efforts to support innovative dropout-prevention programs began in 1967, when the Elementary and Secondary Education Act of 1965 was amended to support programs to reduce the dropout rate. The act was amended again in 1974, when funding for dropout-prevention efforts was consolidated with funding for other programs, and states were given the flexibility to support dropout-prevention efforts through discretionary grants (U.S. General Accounting Office 1987). In 1988, in response to concern that efforts to reduce the dropout rate had languished, the Congress created the School Dropout Demonstration Assistance Program (SDDAP).[3] The program consisted of competitive grants from ED to 89 school districts and community organizations. During its three years, SDDAP grantees received $64 million in federal funds.[4]

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[2]One survey of dropout-prevention programs found that the programs' most commonly offered service was counseling (personal or career), followed by basic education, efforts to encourage parental involvement in education, and assistance in obtaining support services (U.S. General Accounting Office 1987).

[3]Prior to 1988, the Job Training Partnership Act (JTPA) also provided funds to support dropout-prevention efforts. In particular, amendments to the JTPA in 1986 required that the funds set aside to improve coordination between schools and employment-training organizations (the 8 percent set-aside) focus on dropout prevention (U.S. General Accounting Office 1987).

[4]Rossi (1994) presents evaluation findings for the first SDDAP program.

Congress expanded SDDAP in 1991 by authorizing a second round of grants that lasted five years. During this phase, ED awarded 65 grants to school districts, community-based organizations, and partnerships to support two kinds of dropout-prevention programs.[5] "Targeted" programs generally operated within schools or community organizations and provided services designed to help youths stay in school and improve their school outcomes. "Restructuring" programs promoted organizational and instructional reform in schools in which dropping out was a widespread problem. During the five years of SDDAP, grantees received $138 million in federal funds, with restructuring programs averaging about $1 million per program each year and targeted programs averaging about $450,000 per program each year.

The 65 local programs funded by SDDAP represent a wide range of interesting and innovative program options for addressing the dropout problem. However, it would have been impractical to conduct an extensive evaluation of all 65 programs. The evaluation team worked with ED to select 16 targeted programs that were promising models and that served enough students to yield reliable estimates of program effects. Eight programs were designed to assist students of middle school age, and eight were designed for those of high school age. The evaluation team also worked with ED to select five restructuring programs for in-depth evaluation. Results from the evaluation of the restructuring programs are presented in a separate report.

The initial SDDAP grant announcement specified that targeted programs were to adopt a comprehensive approach to serving at-risk youths. Components of the comprehensive approach included counseling and support services, attendance monitoring, challenging curricula, accelerated learning strategies, culturally sensitive parental outreach, enhanced links between middle schools

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[5]ED funded 20 additional programs in the second year of SDDAP, bringing the total number of programs funded to 85. Because of their later start, the additional 20 programs were not part of the impact evaluation.

and high schools, and career-awareness activities. However, middle school and high school programs serve different age groups and are faced with a different dropout problem, so the evaluation analyzes them separately.

1.   Middle School Programs

The eight selected middle school programs can be viewed as intensive or supplemental programs (Table I.1). Intensive programs--which operated in Atlanta, Flint, Miami, and Newark--affected a student's entire school day. For example, the "Accelerated Academics Academy" program, in Flint, Michigan, was an alternative middle school for 100 students who were two or more grade levels behind peers in their age cohort. The program had its own building, staff, and identity within the district, and it used a curriculum designed by its staff that compressed two years of middle school learning into one year, so that successful participants could enter high school with their age peers.

Intensive programs operated in two kinds of settings. Two intensive programs--the Middle School Academy near Atlanta and the Accelerated Academics Academy--were small, alternative middle schools, operating in their own buildings and staffed by district personnel. Class sizes in the Atlanta and Flint programs generally were about the same as class sizes for regular district middle schools. However, students in the alternative middle schools generally did not interact during the school day with students in regular middle schools. The two other intensive programs--Project COMET, in Miami, and Project ACCEL, in Newark, New Jersey--were schools-within-schools, in which participants attended regular middle schools and participated in program activities while in school. Students in schools-within-schools could interact readily with other students during the school day.

TABLE I.1

FEATURES OF MIDDLE SCHOOL PROGRAMS IN THE EVALUATION

	Albuquerque Middle School Leadership Program	Atlanta Griffin-Spalding Middle School Academy	Flint Accelerated Academics Academy	Long Beach Up with Literacy Program	Miami Project COMET Program	Newark Project ACCEL Program	Rockford Early Intervention Program	Sweetwater Twelve Together Program
Target Students	Eighth graders with low grades, high absenteeism	Seventh and eighth graders behind grade level	Students entering middle school behind grade level	Middle school students with low test scores	Fifth graders with high absenteeism or behavioral problems	Sixth and seventh graders behind grade level	Middle school students behind grade level or with low test scores or high absenteeism	Seventh graders with high absenteeism, low grades, or disciplinary problems
Program Description	Leadership workshop in regular middle school	Alternative middle school; social services	Alternative middle school; social services	After-school tutoring and homework help; enrichment activities	School-within-a-school with classroom career laboratory; case workers; mentors	School-within-a-school with accelerated curriculum and team teaching	Daily skill-building class in regular middle school; counseling	Weekly meetings facilitated by adult volunteers in regular middle school; annual weekend retreat
Service Elements								
Counseling	✓	✓	✓	✓	✓	✓		✓
Attendance Monitoring		✓	✓	✓	✓	✓		✓
Outreach to Families			✓	✓	✓	✓	✓	
Challenging Curricula			✓		✓			
Accelerated Learning					✓	✓		
Career Awareness	✓				✓			
Interschool Linkages							✓	

Supplemental programs, which operated in Albuquerque; Long Beach; Rockford, Illinois; and Sweetwater, added activities in addition to normal school activities, generally to build self-esteem, academic skills, or leadership skills. For example, the Early Intervention program in Rockford provided 75 participants in each of the district's four middle schools with one course period per day to work on their basic skills and homework, and a counselor in each school who worked with the 75 participants. Program participants took regular courses with other students during the rest of the school day.

Of the ED-specified program components, Table I.1 shows that counseling (including links to social services) was the most common, followed by attendance monitoring and outreach to families, which are closely linked. Only four programs established a challenging curriculum or opportunities to accelerate learning. In general, little attention was given to career awareness activities and improving linkages across schools (Hershey et al. 1995).

2. High School Programs

Dropout programs for high school-age students in the evaluation can be separated into programs leading to high school diplomas and programs leading to GED certificates. Programs based in high schools are more likely to lead to diplomas; programs based in community organizations are more likely to lead to GED certificates. Five programs--in Boston, Chicago, Las Vegas, Miami, and Seattle--led to high school diplomas, and two--in Queens and St. Louis--led to GED certificates. School districts operated three alternative high school programs (in Chicago, Las Vegas, and Seattle), and community-based organizations operated the two GED-oriented programs and were important collaborators for the alternative high school programs in Boston and Miami. The program in Tulsa did not lead directly to a diploma or a GED but focused instead on transitioning students

to regular high school, a vocational-technical school, or a GED program, depending on preferences of individual students.

Four of the diploma programs (in Boston, Las Vegas, Miami, and Seattle) were alternative high schools for students who had dropped out or were close to dropping out. These programs operated in separate facilities from regular high schools and were small by urban high school standards, enrolling fewer than 400 students. Because students in these alternative high schools typically had obtained some high school credits before entering the programs, the schools tailored course schedules to the needs of individual students. Schools also were more flexible than regular high schools in allowing participants to adapt their school schedules to fit the demands of work or family. Some programs also provided child care, either on site or through arrangements with local providers. The Chicago program was a school-within-a-school that students entered when they enrolled as ninth graders at the Wells Community Academy, a comprehensive high school in a heavily Hispanic area on Chicago's west side. The program targeted students with low eighth-grade test scores or poor attendance. Participants were grouped in classes taught by teachers who had volunteered to be in the school-within-a-school and who worked together to integrate their curricula. About 100 ninth graders studied English, mathematics, science, and art together. Tenth graders took English and mathematics together, and 11th and 12th graders took English together. Classes were smaller than regular classes, extra counseling and tutoring was available, and social service organizations provided support services for program students.

The GED programs were smaller than the alternative high school programs, generally enrolling fewer than 100 participants at a time. Participants typically worked individually or in small groups, using workbooks and computer-aided instruction packages to prepare for the GED test. Participants took the GED test when staff felt they were adequately prepared. Counselors also worked with participants to address personal or social problems. The St. Louis program gave students as long as

nine months (about the length of a school year) to prepare for the test, although students could spend less time in the program before earning their GED certificate. The Queens program allowed up to two years and focused more heavily than the St. Louis program on youth development through counseling and peer activities. The Tulsa program provided nine weeks of activities designed to build participants' basic skills and to address their personal and social problems, after which it transitioned participants back to regular high school or to a vocational school.

Of the ED-specified components, counseling and attendance monitoring were the most common (Table I.2), followed by career awareness activities. The somewhat greater prominence of career awareness activities in high school programs than in middle school programs (shown in Table I.1) reflects the greater importance that high school programs attached to preparing their students for employment. Fewer high school programs than middle school programs established family outreach components, perhaps because high school programs enrolled older students. As with middle school programs, however, few high school programs set up challenging curricula or provided students with opportunities to accelerate their learning.

B. EVALUATION OBJECTIVES AND DESIGN

ED saw the SDDAP program as an important opportunity to learn more about effective ways to serve high-risk youths. The department was particularly interested in the programs' effects on dropout and attendance rates, test scores, grades, students' attitudes about their schools, and students' aspirations with respect to postsecondary education.[6] The evaluation design, data instruments, and analysis focus on determining whether programs were effective on these key dimensions.

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[6]Other components of the SDDAP evaluation included (1) an analysis of program designs, program settings, students served, and the uses of grant resources of all 85 grantees (Adelman and Rubenstein 1995), and (2) an analysis of program implementation, which focused on issues that emerged as programs developed and sought to attract and retain students, create supportive environments, and design appropriate curricula (Hershey et al. 1995).

TABLE I.2

FEATURES OF HIGH SCHOOL PROGRAMS IN THE EVALUATION

	Boston Jobs for the Future High School and ABCD University High School	Chicago Wells Community Academy, School-Within-a-School	Las Vegas Horizon High School	Miami Corporate Academy	Queens, NY Flowers with Care Youth Services	Seattle Middle College High School	St. Louis Metropolitan Youth Academy	Tulsa Student Training and Reentry (STAR)
Target Students	Dropouts or likely to drop out	Students entering ninth grade with low test scores	Ninth or tenth graders behind grade level or with low grades or test scores	Dropouts or likely to drop out	Dropouts	Dropouts or likely to drop out	Dropouts	Dropouts or likely to drop out
Program Description	Alternative high school leading to diploma; competency-based curriculum; case managers; job developers.	School within a school leading to diploma; team-teaching; small class sizes; support services.	Alternative high school leading to diploma; focus on cooperative learning, small-group instruction, and hands-on experiences; support services and child care	Alternative high school leading to diploma; small class sizes; case workers; mentors	GED program emphasizing youth development and job training	Alternative high school, on a college campus, leading to diploma; focus on experiential learning, internships, and support services	GED preparation with computer laboratory and counselors	Nine-week program to build basic skills and address problems through counseling and social services, leading to transition back to school, GED program, or vocational institute
Service Elements								
Counseling Services	✓	✓	✓	✓	✓	✓	✓	✓
Attendance Monitoring		✓	✓	✓	✓	✓	✓	✓
Career Awareness	✓			✓	✓	✓	✓	✓
Outreach to Families		✓		✓				✓
Challenging Curricula	✓	✓						
Accelerated Learning	✓		✓					✓
Interschool Linkages		✓						

1. Selecting Programs for the In-Depth Evaluation

The evaluation team worked closely with ED to identify innovative programs that could be evaluated using rigorous evaluation methods, with random assignment to treatment and control groups. Working from the full set of targeted programs, the evaluation team used three screens to create a short list of programs for the in-depth evaluation. First, programs were more desirable if they were setting up well-articulated models that were consistent with ED's comprehensive approach. Second, programs were more desirable if they served many students, because the impact analysis would then be better able to detect program effects. Statistical power analyses suggested that programs that could serve 150 or more students in a two-year span and that were likely to be oversubscribed were suitable for the impact analysis. Third, programs were more desirable if they were distinct from other programs already operating in the local area, as we did not want to compare a program with similar versions of essentially the same program.

During the design phase, the evaluation team reviewed grant applications, interviewed local staff, and visited 27 programs to assess program models, estimate the number of students programs would serve, and assess the degree of differences between the demonstration programs and existing local programs. The evaluation team then selected 18 targeted programs for in-depth evaluation. Later, 2 of the 18--in Anne Arundel County, Maryland, and San Antonio, Texas--were dropped from the impact analysis after they had difficulties setting up and adhering to random assignment procedures. In addition, the evaluation was delayed for one year at three other programs--the alternative high school programs in Boston and Miami and the fifth grade program in Miami (Project COMET)--while suitable random assignment procedures were worked out.

The evaluation team selected programs for the in-depth evaluation during the first year of program funding, and random assignment began during the second year of funding. Starting the

evaluation while programs were being implemented meant that implementation issues could affect impacts. Issues that arise in working with other organizations or schools, shifts of emphases to address emerging priorities, and staff turnover all could affect the quality and quantity of program services. The implementation analysis identified instances in which programs had to change their plans to adapt to changes in funding or local priorities or in response to staff or district issues (Hershey et al. 1995). However, programs generally implemented their major components, so the impact analysis is studying viable programs.

Another aspect of the way programs were selected for the in-depth evaluation was that each program essentially is a *different* treatment. Even programs that were structured roughly the same way, such as alternative high schools, generally were different in more ways than they were similar. This aspect of the evaluation is important for interpreting results from the impact analysis. The random assignment design used here yields clear findings about whether a program was successful in its particular local setting. It does not yield clear findings about whether a program that works in one district would work as well in another. Nevertheless, the results are valuable because they provide direction that future efforts can follow in replicating programs and observing their effects in a wider range of settings.

2. Experimental Designs and Data Collection

An important aspect of the impact evaluation is its reliance on experimental designs for measuring program effects, because these designs ensure that differences in outcomes between treatment and control group students are the result of program effects. During the 1992-1993 and 1993-1994 school years, students who applied for or, for some programs, were identified by school staff as suitable for the SDDAP-funded program, were randomly assigned to treatment group or control group status. Only those assigned to the treatment group were eligible to participate in the

SDDAP-funded program. Control group students could attend regular schools or other programs available in the local area.[7] We used standard statistical criteria to decide whether measured outcome differences could have arisen by chance or could be attributed to the program intervention.[8]

The evaluation collected baseline and follow-up data from school district records and questionnaires. Baseline records data and baseline questionnaires pertain to the school year preceding the year in which students were assigned. We were able to follow the first cohort of students for three years and the second cohort of students for two years. Table I.3 shows the time periods for random assignment and data collection. Time periods for baseline and follow-up data refer to periods for which the data are relevant, rather than periods when data were collected.

Generally, we achieved high response rates, and statistical tests show that treatment and control groups were similar at followup for most programs, which enabled us to make valid statements aboutprogram impacts. Appendix B provides details about data collection procedures, response rates, and statistical tests for similarity of treatment and control groups. We focus on impacts at the end of the second follow-up year, for which we have data from both student cohorts, and at the end of the third follow-up year, for which we have data from the first cohort.

Although we collected a wide range of data, the analysis is based mainly on two sets of items (Table I.4). Baseline items include basic student and parent demographic characteristics and characteristics associated with dropping out, such as being overage for grade, having a parent who is a dropout, and having a history of poor school attendance. We used baseline data items to describe student characteristics, compare programs in terms of the kinds of students served, and compare

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[7]A previous report on the evaluation's design discussed the different approaches we used to create treatment and control groups, depending on program intake procedures and program requirements to serve particular groups of students (Dynarski et al. 1992).

[8] Appendix A provides details about the workings of random assignment and the methods we used to estimate program impacts. Appendix B provides details about data collection and quality.

TABLE I.3

TIME PERIODS FOR RANDOM ASSIGNMENT AND FOLLOWUP

	First Cohort	Second Cohort
Random Assignment	1992-1993	1993-1994
Baseline	1991-1992	1992-1993
First Followup[a]	1992-1993	1993-1994
Second Followup	1993-1994	1994-1995
Third Followup	1994-1995	None

[a]The first followup was conducted during the same school year as random assignment for students who were randomly assigned as of March 1993 (first cohort) or March 1994 (second cohort).

TABLE I.4

KEY BASELINE AND FOLLOW-UP DATA ITEMS FOR THE IMPACT ANALYSIS

Baseline Items and Sources		Follow-Up Items and Sources	
Item	Source	Item	Source
Demographic Characteristics		**Academic**	
Age	Q	Dropped out	R, Q
Race/ethnicity	Q	Completed high school	R, Q
First language learned	Q	Attendance	R, Q
Household composition	Q	Grades	R, Q
Parents' education	Q	Credits	R
Parents' employment	Q	Standardized test scores	R
Household receives public	Q	Parent Involvement	Q
assistance		Educational aspirations	Q
		Personal	
Risk Factors		Self-esteem	Q
Behind grade level	Q	Locus of control	Q
Attendance	R, Q		
Grades	R, Q	**Social**	
Credits	R		
Standardized test scores	R	Alcohol and drug use	Q
Self-esteem	Q	Arrests	Q
Locus of control	Q	Pregnancies	Q

Q = questionnaire; R = student records.

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treatment and control groups to assess whether random assignment worked correctly and whether follow-up data were influenced by attrition bias. Follow-up data items fall into academic, personal, and social domains. Academic items include dropout rates, attendance rates, credits, grades, test scores, parental involvement, and disciplinary problems. Personal items include measures of self-esteem and locus of control. Social items include alcohol and drug use, arrests, and pregnancies.

C. A LOOK AHEAD

Ultimately, SDDAP is supporting innovative efforts to help high-risk youths stay in and complete school. The major question for the evaluation is whether these innovative efforts lead more youths to do so. In the following chapters, we examine impact findings for middle school dropout-prevention programs (Chapter II) and high school dropout-prevention programs (Chapter III). We then put the findings into context and discuss what we have learned from the evaluation (Chapter IV). Throughout the report, despite access to a wide range of outcomes, we focus attention on key academic outcomes, such as attendance, grades, test scores, credits, and, especially, the dropout rate.

II. IMPACTS OF MIDDLE SCHOOL PROGRAMS

In middle school, many youths begin to struggle academically and socially. The transition from self-contained classrooms in elementary school to frequent class changes in middle school is often difficult. Students who have been retained during elementary school begin to feel stresses from being out of step with their age peers. As youths enter adolescence, delinquency, truancy, and misbehavior in school become more common, putting some on the path toward dropping out.

Programs for middle school students to address these problems are less common than dropout-prevention programs for high school students. The eight middle school programs we evaluated represent an important opportunity to learn more about ways to help at-risk middle school students do better in school.[1] The eight programs addressed problems in diverse ways but emphasized improving academic skills, using counselors or case workers to deal with students' social and personal issues, and creating family-like settings--in schools, classrooms, or after-school groups--in which students would feel safe and comfortable. Evidence about program impacts will be useful for understanding whether these strategies should be replicated to help middle school students who are having trouble in school.

The primary finding is that three intensive middle school programs had impacts on the rate at which students were promoted to higher grades. However, only one of the eight programs reduced the dropout rate, only one of the eight programs improved grades and test scores, and none of the eight programs improved attendance. Though programs spent more resources on students than would normally have been expended, the additional resources only rarely led to improved outcomes.

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[1]We refer to these programs as middle school programs because seven of the eight serve students attending middle schools. The eighth program--Project COMET in Miami--serves fifth-grade students in elementary school but is grouped with the middle school programs for convenience.

A. CONTEXT FOR IMPACTS

The eight middle school programs are different in more ways than they are similar. Most are in urban areas and all focus on helping at-risk students. However, some programs operated as separate schools, some were schools-within-schools, and others were supplements to regular school. Students' background characteristics and risk factors also vary widely. It is useful to discuss these features, because they may affect both whether we observe impacts and how the impacts should be interpreted.

Data from baseline surveys show that the eight programs vary widely in terms of their student demographic and household characteristics (Table II.1). For example, the alternative middle school programs in Atlanta and Flint served more boys than girls and the supplemental programs in Albuquerque and Sweetwater served more girls than boys. Three programs--in Atlanta, Flint, and Newark--served mostly black students. Four--in Albuquerque, Long Beach, Miami, and Sweetwater--served mostly Hispanic students, and, except in Albuquerque, many students in these four programs lived in households in which a language other than English was spoken (as high as 40 percent in Long Beach).

Data from baseline surveys show that the underlying sources of risk of poor school outcomes varied among students in different programs. For example, programs differed in the number of students who were behind grade level, a crucial risk indicator. Most students in the Atlanta, Flint, Miami, and Newark programs were behind grade level (100 percent of the Flint program students were behind grade level, by program design). However, less than 20 percent of those in the Albuquerque, Long Beach, and Sweetwater programs were behind grade level. Most students served

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TABLE II.1

CHARACTERISTICS OF MIDDLE SCHOOL STUDENTS IN THE BASELINE SAMPLE

	Albuquerque Middle School Leadership Program		Atlanta Middle School Academy		Flint Accelerated Academics Academy		Long Beach Up With Literacy		Miami Career Opportunities Motivated Through Technology (COMET)		Newark Project ACCEL		Rockford Early Intervention Project		Sweetwater Twelve Together Program	
	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group
Demographics																
Age (in Years)	14	14	14	14	13	14	13	13	11	11	13	13	13	13	14	14
Gender (Percentage)																
Male	36*	48	71	77	59	60	50	57	52	51	46*	55	56	51	45*	34
Female	64*	53	29	23	41	40	50	43	48	49	54*	45	44	49	55*	66
Ethnicity (Percentage)																
Black, non-Hispanic	2	3	58	67	61	60	19	19	34	30	77	74	44	39	9	9
White, non-Hispanic	17	11	40	33	33	32	6	5	3	2	1	0	39	42	15	15
Hispanic	73	72	1	0	2	2	55	58	52	57	18	20	9	8	53	47
Other	8*	15	1	0	5	6	21	18	11	11	5	6	8	11	24	29
Mother's Education (Percentage)																
Less than high school	20	27	22	26	19	13	25	24	15	15	15	14	17	21	20	20
High school only	36*	26	39	38	18	14	10	13	16	12	24	24	29	29	21	22
Some college	27	29	24*	12	18*	29	19	18	35	31	30*	38	20	22	36	33
Don't know	16	18	15	24	45	44	47	46	36	42	31*	23	35	28	24	25
Risk Factors (Percentage)																
Does Not Live in Two-Parent Household	40	43	39*	53	47*	29	36	37	37	28	57	60	43	45	30	26
Household Receives Public Assistance	20	22	15*	34	53	49	53	49	58*	71	49	50	30	36	15	14
Primary Language Spoken at Home Is Not English	7	6	3	1	0	0	39	45	13	17	2	2	3	5	19	20
Below Grade Level	16	21	98	97	100	100	15	17	94	89	80	85	40	40	12	9
Average Grades During Previous Year Below C	19	24	40	49	17	21	12	7	8*	19	9	6	40	41	15	16
Had Discipline Problems at School During Previous Year	55*	65	79	75	69	73	37	42	65	59	53	53	63	63	36	37

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TABLE II.1 *(continued)*

	Albuquerque Middle School Leadership Program		Atlanta Middle School Academy		Flint Accelerated Academics Academy		Long Beach Up With Literacy		Miami Career Opportunities Motivated Through Technology (COMET)		Newark Project ACCEL		Rockford Early Intervention Project		Sweetwater Twelve Together Program	
	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group
Absent More than 20 Days During Previous Year	9	8	5*	15	14	14	7	12	9	6	5	4	9	9	7	7
External Locus of Control	44	52	39*	56	60	69	58	62	71	64	39	41	58	58	39	33
Not Sure Will Finish High School	35	37	42	37	42	46	45	52	38	40	20	19	46*	59	26	25
Two or More Risk Factors	25	19	64*	80	57*	71	42	48	70	67	64	69	44	50	24	22
F-Statistic for Equivalence of Treatment and Control Groups	1.07		1.87 [+]		0.95		0.56		1.25		0.88		1.57 [+]		0.82	
Sample Size[a]	**215**	**119**	**80**	**77**	**113**	**79**	**168**	**114**	**122**	**67**	**348**	**203**	**393**	**210**	**259**	**235**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Baseline Questionnaire.

[a] Sample sizes represent the number of sample members for whom baseline data are available. Numbers may not add to 100 percent due to rounding.

*Treatment and control means of the baseline characteristic significantly different at the .10 level, two-tailed test.

[+] Treatment and control means of full set of baseline characteristics significantly different at the .10 level, two-tailed test.

by the programs in Albuquerque, Atlanta, Flint, Miami, Newark, and Rockford had discipline problems during the year preceding program entry.[2] In contrast, relatively few students served by the programs in Long Beach and Sweetwater had discipline problems. Summary risk measures show that the Atlanta, Flint, Miami, and Newark programs served the largest proportions of at-risk students and that the Albuquerque and Sweetwater programs served the smallest.

The eight demonstration programs are more likely to show impacts if the services they provide differ markedly from the services received by control group students. Rough measures show a pattern of treatment group students being more likely than control group students to mention receiving a service featured by the program in their site, but the differences are not large (see Table II.2). For example, the Rockford program had a counselor who worked only with program students, and 65 percent of the treatment group stated that they received counseling during the first year, compared with 51 percent of control group students. In the Atlanta program, a staff member worked actively to link students with social services, and 42 percent of the treatment group, but only 15 percent of control group students, reported that they were referred to social services during the first year. Generally, however, about the same proportion of control group and treatment group students received most services and received roughly the same amounts of services.[3]

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[2]We code students as having discipline problems if students indicated that they had three or more incidents of (1) being sent to the school office during a school year for "doing something wrong," (2) being sent to the school office for "problems with schoolwork," (3) having warnings sent to their parents about their attendance, (4) having warnings sent to their parents about their behavior, or (5) got into a fight, or if any two of these five events happened one or more times.

[3]The information we have from the survey about services that students receive is incomplete for several reasons. We know whether services were received but could not determine the quality of services. For example, if students reported that they received counseling, we do not know whether students were counseled by regular high school guidance counselors or by trained case managers. In addition, the structure of the programs affected whether students believed they were receiving services. For example, in programs that are physically separate from regular school, such as in Atlanta or Flint, students may believe they are attending regular classes rather than "special classes," as the survey question asks, since everyone at the school is taking the same classes.

TABLE II.2

SERVICES RECEIVED BY MIDDLE SCHOOL STUDENTS DURING THE FIRST FOLLOW-UP YEAR
(Percentage)

	Albuquerque Middle School Leadership Program		Atlanta Middle School Academy[a]		Flint Accelerated Academics Academy		Long Beach Up With Literacy		Miami Career Opportunities Motivated Through Technology (COMET)		Newark Project ACCEL		Rockford Early Intervention Project		Sweetwater Twelve Together Program	
	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group
Received Counseling	54	50	64	54	52	32	62	75	NA	NA	74*	59	65*	51	70	64
Attended Special Classes in Mathematics, English, or Other Subjects	39	31	40	28	35*	63	54	64	NA	NA	68	62	58*	41	32*	41
Referred to a Social Service Agency for Counseling, Health Needs, or Financial Assistance	20*	11	42*	15	5*	18	20	19	NA	NA	27*	15	31*	20	23	19
Sample Size																
Year 2 (cohort 1 and 2)	185	105	73	67	100	72	150	94	97	50	341	195	355	199	246	220
Year 3 (cohort 1 only)	120	69	--	--	40	36	58	39	--	--	187	109	155	73	119	100

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaire.

NOTE: Treatment group means and control group mean are adjusted using regression models.

NA = not available.

[a]Due to late start-up of random assignment, only one cohort was sampled. Year 2 results apply to the one cohort and year 3 results are not available.

*Significantly different from zero at the .10 level, two-tailed test.

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Another way to assess whether programs directed more resources to students than they otherwise would have received is to look at program costs. Costs are a general measure of services that reflect important intervention strategies, such as reduced class sizes, as well as discrete services, such as counseling or referrals to social services.

We found that more resources were spent on treatment group students than were spent on control group students (see Table II.3).[4] We collected information for the first year after random assignment about the costs of the SDDAP middle school programs and the costs of regular middle schools (including programs for at-risk students that control group members could enter). Across all programs, treatment group students had more spent on them than control group students, with added spending ranging from a high of 109 percent (in Miami) to a low of 8 percent (in Atlanta). The intensive middle school programs in Miami and Newark were the most expensive, with most of the additional costs arising because of their reduced class sizes. Programs in Long Beach and Rockford, which provided supplemental services, were also relatively costly, spending 30 to 50 percent more than the regular programs available to control group students. The two alternative middle school programs in Atlanta and Flint were relatively low cost, spending 10 to 20 percent more than regular middle schools.

The differences in the types of students served and the amount of resources expended are a natural result of the way in which programs were selected for grant funding and for the evaluation. In terms of the analysis, the existence of these differences suggests that we should examine impacts separately for each program, as a combination of programs would comprise programs with different structures serving different students.

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[4]Details about how costs were calculated are in Rosenberg and Hershey (1994).

TABLE II.3

MIDDLE SCHOOL DROPOUT PREVENTION PROGRAM COSTS[a]

	Regular School	SDDAP Program	Incremental Cost of SDDAP Program	Incremental Cost as Percentage of Regular School Cost
Albuquerque Middle School Leadership Program	$342	$375	$33	10
Atlanta Middle School Academy	$650	$700	$50	8
Flint Accelerated Academics Academy	$650	$790	$140	22
Long Beach Up With Literacy	$368	$546	$178	48
Miami Career Opportunities Motivated Through Educational Technology (COMET)	$345	$721	$376	109
Newark Project ACCEL	$573	$955	$382	67
Rockford Early Intervention Project	$386	$527	$141	37
Sweetwater Twelve Together	$440	$660	$220	50

SOURCE: Rosenberg and Hershey (1995).

[a]Costs are per student month.

B. DID ACADEMIC OUTCOMES IMPROVE?

For dropout-prevention programs to be effective, some indicators for treatment group students should move in predictable directions. Students who like school more may attend school more consistently. They may have higher grades and may perform better on standardized tests. These students are more likely to be promoted to higher grade levels and should be less likely to drop out. If academic success feeds back to self-concept, then students may have higher self-esteem, a greater sense of efficacy, and a more positive sense that they will graduate from high school.

The evidence in Table II.4 shows that positive impacts on the related cluster of outcomes--absenteeism, grades, and test scores--were rare.[5] No program had lower absenteeism rates for the treatment group, and three programs had higher rates.[6] Relative to their control group counterparts, treatment group students in the Albuquerque Leadership Program had higher grades, but students at Newark's Project ACCEL and the Sweetwater Twelve Together program had lower grades. None of the programs had impacts on reading test scores (the same was true for mathematics test scores, not shown in the table).

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[5]In an experimental design, experiences of the control group represent what would have happened to the treatment group if the program being evaluated did not exist. Differences in experiences reflect program impacts. More formally, we measured program impacts by comparing an outcome's mean value for students in the treatment group with its mean value for students in the control group. We also adjusted outcomes for differences in the characteristics of treatment and control group students at baseline, using regression techniques. Appendix A provides details about these techniques.

[6]Here and throughout the report, we focus mainly on impacts that are statistically different from zero at the 10 percent significance level. At this level, if all differences between treatment and control group means were solely the result of sampling variation, then the tests would show 1 out of 10 impacts to be statistically significant from zero. Impacts that are statistically significant but widely scattered must be viewed cautiously, as they could arise from the large number of impacts being examined.

TABLE II.4

IMPACTS ON ABSENTEEISM, GRADES, AND TEST SCORES, MIDDLE SCHOOL PROGRAMS

	Albuquerque Middle School Leadership Program		Atlanta Middle School Academy		Flint Accelerated Academics Academy		Long Beach Up With Literacy		Miami Career Opportunities Motivated Through Technology (COMET)		Newark Project ACCEL		Rockford Early Intervention Project		Sweetwater Twelve Together Program	
	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group
Days Absent (Percentage)																
Year 2 (Cohort 1 and 2)	8	6	20*	12	13	17	10	10	7*	5	15*	12	18	18	6	6
Year 3 (Cohort 1 only)	11	10	NA	NA	18	17	12	12	NA	NA	18	17	27	29	7	6
English Grade																
Year 2 (Cohort 1 and 2)	73*	69	64	65	69	67	79	78	NA	NA	69*	72	62	62	77*	79
Year 3 (Cohort 1 only)	72	69	NA	NA	60	66	73	74	NA	NA	63	66	61	59	74	73
Math Grade																
Year 2 (Cohort 1 and 2)	69*	65	59	63	67	66	73	73	NA	NA	69	70	61	61	75	74
Year 3 (Cohort 1 only)	70	68	NA	NA	58	64	71	70	NA	NA	66	64	56	57	73	73
Reading Test Score[a] **(Percentile)**																
Year 2 (Cohort 1 and 2)	26	26	NA	NA	12	12	NA	NA	17	16	20	22	NA	NA	46	45
Year 3 (Cohort 1 only)	37	34	NA	NA	NA	NA	NA	NA	NA	NA	28	31	NA	NA	NA	NA
Sample Size																
Year 2 (Cohort 1 and 2)	194	110	66	64	98	69	154	96	118	66	310	180	293	160	242	211
Year 3 (Cohort 1 only)	115	70	--	--	35	32	59	35	--	--	141	79	130	59	100	88

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, School Records.

NOTE: Treatment group means and control group mean are adjusted using regression models.

NA = not available.

*Significantly different from zero at the .10 level, two-tailed test.

The evidence in Table II.5 shows that three programs--in Atlanta, Flint, and Newark--led to higher rates of grade promotion. By two years after program entry, the average treatment group student in Atlanta had completed 8.6 grade levels, compared with 7.9 grade levels for the average control group student.[7] In other words, more students in the Atlanta alternative middle school had entered high school compared with their counterparts in the control group. In Flint, the respective numbers at the end of the second follow-up year were low--7.3 for treatment group students and 6.8 for control group students--but the difference was statistically significant. In Newark, the grade-level impact was smaller than in Atlanta and Flint--the treatment and control groups achieved average grade levels of 7.8 and 7.5, respectively--but the difference was consistent with the purpose of the program. The Newark program (and the Flint program) provided an accelerated curriculum designed to enable students who were behind grade level to catch up with their age peers. Students appear to be moving to higher grade levels, but, as the evidence from Table II.4 shows, they are not receiving better grades or higher test scores.

One program--the Accelerated Academics Academy in Flint--resulted in lower dropout rates. However, the dropout-rate impact is evident only for the first cohort. The dropout rate for that cohort was about 19 percentage points lower for the treatment group, a significant difference, whereas the dropout rate for the second cohort was about 2 percentage points lower, an insignificant difference. The reason for difference in cohort impacts is unclear, because the program had a similar structure in both years, suggesting that the program's effectiveness is inconsistent. Four others--in Atlanta, Long Beach, Rockford, and Sweetwater--also had lower dropout rates, but the treatment-control differences were not statistically significant.

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[7]Students report the highest grade they completed in whole numbers, which are then averaged to arrive at the numbers presented in the text. As an example of the units involved, if 40 percent of the treatment group had completed eighth grade and 60 percent had completed ninth grade, then the average highest grade completed would be 8.6.

TABLE II.5

IMPACTS ON GRADE PROMOTION AND DROPPING OUT, MIDDLE SCHOOL PROGRAMS

	Albuquerque Middle School Leadership Program		Atlanta Middle School Academy[a]		Flint Accelerated Academics Academy		Long Beach Up With Literacy		Miami Career Opportunities Motivated Through Technology (COMET)[a]		Newark Project ACCEL		Rockford Early Intervention Project		Sweetwater Twelve Together Program	
	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group
Highest Grade Completed																
Year 2 (Cohort 1 and 2)	8.9	9.0	8.6*	7.9	7.3*	6.8	7.5	7.5	NA	NA	7.8*	7.5	7.8*	7.9	8.6*	8.7
Year 3 (Cohort 1 only)	9.6	9.6	NA	NA	8.5*	7.8	8.3	8.4	NA	NA	8.7*	8.4	8.6*	8.7	9.1	9.2
Dropout Rate (Percentage)																
Year 2 (Cohort 1 and 2)	13	8	6	14	2*	9	5	5	NA	NA	6	5	6	7	7	8
Year 3 (Cohort 1 only)	18	23	NA	NA	3*	17	8	8	NA	NA	15	19	12	16	8	13
Sample Size																
Year 2 (Cohort 1 and 2)	185	105	73	67	100	72	150	94	97	50	341	195	355	199	246	220
Year 3 (Cohort 1 only)	120	69	--	--	40	36	58	39	--	--	187	109	155	73	119	100

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires.

NOTE: Treatment group means and control group mean are adjusted using regression models.

NA = not available.

[a] Due to late start-up of random assignment, only one cohort was sampled. Year 2 results apply to the one cohort and year 3 results are not available.

*Significantly different from zero at the .10 level, two-tailed test.

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Overall, the findings indicate that the programs had few impacts on academic outcomes. Although some programs affected one or two outcomes, none positively affected a set of related outcomes. The most promising results are the impacts on grade completion, but this finding must be interpreted cautiously, because criteria for promotions are determined by the programs. Moreover, treatment group students were being promoted at higher rates than were control group students without having better grades or higher test scores.

C. DID PERSONAL OUTCOMES IMPROVE?

Dropout-prevention programs typically strive to build self-esteem and a sense of self-efficacy among their students. The SDDAP programs emphasized frequent contact with supportive adults, positive messages about the values of working hard and doing well, and counseling and mentoring to build life skills, all of which worked toward building students' self-esteem and their ability to plan their futures.

We examined three measures to assess whether programs improved personal outcomes. The first two measures were adaptations of the Rosenberg self-esteem scale and the Rotter locus-of-control scale, which were used for the National Education Longitudinal Study (NELS) that began in 1988. We compared students' responses on these scales with responses from the nationally representative sample of NELS students and coded students according to whether their responses fell into the lowest third of the distribution of self-esteem and locus-of-control scores from NELS. Students whose responses fell into the lowest third are said to have low self-esteem and an "external" locus of control. The third personal outcome measure was whether students reported that they were very sure of graduating from high school. Programs can affect this useful measure of education aspirations by increasing students' academic competence and self-confidence.

The results in Table II.6 show that programs generally did not affect personal outcomes. In fact, of the 42 treatment-control differences we examined, only one, for the Flint alternative middle school, was statistically significant. Moreover, no trend in the direction of the results was observed. For example, treatment group students in some programs have higher self-esteem than control group students, whereas those in other programs have lower self-esteem. In some cases, self-esteem was higher for the second cohort but lower for the first. This pattern suggests that the differences probably arose from sampling variation. Even the two programs most oriented toward improving personal outcomes--the Albuquerque Leadership Program and the Sweetwater Twelve Together Program--did not show patterns of effects in any particular direction.

The results of our examination of outcomes other than academic and personal outcomes are reported in Appendix C. For example, we considered disciplinary problems, parental involvement, the extent of reading outside school, whether students used alcohol or drugs, and whether students either became pregnant or impregnated someone else. These outcomes are more loosely linked with dropout-prevention programs than are the academic and personal outcomes we analyzed, but they broaden the perspective on whether programs had impacts.

Generally, we found no patterns suggesting that programs consistently improved these other outcomes. If anything, treatment group students generally had higher levels of negative outcomes, such as alcohol and drug use.[8] These findings could arise because control group students participate in programs that focus on reducing these outcomes, whereas the treatment group takes part in the SDDAP program, which focuses on other outcomes. However, we do not have enough information about control group programs to assess whether this explanation is valid.

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[8]None of the programs reduced any of our three measures of drug or alcohol use by a statistically significant amount. On the other hand, at least one measure of alcohol or drug use was larger and statistically significant for treatment group students in the Albuquerque, Atlanta, and Flint programs.

TABLE II.6

IMPACTS ON PERSONAL OUTCOMES AND ASPIRATIONS
(Percentages)

	Albuquerque Middle School Leadership Program		Atlanta Middle School Academy[a]		Flint Accelerated Academics Academy		Long Beach Up With Literacy		Miami Career Opportunities Motivated Through Technology (COMET)[a]		Newark Project ACCEL		Rockford Early Intervention Project		Sweetwater Twelve Together Program	
	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group
Low Self-Esteem																
Year 2 (Cohort 1 and 2)	38	39	21	30	33	39	42	44	48	39	20	23	33	39	31	35
Year 3 (Cohort 1 only)	31	32	NA	NA	22	36	44	36	NA	NA	14	19	35	27	32	32
External Locus of Control																
Year 2 (Cohort 1 and 2)	40	32	49	46	52	58	54	58	54	47	37	35	48	44	29	30
Year 3 (Cohort 1 only)	29	36	NA	NA	37*	59	49	45	NA	NA	28	28	45	38	26	20
Very Sure of Completing High School																
Year 2 (Cohort 1 and 2)	76	82	63	62	70	68	64	58	76	71	82	85	60	59	82	82
Year 3 (Cohort 1 only)	72	73	NA	NA	76	68	59	59	NA	NA	85	89	64	63	84	83
Sample Size																
Year 2 (Cohort 1 and 2)	185	105	73	67	100	72	150	94	97	50	341	195	355	199	246	220
Year 3 (Cohort 1 only)	120	69	--	--	40	36	58	39	--	--	187	109	155	73	119	100

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaire.

NOTE: Treatment group means and control group mean are adjusted using regression models.

NA = not available.

[a]Due to late start-up of random assignment, only one cohort was sampled. Year 2 results apply to the one cohort and year 3 results are not available.

*Significantly different from zero at the .10 level, two-tailed test.

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D. SUMMARY

The need for programs that serve dropout-prone students effectively is clear. Of the middle school students we began tracking as part of the evaluation, 10 percent were no longer attending school at the end of what would have been their first year of high school. Many students also had lower attendance, grades, and test scores over time. What emerges is a picture of students who are starting out at risk in terms of their attendance and academic performance and who experience worsening outcomes during the next two years--some drop out of school during this period, and those who continue to attend perform more poorly than they had previously.

The evidence in this chapter shows that most programs we evaluated were not serving students more effectively than other programs already available to them. This is not to say that the programs failed to provide useful services. Treatment group students likely benefited from program services in the sense that the services helped them improve various outcomes from what they otherwise would have been. However, control group students also received services, from other programs or from their regular schools, and the impact evidence tells us that most services supported by SDDAP funds were no more effective than these other services. The one interesting finding was that alternative middle schools had higher rates of grade promotion and lower rates of dropping out. We consider the policy implications of these findings in Chapter IV, after examining the impacts of high school programs in the next chapter.

III. IMPACTS OF HIGH SCHOOL PROGRAMS

All the SDDAP programs serving high school students have the same objective--helping students stay in and complete high school. However, the programs vary widely in their goals and in the services they offer. Some programs operate as alternative high schools leading to regular high school diplomas, whereas others help students pursue a GED certificate. Some programs emphasize innovative teaching and curricula and give students flexible options for earning credits. All enhance the school or program environment by offering smaller class sizes, more individual attention, and various types of counseling and mentoring services.

The key issue is whether the programs succeed in keeping more students in school and in improving other outcomes. The primary findings here are that programs did not reduce the dropout rate much, but that programs oriented toward GED certificates were more effective than the ones oriented toward high school diplomas. This finding highlights a difficult trade-off, because the GED may be more attainable but less valuable in the labor market.

A. CONTEXT FOR IMPACTS

The eight high school programs in the evaluation serve youths who are highly at risk of dropping out or who have already dropped out. The programs also operate in different contexts. Some are in areas with few programs available for at-risk youths, whereas others operate in areas with a variety of programs.

Baseline data show wide differences in the types of students programs served (Table III.1). In Chicago, nearly all students were Hispanic and only a few were black, and in St. Louis, nearly all students were black and none were Hispanic. Programs in Las Vegas and Tulsa served mostly white students. The alternative high school programs in Boston and Seattle and the GED preparation

TABLE III.1

CHARACTERISTICS OF HIGH SCHOOL STUDENTS IN THE BASELINE SAMPLE

	Boston JFY and University High Schools		Chicago School-Within-a-School		Queens Flowers with Care		Las Vegas Horizon High School		Miami Corporate Academy		Seattle Middle College High School		St. Louis Metropolitan Youth Academy		Tulsa Student Training and Reentry Program	
	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group
Demographics																
Age (in Years)	18	18	15	15	17	17	16	16	17	17	18	18	18	18	17*	17
Gender (Percentage)																
Male	44	43	51	45	58	64	51	49	61	49	53	55	49	52	66	67
Female	56	57	49	55	42	36	50	51	40	52	47	45	51	48	34	33
Ethnicity (Percentage)																
Black, non-Hispanic	76	76	7	14	35*	20	16	16	38*	24	50	52	96	96	12	11
White, non-Hispanic	10	2	3	3	21	24	62	56	11*	24	19	21	4	3	73	72
Hispanic	7	17	86	81	37*	51	17	20	46	51	8	10	0	0	3	3
Other	7	5	4	2	8	6	6	8	5	1	23	17	0	1	12	14
Mother's Education (Percentage)																
Less than high school	16	13	52*	38	23	25	25	30	19	27	13	15	23	28	16	17
High school only	21*	39	13	16	31	27	37	33	31	20	25	25	37	36	34	40
Some college	35	39	7	13	29	28	26	25	27	33	41	39	21	16	31	23
Don't know	28*	10	28	33	17	21	12	12	24	20	21	21	19	20	19	19
Family Background Risk Factors (Percentage)																
Does Not Live in Two-Parent Household	52	66	37	43	61*	41	39	40	47	49	60	62	75	74	52	52
Household Receives Public Assistance	30	30	27	26	32	20	16	15	27	35	34	32	64	58	18	19
Primary Language Spoken at Home Is Not English	0*	6	17	11	2	3	4	3	7	9	6	9	0	0	0	1
Below Grade Level	86	78	31	35	93	94	38	32	62	67	96	95	97	97	98	98
Average Grades During Previous Year Below C	61	74	36*	24	59*	45	70	65	75*	61	37	35	39	39	66	70
Had Discipline Problems at School During Previous Year	63	78	35	39	79	78	87	91	84	87	68	65	70	70	80*	88

TABLE III.1 *(continued)*

	Boston JFY and University High Schools		Chicago School-Within-a-School		Queens Flowers with Care		Las Vegas Horizon High School		Miami Corporate Academy		Seattle Middle College High School		St. Louis Metropolitan Youth Academy		Tulsa Student Training and Reentry Program	
	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group
Absent More than 20 Days During Previous Year	61	59	6	2	62	49	52	56	57	55	40	41	39	32	41*	51
Ever Dropped Out of School	66	56	2	0	65	68	47	46	44	49	54	53	96	96	80*	89
External Locus of Control	46	35	51	46	35	35	57	50	54	48	39	40	43	37	37	41
Has a Child	25	27	0	0	8	7	6	7	4	4	13*	20	34	35	9	8
Two or More Risk Factors	86	84	40	40	85*	67	56	48	72	76	84	83	94	98	90	88
F-Statistic for Equivalence of Treatment and Control Groups	1.90 [+]		1.05		1.34		0.68		1.06		0.65		0.62		1.20	
Sample Size[a]	**62**	**38**	**106**	**65**	**106**	**60**	**287**	**197**	**77**	**65**	**322**	**193**	**223**	**149**	**258**	**149**

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SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Baseline Questionnaire.

[a] Sample sizes represent the number of sample members for whom baseline data are available.

*Treatment and control means of the baseline characteristic significantly different at the .10 level, two-tailed test.

[+]Treatment and control means of full set of baseline characteristics significantly different at the .10 level, two-tailed test.

program in St. Louis served students who were an average of 18 years of age when they entered the programs. The school-within-a-school in Chicago and the alternative high school in Las Vegas served students who were 15 to 16 years old when they entered. The somewhat younger ages of students in these programs means the students were less likely than their older counterparts to attain their diplomas during the period of the evaluation.

Many students entering the programs had multiple risk factors. For example, nearly all students in Boston, Queens, and St. Louis were behind grade level, and most had dropped out of school at least once. Many students reported having missed many days of school during the previous year, having had discipline problems, and having low grades. Students had the highest level of risk factors in St. Louis, where nearly 100 percent had two or more risk factors, and the lowest level in Chicago and Las Vegas, where about 40 to 60 percent had two or more risk factors.[1]

The eight programs generally operated in areas in which other programs for dropout-prone youths were already operating. As students came to the SDDAP-funded programs and were randomly assigned to be admitted or not to be admitted, many who were not admitted entered other programs. Data for the first follow-up year show a general pattern: (1) treatment group students spent more time than control group students in the type of program to which they were admitted by random assignment, and (2) control group students spent more time in some other kind of program (see Table III.2). The second part of the pattern is an important reminder that control group students were not simply doing nothing. Having been denied access to one kind of program, many control

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[1]The baseline data in Table III.1 also show that random assignment successfully created equivalent treatment and control groups in seven of the eight programs, according to statistical tests of equivalence. In Boston, tests show that the treatment group and control group were not equivalent. However, the data do not reveal patterns in the differences. To adjust for differences, all impacts were estimated using regression models with baseline variables entered as explanatory variables.

TABLE III.2

MONTHS THAT HIGH SCHOOL STUDENTS WERE ENROLLED IN EDUCATION PROGRAMS DURING THE FIRST FOLLOW-UP YEAR
(Percentage)

Type of School	Boston JFY and University High Schools		Chicago School-Within-a-School		Queens Flowers with Care		Las Vegas Horizon High School		Miami Corporate Academy		Seattle Middle College High School		St. Louis Metropolitan Youth Academy		Tulsa Student Training and Reentry Program	
	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group
Any School	63	58	98	98	68*	34	74	68	80*	68	60	63	47	47	40*	28
Regular School	20	33	93	93	5	0	37	44	35	47	25	28	9	8	12	14
Alternative School	39*	13	0	0	1	2	26*	15	28*	8	29	24	3	5	21*	4
GED Program	5	7	0	0	60*	32	0	0	0	2	5*	12	35	33	8	9
Other/Missing	0	4	4	5	1	0	11	8	17	11	2	0	0	0	0	0
Sample Size	**45**	**26**	**45**	**43**	**24**	**12**	**158**	**54**	**59**	**49**	**105**	**62**	**89**	**48**	**87**	**44**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires.

NOTE: The figures in the tables are based on cohort 2 only. Students in cohort 1 did not report their school type in the first follow-up year. Numbers may not add to 100 percent due to rounding.

 *Significantly different from the control group mean at the .10 level, two-tailed test.

group students went to other programs. For example, in Boston, the treatment group spent 39 percent of the first follow-up year in an alternative high school program, whereas the control group spent 13 percent of that year in some other alternative high school program.[2] On the other hand, control group students in Boston spent more time in regular high school than treatment group students. The directions of these numbers suggest that the random assignment process allowed treatment group students into the SDDAP-funded alternative high school and that many control group students went back to or stayed in regular high school.

Programs fell into two categories in terms of how much time the treatment and control groups spent in any kind of school. For five programs (Boston, Chicago, Las Vegas, Seattle, and St. Louis), treatment group students and control group students spent about the same amount of time in school during the first follow-up year. For example, in Boston, treatment and control group students spent 63 percent and 58 percent of the first follow-up year in an education program, respectively. In Seattle, the treatment group spent 60 percent of the year in school and the control group spent 63 percent of the year in school, an insignificant difference. In St. Louis, the two groups spent nearly identical amounts of time in school and nearly identical amounts of time in the various types of education programs (regular school, GED program, alternative high school, and so on). Whatever differences in outcomes arise in these five programs are likely to be due to differences in the quality of the experiences offered by the programs relative to experiences offered by other programs that control group students enter.

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[2]On the follow-up questionnaire, students reported the type of educational programs they had attended during each month of the previous year. We calculated the percentage of time in school as the percentage of the nine months between September and May that students stated they had attended school. We cannot distinguish individual schools in these data, so if students indicated that they had attended an alternative high school, for example, we do not know whether they were referring to the SDDAP alternative high school or to another alternative high school. Also, we added questions about program types to the questionnaire after having administered it to the first cohort, so we have information on program types only for the second cohort.

For three of the eight programs (in Miami, Queens, and Tulsa), treatment group students spent more time in school than control group students. For example, in Miami, treatment group students spent 80 percent of the first follow-up year in school and control group students spent 68 percent of the first follow-up year in school.[3] For these programs, differences in outcomes could arise because of differences between SDDAP programs and other programs, and because control group students spend less time in school than treatment group students.

B. DID STUDENTS STAY IN SCHOOL?

A fundamental objective of dropout-prevention programs is to keep students in school and help them complete school. In addition, through their positive messages, adult mentoring, and links with social services, programs may be able to improve students' self-concept and reduce negative behaviors, such as becoming pregnant, using drugs, or being arrested. To determine whether the programs achieved these objectives, we first analyzed whether treatment group students in SDDAP programs had lower dropout rates and higher completion rates than control students. We then looked at whether treatment group students had higher levels of personal and social outcomes, such as pregnancy rates, arrest rates, self-esteem, and locus of control.

A striking feature of the results across the eight programs is the similarity in dropout rates for treatment and control group students (Table III.3). Programs had little effect on dropping out.[4]

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[3]It is possible to view the result that treatment group students spent more time in school as a positive impact of the program. However, control group students were turned away from the program by the random assignment process, which could have generated artificial differences in the amount of time students were in school. Control group students who had to look for another program may have spent less time in school during the follow-up year while they searched for a new program opportunity.

[4]We categorize students as dropouts if they had not completed high school and were not attending high school at the time they were interviewed. Our definition does not count students as dropouts if students dropped out and re-entered school before they were interviewed.

TABLE III.3

IMPACTS ON DROPPING OUT AND COMPLETING HIGH SCHOOL, HIGH SCHOOL PROGRAMS

(Percentage)

	Boston JFY and University High Schools[a]		Chicago School-Within-a-School		Queens Flowers with Care		Las Vegas Horizon High School		Miami Corporate Academy[a]		Seattle Middle College High School		St. Louis Metropolitan Youth Academy		Tulsa Student Training and Reentry Program	
	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group
Dropped Out																
Year 2 (Cohort 1 and 2)	34	28	11	10	39	47	55*	46	41	31	36	33	62	64	67	63
Year 3 (Cohort 1 only)	NA	NA	22	10	49	45	64	73	NA	NA	31	38	60	66	61	69
Received High School Diploma or GED																
Year 2 (Cohort 1 and 2)	46	41	0	0	22	20	3	1	18	25	40	38	26*	16	23	18
Year 3 (Cohort 1 only)	NA	NA	0	0	40	29	14	8	NA	NA	55	61	38	23	38*	20
Received High School Diploma																
Year 2 (Cohort 1 and 2)	31	23	0	0	2	3	0	1	13	11	21	18	5	5	3	4
Year 3 (Cohort 1 only)	NA	NA	0	0	9	3	9	2	NA	NA	31	23	11	3	7	4
Received GED Certificate																
Year 2 (Cohort 1 and 2)	16	18	0	0	20	17	2	1	5	14	18	20	21*	11	20	14
Year 3 (Cohort 1 only)	NA	NA	0	0	31	26	5	6	NA	NA	24*	37	28	19	32	16
Sample Size																
Year 2 (Cohort 1 and 2)	132	80	113	75	81	41	235	164	63	57	245	150	186	115	214	121
Year 3 (Cohort 1 only)	--	--	63	33	42	18	77	73	--	--	132	85	58	59	124	83

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaire.

NOTE: Treatment group means and control group mean are adjusted using regression models.

NA = not available.

[a] Due to late start-up of random assignment, only one cohort was sampled. Year 2 results apply to the one cohort and year 3 results are not available.

*Significantly different from the control group mean at the .10 level, two-tailed t-test.

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Table III.3 shows 14 treatment-control differences in the dropout rate, of which only 1 is statistically significant and only 6 are in the hypothesized direction (with the treatment group dropout rate lower than the control group dropout rate). The lack of a general pattern indicates that the differences are probably caused by sampling variation. In addition, it is clear that dropout rates for the kinds of students who enter dropout-prevention programs are high. At the end of the third follow-up year, for example, more than 60 percent of students in the Las Vegas, St. Louis, and Tulsa programs had become dropouts.[5]

Although programs did not lower dropout rates much, they were somewhat successful in improving high school completion rates. Four of the five alternative high school programs served students who were old enough to graduate during the follow-up period. In all four programs, more treatment group students than control group students completed school (Table III.3). For example, after three years, 31 percent of treatment group members admitted to the Seattle alternative high school had received a high school diploma, compared with 23 percent of control group students. Diploma completion rates were also higher for treatment group students in Boston and Las Vegas, by seven to eight percentage points. None of these treatment-control differences is statistically significant, but the fact that all four sites had higher completion rates suggests that programs can affect this important outcome.

Students can complete high school by passing the GED test. For two of the three programs oriented to preparing students for GEDs (St. Louis and Tulsa), we found that treatment group students were more likely than control group students to obtain GEDs. For example, after two years, 21 percent of treatment group students in St. Louis had received GEDs, compared with 11 percent

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[5]Dropout rates were lower for students in the Boston and Miami programs, for which we have only two years of follow-up data, and for students in the Chicago program, which serves the youngest and least at-risk students of those in the eight programs.

of the control group, a statistically significant difference. Because both treatment group students and control group students in St. Louis attended similar types of education programs (see Table III.2), the fact that more treatment group students obtained GEDs is solid evidence that the SDDAP-funded program in St. Louis was more effective than the average GED program in the local area. Students admitted to the Tulsa program also were more likely to receive GEDs by a substantial margin. At the end of the third year, twice as many treatment group students as control group students had received GEDs (32 percent versus 16 percent).

A curious aspect of the findings in Table III.3 is the number of students who entered diploma-oriented programs but who went on to receive GEDs. For example, after three years, more than half the treatment group at the Seattle alternative high school had completed high school, but closer inspection shows that almost half of those who had completed high school had received GEDs. Similarly, about a quarter of the students who entered the Boston and Miami alternative high schools and who completed high school actually received GEDs. The path goes the other way as well. About one-fifth of students who entered the Queens, St. Louis, and Tulsa GED programs and who completed high school reported receiving high school diplomas.[6] These findings suggest that alternative high school programs and GED preparation programs act partly as ports of entry. It may be that students enter alternative high school programs and then decide that they would like to pursue a GED instead, or vice versa.

Our finding that programs affected high school completion seems at odds with our finding that programs did not affect the dropout rate. The findings can be reconciled by noting that different proportions of students in the treatment and control groups can be still in school (they have not dropped out and have not completed). Treatment group students can have a higher dropout rate *and*

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[6]We did not use school district records to validate whether students received high school diplomas, so some students who received GEDs may have said they received their diplomas.

a higher completion rate if fewer of them are still in school compared with the control group. Three programs (in Boston, Queens, and Seattle) had dropout and completion rate results that are apparently at odds in this way, so it is useful to look at the results to avoid the uncertainty created when programs have many students still in school. We do this in Table III.4 by combining the three states in alternative ways. First, we assume that all students who have not yet completed school will do so, an optimistic assumption. Second, we assume that students who are still in school complete school and drop out at the same rate as do other members of the group.[7] Third, we assume that all students who have not yet completed school will not do so, a pessimistic assumption.

Resolving the ambiguity about students who are still in school results in a more favorable view of the programs; nevertheless, program effects are not large, regardless of how we view the results. For example, the third-year results for Queens showed that the treatment group had a completion rate 11 percentage points higher than that of the control group and a dropout rate about 4 percentage points higher than that of the control group. A much larger portion of the control group was still in school, however (27 percent of the control group, compared with 11 percent of the treatment group). When we assume that students still in school complete or drop out at rates already estimated, we project that the Queens treatment group will have a completion rate six percentage points higher than that of the control group (conversely, the Queens treatment group is projected to have a dropout rate six percentage points lower than the control group's). Similarly, the third-year results for the Seattle program show a completion rate of 55 percent for the treatment group and 61 percent for the control group. However, more of the treatment group was still in school. Using our middle assumption, we

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[7]To implement this assumption, we first add the rate at which students in a treatment or control group complete school and the rate at which they drop out. We then divide the completion and dropout rates by this sum, which gives us two rates that sum to 100 percent. For example, suppose 35 percent of the treatment group is still in school, 10 percent have completed school, and 55 percent have dropped out. Our procedure yields a projected completion rate for students of 25 percent (found as $10/(10 + 30)$) and a projected dropout rate of 75 percent (found as $30/(10 + 30)$).

TABLE III.4

ALTERNATIVE VIEWS OF DROPOUT AND COMPLETION RATES, HIGH SCHOOL PROGRAMS

	Boston JFY and University High Schools		Chicago School-Within-a-School		Queens Flowers with Care		Las Vegas Horizon High School		Miami Corporate Academy		Seattle Middle College High School		St. Louis Metropolitan Youth Academy		Tulsa Student Training and Reentry Program	
	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group
Observed Rates of Dropping Out, Completing, and Staying in School																
Dropped Out	34	28	22	10	49	45	64	73	41	31	31	38	60	66	61	69
Completed	46	41	0	0	40	29	14	8	18	25	55	61	38	23	38	20
Still in School	20	31	78	90	11	27	22	19	41	44	14	1	2	12	1	11
First Assumption: All Students Still in School Complete																
Dropped Out (*projected*)	34	28	22	10	49	45	64	73	41	31	31	38	60	66	61	69
Completed (*projected*)	66	72	78	90	51	55	36	27	59	69	69	62	40	34	39	31
Second Assumption: Students Still in School Drop Out and Complete at Measured Rates																
Dropped Out (*projected*)	42	41	100	100	55	61	82	90	70	56	36	39	61	75	62	77
Completed (*projected*)	58	59	0	0	45	39	18	10	30	44	64	61	39	25	38	23
Third Assumption: All Students Still in School Drop Out																
Dropped Out (*projected*)	54	59	100	100	60	71	86	92	82	75	45	39	61	77	62	79
Completed (*projected*)	46	41	0	0	40	29	14	8	18	25	55	61	38	23	38	21

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program

NOTE: The results refer to the third follow-up year for the first cohort, except for Boston and Miami, for which they refer to the second follow-up year for the first cohort.

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project that the Seattle treatment group will finish school at a moderately higher rate than the control group (64 percent versus 61 percent).

Although programs represented different treatments and worked with different kinds of students, we can ask whether they yielded lower dropout rates or higher completion rates on average. Table III.5 shows average treatment group and control group completion and dropout rates and their difference, which is the average impact. For the eight programs together, the average dropout rate was 45 percent for the treatment group and 45 percent for the control group, with a zero net impact. The average completion rate was 31 percent for the treatment group and 26 percent for the control group, a net impact of 5 percentage points. However, a larger proportion of the control group was still in school. When we assume that students who are still in school drop out or complete at the same rate as other students, we find that the net impact of the programs on the average completion rate is four percentage points. Conversely, the net reduction of the dropout rate is four percentage points. These impacts are not large, and statistical tests indicate that the impacts could be due to sampling variation.

Programs may have small impacts overall but large impacts on some groups of students. To determine whether programs affected students differently, we estimated program impacts for students at low and high risk of academic failure.[8] We found that, except in the Seattle program, student risk status generally was not associated with impacts. By the end of the third follow-up year, the Seattle program had significantly increased the rate at which low-risk students received high school diplomas (by 14 percentage points) and significantly reduced the proportion of low-risk students who had earned GED certificates (by 21 percentage points). In contrast, the program had

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[8]Students were considered to be at high risk of academic failure if they had four or more of eight academic risk factors: (1) being from a single-parent family, (2) being on public assistance, (3) not being proficient in English, (4) being behind grade level, (5) having low grades, (6) having discipline problems at school, (7) having an external locus of control, and (8) being a parent.

TABLE III.5

AVERAGE DROPOUT AND COMPLETION RATES,
HIGH SCHOOL PROGRAMS

	Average for Eight High School Programs		
	Treatment Group	Control Group	Impact
Observed Rates of Dropping Out, Completing, and Staying in School			
Dropped Out	45	45	0
Completed	31	26	5
Still in School	24	29	-5
First Assumption: *All Students Still in School Complete*			
Dropped Out *(projected)*	45	45	0
Completed *(projected)*	55	55	0
Second Assumption: Students Still in School Drop Out or Complete at Measured Rates			
Dropped Out *(projected)*	63	67	-4
Completed *(projected)*	37	33	4
Third Assumption: All Students Still in School Drop Out			
Dropped Out *(projected)*	69	74	-5
Completed *(projected)*	31	26	5

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program.

NOTE: The results refer to the third follow-up year for the first cohort, except for Boston and Miami, for which they refer to the second follow-up year for the first cohort.

no impact on high school or GED completion rates among high-risk students. These findings show that the program's overall effect of shifting students away from GEDs and toward high school diplomas was concentrated among lower-risk students.

C. DID OTHER OUTCOMES IMPROVE?

Dropout-prevention programs could improve students' attitudes about themselves through their emphasis on positive messages, supportive contacts with adults, and efforts to raise students' aspirations for their futures. However, the evidence shows that these effects did not arise (Table III.6). In fact, treatment group members in the Chicago, Las Vegas, Miami, and St. Louis programs had lower self-esteem than control group members. Across all programs and all follow-up years, no programs affected locus of control significantly.

Although programs were not designed directly to affect social outcomes such as pregnancy rates, drug use, or criminal activity, they might affect these outcomes indirectly, by providing a better school environment and causing students to feel better about themselves. We found, however, results sometimes were in the opposite direction. For example, second-year results show that only 9 of the 24 contrasts were in the direction favoring the SDDAP-funded program, only 4 of 24 contrasts were statistically significant, and only 1 of the 4 significant results was in the direction favoring the SDDAP-funded program. The evidence indicates that, at best, programs did not affect the personal and social outcomes we examined, and that they may have affected impacts in the opposite directions.

D. SUMMARY

The findings must be interpreted carefully, because the programs' objectives and the contexts in which they operated differed. Some programs focused on high school diplomas and others

TABLE III.6

IMPACTS ON OTHER OUTCOMES, HIGH SCHOOL PROGAMS

(Percentage)

	Boston JFY and University High Schools[a]		Chicago School-Within-a-School		Queens Flowers with Care		Las Vegas Horizon High School		Miami Corporate Academy[a]		Seattle Middle College High School		St. Louis Metropolitan Youth Academy		Tulsa Student Training and Reentry Program	
	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group	Treatment Group	Control Group
Low Self-Esteem																
Year 2 (Cohort 1 and 2)	12	9	35	29	26	29	24	23	19	16	19	23	25	21	21	25
Year 3 (Cohort 1 only)	NA	NA	36	11*	15	11	23	15	NA	NA	19	21	29*	14	29	25
External Locus of Control																
Year 2 (Cohort 1 and 2)	33	38	35	45	43	39	38	36	25	30	34	31	52	52	35	34
Year 3 (Cohort 1 only)	NA	NA	38	28	34	30	38	35	NA	NA	29	29	50	38	38	46
Females Who Got Pregnant During Previous Year																
Year 2 (Cohort 1 and 2)	34	32	10	7	13	20	18*	32	16	26	32*	17	26	24	31	21
Year 3 (Cohort 1 only)	NA	NA	25*	1	26	8	31	26	NA	NA	22	18	17*	39	23	34
Males Arrested During Previous Year																
Year 2 (Cohort 1 and 2)	20	22	10	7	21	19	29	25	14	17	27*	17	30	25	27	30
Year 3 (Cohort 1 only)	NA	NA	14	6	18	6	20	30	NA	NA	22	13	18	24	25	25
Students Who Smoked Marijuana During Previous Month																
Year 2 (Cohort 1 and 2)	25	23	8	5	32	25	29	31	23	23	32	33	33	31	31*	19
Year 3 (Cohort 1 only)	NA	NA	9	12	17	29	28	35	NA	NA	31	28	25	17	29	22
Sample Size																
Year 2 (Cohort 1 and 2)	132	80	113	75	81	41	235	164	63	57	245	150	186	115	214	121
Year 3 (Cohort 1 only)	--	--	63	33	42	18	77	73	--	--	132	85	58	59	124	83

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires.

NOTE: Treatment group means and control group mean are adjusted using regression models.

NA = not available.

[a] Due to late start-up of random assignment, only one cohort was sampled. Year 2 results apply to the one cohort and year 3 results are not available.

*Significantly different from the control group mean at the .10 level, two-tailed test.

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focused on GED certificates. Some offered many support services and others did not. Some programs operated in settings in which control group students were less likely than treatment group students to attend education programs; others operated in settings in which treatment and control group students were equally likely to attend education programs. Putting together impacts, program structures, and local contexts helps to clarify what we have learned.

Looking at the combined results for the programs clearly shows that average program impacts on dropping out are not large. The impacts range from no impact to about a five percentage point impact under different assumptions about what will happen to students who are still in school. As a group, the programs did not reduce dropping out much.

It is clear, however, that GED programs helped students earn GEDs. For example, at the end of the three-year follow-up period, students in the St. Louis and Tulsa programs' first cohort were more likely than control group students to obtain their GEDs and were less likely to be dropouts. The Tulsa findings become muted when we combine the two cohorts (the dropout rate result is no longer evident), but a picture emerges of programs that represent positive additions to other programs for at-risk students in the Tulsa and St. Louis areas. The picture for the Queens program is less clear. Under some assumptions about whether students still in school drop out or complete, the Queens program also appears to reduce the dropout rate and improve high school completion. However, none of the measured impacts on which the projections are based is statistically significant.

Of the alternative high schools, only the Seattle program had positive results, for students who were at somewhat lower risk of dropping out. In the Seattle program, lower-risk students were less likely to drop out and were more likely to receive their high school diploma. Combined with the result that Seattle control group students were more likely to receive GEDs, the evidence indicates

that the Seattle Middle College High School program resulted in low-risk students obtaining high

school diplomas instead of GEDs. This information is useful for school districts considering

program strategies for helping moderately at-risk students. However, none of the findings for the

Boston, Chicago, Las Vegas, and Miami programs was statistically significant.

IV. WHAT HAVE WE LEARNED?

SDDAP was conceived as an important channel through which federal funds could flow to support innovative local dropout-prevention programs and to promote knowledge about dropout-prevention strategies. In this report, we focused on assessing whether the 16 dropout-prevention programs that were selected to be part of the in-depth evaluation reduced dropping out and improved other outcomes. Eight programs operated for middle school students, and eight programs operated for high school students. We separated the program types further into intensive and supplemental programs at the middle school level, and into alternative high school and GED/transition programs at the high school level. We were limited in the types of programs we could study, because programs had to be part of SDDAP and suitable for an evaluation in which an experimental design was used. Nevertheless, the diversity of programs we evaluated represents a range of innovative approaches to address the dropout problem.

We laid a solid groundwork for observing impacts by sampling many students, tracking them for two to three years, and collecting large amounts of data about them. We randomly assigned almost 6,000 students during two years of intake and collected follow-up data from survey questionnaires for more than 85 percent of students whom we sampled. We also were able to collect data from student records for most of the sample.

Our major finding is that few programs reduced the dropout rate or improved other outcomes. However, programs that showed some indications of effectiveness had particular features that may contribute to discussions of policy and program design. At the middle school level, alternative middle schools, which were small and physically separate schools serving highly at-risk students,

proved to be moderately effective. At the high school level, GED programs were moderately effective.

In the rest of this chapter, we discuss these findings further and relate them to previous evaluations of dropout-prevention programs and programs for at-risk youths that contained education components. Generally, our findings are consistent with findings from these evaluations. Few demonstration programs have yielded evidence that dropping out can be reduced much, although some have yielded evidence that GED attainment can be enhanced.

A. MIDDLE SCHOOL PROGRAMS

Our evidence showed that what middle school dropout-prevention programs did was more important than how much they spent. The most effective programs offered an intensive experience for students that was far removed from that of regular middle schools. In contrast, none of the four SDDAP programs that provided less-intensive supplemental services had impacts on academic outcomes.

The necessity of providing intensive intervention may not be surprising. The programs served students from highly disadvantaged backgrounds who faced substantial upheaval in their daily lives and who, for the most part, had experienced failure in school. For example, 42 percent of treatment group students in middle school programs were from single-parent families, and 35 percent were from families receiving public assistance (Gleason and Dynarski 1994). During the first follow-up year, 30 to 40 percent of the students moved to new homes, the parents of 10 to 15 percent separated or divorced, and one or both parents of 10 to 15 percent lost their jobs. In addition, at the time students entered programs, they were about three times as likely as the national average to have received failing grades in their classes, many had experienced serious disciplinary problems in school, and nearly one-half were behind grade level for their age. Our evidence suggests that

programs intervening for one or two hours per day or less were not able to overcome these factors. Intensive programs did not achieve dramatic impacts, but it appears that programs are not likely to have impacts unless they are intensive.

B. HIGH SCHOOL PROGRAMS

The SDDAP high school programs also served students who are highly at risk of educational failure. To a greater extent than the students in SDDAP middle school programs, these students were likely to have one or more indicators of educational risk. Most came from disadvantaged backgrounds, faced upheaval in their everyday lives, and had already experienced failure in school. For example, 55 percent of treatment group students in SDDAP high school programs were from single parent families, and 31 percent were from families receiving public assistance (Gleason and Dynarski 1994). Nearly 100 percent of students at one program had two or more risk factors. During the first follow-up year, 42 percent moved to a new home, the parents of 11 percent separated or divorced, and one or both parents of 19 percent lost their jobs. Students in SDDAP high school programs frequently faced turmoil in their own lives as well. As noted in the previous chapter, many used drugs, were involved with the criminal justice system, or became or got someone else pregnant. More than three-fourths were behind grade level for their age, and more than one-half reported that they usually had received grades below C's at their last school.

Given the issues that the students faced outside of school, it was likely than only an intensive school intervention had any prospect of positively influencing their academic outcomes. As with middle school programs, we suspect that less-intensive high school programs providing supplemental services would not have had positive impacts on these outcomes. We cannot test this hypothesis, however, because none of the SDDAP high school programs that we evaluated used a less-intensive approach. All eight programs intervened intensively in students' school lives, and

seven of the eight operated in facilities that were physically separate from the districts' regular high schools.

Even the intensive approach used by alternative high schools was not successful in improving students' academic outcomes relative to other educational options available to students. Five SDDAP alternative high schools were designed to help students stay in school and perform better in school until they earned a high school diploma. Only one of these programs had impacts on keeping students in school or on other outcomes. These results may reflect the difficulty of inducing highly at-risk high school students to remain in school for the duration required to earn a high school diploma. Alternatively, the lack of impacts may be due to control groups that actively pursued educational options other than the SDDAP programs.

GED programs were somewhat more successful than were alternative high school programs. Students in these programs may have been more committed to reaching their goals because they believed that obtaining a GED certificate was easier than earning a high school diploma. However, our finding that GED programs can be effective does not mean that interventions for at-risk high school students should be structured with GEDs as their objectives. Recent evidence questions the value of the GED certificate in the labor market. On the negative side, studies show that those with a GED certificate have only slightly higher earnings than do high school dropouts and significantly lower earnings that those with high school diplomas (Cameron and Heckman 1993). On the positive side, students who receive GEDs, although possibly earning no more than dropouts, are more likely than dropouts to enter training programs or colleges (Murnane et al. 1995). Policymakers must address the difficult trade-off of whether to promote the GED as an attainable credential for at-risk youths, since it may have a limited and possibly declining value in a modern economy.

C.   COMPARABILITY WITH FINDINGS FROM OTHER PROGRAM EVALUATIONS

Previous evaluations of dropout-prevention demonstration programs have yielded mixed results about program effectiveness. An evaluation of dropout-prevention programs supported by federal funds between 1989 and 1991 under the Carl Perkins Act found that 4 of the 10 programs reduced the dropout rate (Hayward and Tallmadge 1995). However, impacts on other outcomes were rare. An evaluation of programs funded under the 1988 SDDAP also found few impacts, though small sample sizes and the evaluation design made it difficult to detect impacts (Rossi 1994). Differences in methodologies and program features make it difficult to compare other evaluation findings with ours, but we can say that the findings are consistent in the sense that strong patterns of impacts are not evident in any of the three evaluations.

Our findings for high school students are consistent with findings from evaluations of employment training and welfare programs serving at-risk youths. These programs generally do not focus specifically on inducing dropouts to finish school, but they typically do contain service components intended to help participants return to school or obtain GED certificates. A recent evaluation of the JOBSTART program--an education and training initiative for high school dropouts designed to be similar to the Job Corps program--found that treatment group members were more likely than control group members to receive GEDs (Cave et al. 1993). However, the program did not affect employment and earnings. The National JTPA Evaluation found that the JTPA program led to increases in GED attainment for young women and young men after 18 months (Bloom et al. 1993). The program had no impacts on employment and earnings for young women and had negative impacts on employment and earnings for young men. The evaluation of the Teen Parent Demonstration found modest effects of the program on GED attainment (Maynard et al. 1993). The program also had modest impacts on employment rates and on earnings. The evaluation of

California's Greater Avenues for Independence (GAIN) welfare-reform program found that the program increased GED attainment. However, at two years after random assignment, it had no impact on literacy levels and employment and earnings (Martinson and Friedlander 1993).

This review of evaluation evidence raises two questions. First, can programs for at-risk youths in the high school age range affect important outcomes, such as high school completion or skill levels? The evidence suggests that they can affect high school completion mostly in the form of GED attainment. We can speculate that programs have not met with success because they represent only minor interventions in the lives of young people who face enormous obstacles hindering them from remaining in school and obtaining their diplomas. GED programs typically last less than one year. Diploma programs typically require two years or more to complete, depending on the academic credits that participants earn before they enter the programs. It is possible that diploma programs fail to reduce dropout rates because participants simply are unable to stay with the program long enough, especially since most programs we studied did not have employment components enabling participants to earn money and possibly train for a vocation while they finish school.

The second question is why alternative middle schools appear to be effective, whereas alternative high schools do not. In both cases, programs attempted to create friendly and caring small-school environments. The answer may lie in the difference between middle school youths and high school youths and in the options available to high school youths who want to continue their education. If we view dropping out as the culmination of a gradual process of disengagement from school, middle school youths are younger and may benefit more from intensive intervention. High school students have had more time to become disengaged from school and some may be dealing with problems, such as pregnancies and substance abuse, that are far less common among middle

school students. Interventions of similar intensity may therefore have greater effects for middle school students.

In addition, because a relatively greater variety of programs for high school students than for middle school students have been developed, it is more difficult for any one program option for students in high school to show effects. High school age students can participate in adult education programs, enter the Job Corps, or qualify for welfare and receive services from social agencies. Middle school students have none of these options. Interventions for middle school students may therefore show greater effects because of their singular nature.

D. POLICY IMPLICATIONS

The evaluation assessed the effectiveness of a program providing federal funding in the form of loosely prescriptive grants to local school districts and community organizations to support dropout-prevention activities. It found weak results. What should we do with the findings?

Finding that a program has no impact is sometimes interpreted to mean that a program "does not work." A corollary is that federal funds should not support the program in the future. However, this interpretation commingles the policy objectives of funding demonstration programs and those of funding ongoing programs. An example may help illuminate the issue. In medical research, if researchers are testing an experimental treatment against an existing treatment and a placebo treatment, we would conclude that the experimental treatment "does not work" only if it does no better than the placebo. If the experimental treatment does just as well as the existing treatment and both do better than the placebo treatment, we would conclude that the experimental treatment works but is not preferred to the existing treatment (unless producing it was cheaper). If policymakers believed that treating the disease was important, public funding could be used to underwrite existing or experimental treatments. It would not matter which, because the two are equally effective.

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However, researchers naturally would want to develop and test new experimental treatments with the goal of improving on existing treatments.

Similarly, our findings of "no impact" for most of the dropout-prevention programs we evaluated means that the demonstration programs were about as effective as existing approaches in helping at-risk students. However, because the programs operated in real education contexts, creating a placebo condition was not possible. Without it, we cannot conclude that the programs "did not work." We can conclude that addressing the dropout problem will mean exploring new directions for research.

Our findings suggest two promising areas for research. The first involves intensive programs for middle school students. Most programs for at-risk middle school students focus on improving skills and building self-esteem and leadership qualities. Our evidence suggests that a more-intensive approach embodied by alternative middle schools may be an effective way to help these students.

The second research area is a reconsideration of efforts to help older at-risk students obtain high school diplomas. Our evidence and the weight of evidence from other program evaluations shows that programs can help students get GEDs but are rarely able to help students obtain high school diplomas. The issue is whether policymakers should adopt the strategy of promoting the diploma over the GED, in effect adopting a higher standard but one that few at-risk students will attain. Research can investigate the relative value of the GED and the diploma, the likelihood that a youth entering a program attains one or the other, and the ultimate social benefits from a strategy of encouraging diplomas over GEDs.

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APPENDIX A

RANDOM ASSIGNMENT AND IMPACT ESTIMATION METHODS

In this appendix, we provide more details about the random assignment procedures used in the 16 programs and the methods we used to estimate impacts.

A. RANDOM ASSIGNMENT PROCEDURES

Extensive discussions with program staff about their methods for enrolling students led us to design random assignment procedures that balanced research objectives and program needs. We used two primary methods of random assignment, depending on the way in which programs enrolled students. The first method was used for "walk-in" programs in which students either expressed interest on their own by walking in or were referred by another school or organization. For walk-in programs, staff determined whether applicants were appropriate for the program and, if they were, had them complete intake forms and a baseline questionnaire. The names were then sent to MPR, where students were assigned randomly to treatment and control groups, generally at a rate of one treatment group member for each control group member.

The second random assignment method was used for "early assignment" programs in which program staff first identified eligible students, frequently in the spring for fall enrollment. They then sent students' names to MPR, where students were assigned randomly to treatment and control groups. Program staff then undertook baseline data collection for students in both groups.

We varied the basic random assignment procedures in two ways to accommodate program features. First, for early assignment programs, it was desirable to fill vacant slots in a way that did not require programs to go through the effort of identifying additional eligible students. For these programs, we created a waiting list of names to fill vacant slots, with names in random order. As slots opened up, program staff would contact MPR, receive names of the next applicants on the waiting list, and offer these applicants admission to the program. The status of applicants offered admission was then changed to treatment group member, regardless of whether applicants actually

enrolled in the program. Applicants on the waiting list who had not been offered admission by the time the enrollment period for the program ended had their status changed to control group member.

The second variant of the basic random assignment procedures involved creating strata. Some programs wanted a particular mix of applicants in terms of demographic characteristics or risk factors. Creating strata and randomly assigning students within strata at different rates ensured that random assignment yielded the right mix. Other programs operated in more than one school or location and had to ensure that they had enough applicants at each location in the treatment group.

To accommodate strata, program staff transmitted information identifying the strata that students were in to MPR. The strata definitions and selection probabilities were set in discussions with program staff and programmed into the random assignment system. To maintain statistical power, we limited the overall probability of being selected as a treatment group member to no more than 67 percent (two of three applicants selected for the treatment group). For some programs, however, as long as the overall probability was no more than 67 percent, the admission probability would be less than 33 percent for some subgroups and more than 67 percent for other subgroups.

We used weights in the impact analysis to offset the differential sampling probabilities created by stratification. Weights were calculated so that the characteristics of control group students were representative of treatment group students.[1] If p_j is the probability of being selected into the treatment group, then the probability of being chosen into the control group is $(1 - p_j)$ and the

$_j$ relative pr

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[1]An alternative method would have been to weight sample members so that both treatment and control groups were representative of the full population of applicants, rather than the population offered admission to these programs. However, we considered it more appropriate for the means and impacts presented in the report to reflect the population actually served by the SDDAP programs, rather than the population that applied to be served by the programs.

group members is the inverse of the relative probability of being selected into the control group, normalized so that the sum of weights equals the number of control group members:

$$(1) \quad W_j = \frac{1}{\frac{(1 - p_j)}{p_j}} \cdot \frac{N^c}{\sum_{i}^{N^c} \frac{(1 - p_j)}{p.}},$$

where N_c is the number of control group members in a particular program. These weights were applied to sample observations in calculating both the unadjusted and regression-adjusted treatment and control group means. They also were used in tables comparing baseline characteristics of various groups.

B. ESTIMATING PROGRAM IMPACTS USING REGRESSION MODELS

An experimental research design, in which sample members are randomly assigned to a treatment or control group, produces research groups that are similar at baseline. However, using baseline characteristics as explanatory variables in regression models reduces the variance of impact estimates and accounts for any baseline differences between the research groups that arise, including differences that may arise as a result of follow-up data collection.

The regression model used to estimate impacts is illustrated in equation (2):

$$(2) \quad y_i = X_i \beta + \alpha T_i + \epsilon_i,$$

where y_i is an outcome measure (such as grade point average or percentage of days absent) for student i; X_i is a set of baseline characteristics; T_i is the treatment dummy, equal to one if the sample member is in the treatment group and equal to zero if he or she is in the control group; and ϵ_i is a

random error term representing unobserved factors affecting the outcome.[2] The estimated value of α is the value of a is the "regression-adjusted" impact of the program on outcome y. If treatment and control group members had similar observed baseline characteristics (as is typically the case), the estimated value of α will be similar to the simple difference between treatment and control group members in the mean value of y. However, the variance of α should be somewhat smaller when a regression model is used.

We also used regression models to estimate impacts for various subgroups. The subgroups that we examined were based on gender, ethnicity, cohort, program entry date, and a variety of education "risk" factors. Not all subgroups were analyzed for every site, because subgroups in some sites were too small. Subgroup impacts were estimated using the following model:

$$(3)\quad y_i = X_i\beta + \alpha_1 T_i + \alpha_2 S_i * T_i + \epsilon_i,$$

where S_i is a dummy variable equal to one if the case is a member of a particular subgroup (for example, male, Hispanic, or below grade level) and is equal to zero if he or she is not. In this model, $\alpha_1 + \alpha_2$ is the impact for those in the subgroup and α_1 is the impact for those who are not. If the estimate of α_2 is significantly different from zero, then we can conclude that the subgroup impacts are significantly different from each other. We used the same baseline variables in the subgroup models as we did for the full model, with the exception that the variable defining the subgroup could no longer be used as a baseline variable.

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[2]For binary outcomes (such as whether a student was a dropout), we used logistic regression models to estimate impacts, rather than the simple linear model illustrated in equation (2). For some outcomes and programs, the logistic models failed to converge, primarily because of small sample sizes. In these cases, we reverted to the simple linear model. The choice of technique rarely mattered. We compared impact estimates from simple linear models and logistic models for various outcomes and found that the estimates were nearly identical.

The regression models included baseline variables that previous research suggested would be correlated with the outcomes we analyzed. Baseline variables fall into three categories: (1) demographic characteristics, such as age, race/ethnicity, and sex; (2) family background characteristics; and (3) variables indicating or correlated with poor school performance. For family background measures, we used the mother's education, the number of siblings, whether the sample member had a sibling who had dropped out, the employment status of the parents, whether both parents were present in the household, the level of parental discipline, whether the sample member read more than two hours each week, whether the household was receiving public assistance, and whether the primary language spoken at home was English.

School performance variables included whether a student was below grade level, had average grades below C, had discipline problems at school, was absent more than 20 days during the prior year, had ever dropped out of school, had low self-esteem, had an external locus of control, or was a parent. We also included three variables indicating whether a student considered any of the following to be serious problems at his or her school: (1) skipping class, (2) using drugs or alcohol, or (3) fighting. We included a cohort variable for whether the sample member was in cohort 1 or cohort 2, as well as variables indicating the time of scheduled program entry (early first semester, late first semester, or second semester). In general, we attempted to include the full set of baseline variables for each site. However, in some cases, when there was little or no variation for a particular variable within a site, the variable was dropped from the model.[3]

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[3] For six sites (in Albuquerque, Atlanta, Chicago, Flint, Newark, and Rockford) for which school records data were available and for which we found evidence of baseline treatment-control differences, we used additional baseline variables from the school records. The additional variables included measures of the sample members' attendance, grades, and standardized test scores during the school year preceding program entry.

Sample sizes were small in some sites. Therefore, we did not want to drop any students for whom we had valid follow-up data if they had missing baseline items. If students had missing baseline items, we assigned the average value of the baseline item for that site. Using average values to replace missing items reduces the variance of our estimates, but at the expense of introducing measurement error (because the average value of a variable generally will not equal the true but unobserved value of that variable). When missing values were imputed for more than five percent of cases for a particular variable within a site, we also included a dummy variable in the model flagging the imputed cases. A dummy variable was included in regression models to flag cases for which follow-up data were available but all baseline items were missing, which happened when students did not complete baseline questionnaires.

APPENDIX B

DATA COLLECTION AND QUALITY

Our analysis uses baseline and follow-up data from student questionnaires and from school records. This appendix discusses the procedures we used to collect these data and the quality of the data we collected.

A. PROCEDURES FOR COLLECTING QUESTIONNAIRE DATA

We collected baseline questionnaires from almost all students and two or three follow-up questionnaires from many students. Most students completed a baseline questionnaire at the time of or shortly after random assignment. A single baseline questionnaire formatted for self-administration was developed for all programs. The baseline questionnaire collected information about student demographic characteristics, family background, attitudes and aspirations, and academic experiences from the school year preceding program entry.

Students generally completed follow-up questionnaires at the end of a school year. Because students were in two cohorts, follow-up waves were a year apart for the cohorts. For example, the second follow-up questionnaire was given to cohort 1 students at the end of the 1993-1994 school year and to cohort 2 students at the end of the 1994-1995 school year. (We also administered a first follow-up questionnaire to all students, but results from these data are used only sparingly in this report.) Data collection ended at the same time for both cohorts (in the fall of 1995), by which point we were able to follow up twice with the second cohort and three times with the first cohort.

Follow-up questionnaires were collected using three modes. Program staff administered follow-up questionnaires to students in their programs or to students whom they could easily locate. MPR administered telephone interviews to students whom programs could not locate. In particular, MPR interviewed a large proportion of control group members, as programs could not easily locate them. MPR also administered field interviews to students who could not be interviewed by telephone.

The proportion of surveys administered by programs varied by program and by research group. Middle school students and treatment group students were more likely than high school students and control group students to be surveyed by program staff. This pattern is due to the greater ease with which middle school students and treatment group students could be located by program staff.

Response rates were high in all programs, typically 80 percent or more, and generally similar for treatment and control groups (Tables B.1 and B.2). We tested for attrition bias by comparing baseline characteristics of treatment and control groups for which follow-up data were available (Tables B.3 and B.4).

B. SCHOOL RECORDS DATA

We collected student records data for the three follow-up years for cohort 1 and the two follow-up years for cohort 2. We sent records forms to programs roughly on a semester cycle. Program staff generally transcribed records data onto hard-copy forms, which they sent to MPR for data entry. In some sites, program staff extracted data from computer files and sent the files to MPR for processing. Baseline student records data covered the school year preceding the students' initial entry into the sample. As with the questionnaire, we used a single form to collect records data in all programs. Unlike the questionnaire, we used the same form to collect baseline and follow-up records data, which included measures of student enrollment, attendance, and academic performance.

We attempted to collect records data for all programs. We collected usable records data for all eight middle school programs and three of the eight high school programs (Chicago, Las Vegas, and Miami). The other five high school programs operated independently of the regular school district; thus, records data were not available to us.

We analyzed three main categories of records data: (1) attendance data (in particular, the percentage of enrolled days absent), (2) grade data (including grades in English and mathematics

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TABLE B.1

SAMPLE SIZES AND RESPONSE RATES
(MIDDLE SCHOOL PROGRAMS)

	Number of Valid Cases		Number for Whom F2 Survey Was Attempted		Number Completing F2 Survey		Percentage of Attempted F2 Surveys Completed		Number for Whom F3 Survey Was Attempted		Number Completing F3 Survey		Percentage of Attempted F3 Surveys Completed	
	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control
Cohort 1														
Albuquerque	144	81	144	81	117	72	81	89	144	81	120	69	83	85
Atlanta	0	0	0	0	0	0	n.a.	n.a.	0	0	0	0	n.a.	n.a.
Flint	46	46	45	46	43	39	96*	85	45	46	40	36	89	78
Long Beach	79	53	78	53	62	38	80	72	78	53	58	39	74	74
Miami-COMET	0	0	0	0	0	0	n.a.	n.a.	0	0	0	0	n.a.	n.a.
Newark	214	135	214	135	185	108	86	80	214	135	187	109	87*	81
Rockford	187	91	187	91	178	88	95	97	187	89	155	73	83	82
Sweetwater	130	116	130	116	123	107	95	92	130	116	119	100	92	86
Total	800	522	798	522	708	452	89	87	798	520	679	426	85	82
Cohort 2														
Albuquerque	71	38	71	38	67	33	94	87	0	0	0	0	n.a.	n.a.
Atlanta	80	80	80	80	67	73	84	91	0	0	0	0	n.a.	n.a.
Flint	66	40	66	40	57	33	86	83	0	0	0	0	n.a.	n.a.
Long Beach	97	70	97	70	88	56	91*	80	0	0	0	0	n.a.	n.a.
Miami-COMET	118	66	118	66	97	50	82	76	0	0	0	0	n.a.	n.a.
Newark	178	93	178	93	156	86	88	93	0	0	0	0	n.a.	n.a.
Rockford	206	132	206	132	176	110	86	83	0	0	0	0	n.a.	n.a.
Sweetwater	133	121	133	121	123	113	93	93	0	0	0	0	n.a.	n.a.
Total	949	640	949	640	831	554	88	87	0	0	0	0	n.a.	n.a.
Cohorts 1 and 2														
Albuquerque	215	119	215	119	184	105	86	88	144	81	120	69	83	85
Atlanta	80	80	80	80	67	73	84	91	0	0	0	0	n.a.	n.a.
Flint	112	86	111	86	100	72	90	84	45	46	40	36	89	78
Long Beach	176	123	175	123	150	94	86*	76	78	53	58	39	74	74
Miami-COMET	118	66	118	66	97	50	82	76	0	0	0	0	n.a.	n.a.
Newark	392	228	392	228	341	194	87	85	214	135	187	109	87*	81
Rockford	393	223	393	223	354	198	90	89	187	89	155	73	83	82
Sweetwater	263	237	263	237	246	220	94	93	130	116	119	100	92	86
Total	1,749	1,162	1,747	1,162	1,539	1,006	88	87	798	520	679	426	85	82

*Difference between treatment and control response rates statistically significant at the .10 level.

F2 = second follow-up; F3 = third follow-up; n.a. = not applicable.

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TABLE B.2

SAMPLE SIZES AND RESPONSE RATES
(HIGH SCHOOL PROGRAMS)

	Number of Valid Cases		Number for Whom F2 Survey Was Attempted		Number Completing F2 Survey		Percentage of Attempted F2 Surveys Completed		Number for Whom F3 Survey Was Attempted		Number Completing F3 Survey		Percentage of Attempted F3 Surveys Completed	
	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control
Cohort 1														
Boston-Both	19	14	19	13	7	2	37	15	19	14	13	9	68	64
Chicago	70	37	70	37	65	33	93	89	70	37	63	33	90	89
Flowers (Queens)	55	32	55	32	41	21	75	66	54	32	42	18	78*	56
Las Vegas	103	97	103	97	90	85	87	88	103	97	77	73	75	75
Miami-Academy	7	8	7	8	6	7	86	88	7	8	5	7	71	88
Seattle	199	123	199	123	164	92	82	75	199	122	132	85	66	70
St. Louis	88	80	88	80	74	63	84	79	87	80	58	59	67	74
Tulsa	151	93	151	93	123	80	82	86	150	93	124	83	83	89
Total	692	484	692	483	570	383	82	79	689	483	514	367	75	76
Cohort 2														
Boston-Both	164	102	162	102	125	78	77	77	0	0	0	0	n.a.	n.a.
Chicago	57	49	57	49	46	42	81	86	0	0	0	0	n.a.	n.a.
Flowers (Queens)	50	28	50	28	40	20	80	71	0	0	0	0	n.a.	n.a.
Las Vegas	184	100	184	100	145	79	79	79	0	0	0	0	n.a.	n.a.
Miami-Academy	70	57	70	57	57	50	81	88	0	0	0	0	n.a.	n.a.
Seattle	123	71	122	70	80	58	66*	83	0	0	0	0	n.a.	n.a.
St. Louis	135	70	135	69	112	52	83	75	0	0	0	0	n.a.	n.a.
Tulsa	106	55	106	55	91	41	86*	75	0	0	0	0	n.a.	n.a.
Total	889	532	886	530	696	420	79	79	0	0	0	0	n.a.	n.a.
Cohorts 1 and 2														
Boston-Both	183	116	181	115	132	80	73	70	19	14	13	9	68	64
Chicago	127	86	127	86	111	75	87	87	70	37	63	33	90	89
Flowers (Queens)	105	60	105	60	81	41	77	68	54	32	42	18	78*	56
Las Vegas	287	197	287	197	235	164	82	83	103	97	77	73	75	75
Miami-Academy	77	65	77	65	63	57	82	88	7	8	5	7	71	88
Seattle	322	194	321	193	244	150	76	78	199	122	132	85	66	70
St. Louis	223	150	223	149	186	115	83	77	87	80	58	59	67	74
Tulsa	257	148	257	148	214	121	83	82	150	93	124	83	83	89
Total	1,581	1,016	1,578	1,013	1,266	803	80	79	689	483	514	367	75	76

*Difference between treatment and control response rates statistically significant at the .10 level.

F2 = second follow-up; F2 = third follow-up; n.a. = not applicable.

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TABLE B.3

VALUE OF F-STATISTIC FOR TESTS FOR ATTRITION BIAS, MIDDLE SCHOOL PROGRAMS

	Albuquerque Middle School Leadership Program	Atlanta Middle School Academy	Flint Accelerated Academics Academy	Long Beach Up With Literacy	Miami Career Opportunities Motivated Through Technology (COMET)[a]	Newark Project ACCEL	Rockford Early Intervention Project	Sweetwater Twelve Together Program
Baseline	1.1	1.9*	1.0	0.6	1.3	0.9	1.6	0.8
First Follow-Up Questionnaire	1.5*	1.6*	0.9	0.7	1.1	0.8	1.5	0.9
Second Follow-Up Questionnaire	1.4	1.5*	0.8	0.7	0.9	0.9	1.7*	1.2
Third Follow-Up Questionnaire	1.4	NA	0.7	0.9	NA	1.5*	1.4	1.2

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Baseline and Follow-Up Questionnaires.

NOTE: The F-statistic is for the test that baseline characteristics shown in Table II.1 are equal for the treatment and control groups.

NA = not available.

 *Significantly different from zero at the .10 level, one-tailed test.

TABLE B.4

VALUE OF F-STATISTIC FOR TESTS FOR ATTRITION BIAS, HIGH SCHOOL PROGRAMS

	Boston JFY and University High Schools	Chicago School-Within-a-School	Queens Flowers with Care	Las Vegas Horizon High School	Miami Corporate Academy	Seattle Middle College High School	St. Louis Metropolitan Youth Academy	Tulsa Student Training and Reentry Program
Baseline	1.9*	1.1	1.3	0.7	1.1	0.7	0.6	1.2
First Follow-Up Questionnaire	2.2*	1.2	1.8*	1.0	1.2	0.7	1.0	1.5*
Second Follow-Up Questionnaire	1.5*	1.1	1.1	NA	1.1	0.9	0.7	1.3
Third Follow-Up Questionnaire	NA	0.7	1.1	0.8	NA	1.6*	1.0	1.4

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Baseline and Follow-Up Questionnaires.

NOTE: The F-statistic is for the test that baseline characteristics shown in Table III.1 are equal for the treatment and control groups.

NA = not available.

 *Significantly different from zero at the .10 level, one-tailed test.

classes and overall grade point average), and (3) test score data (scores on standardized reading and mathematics tests administered by the schools). Not all programs with usable records data had all these items. Table B.5 summarizes the availability of each of these categories of data, by program. All 11 programs with usable school records had attendance data, and all but 1 (the Miami-COMET program) had grade data. However, several (Atlanta, Las Vegas, and Miami) did not have test score data.

TABLE B.5

SCHOOL RECORDS DATA AVAILABILITY

	Attendance/Absence Data	Grade Data	Standardized Test Score Data
Middle School Programs			
Albuquerque	Yes	Yes	Yes[a]
Atlanta	Yes[b]	Yes[b]	No
Flint	Yes	Yes	Yes
Long Beach	Yes	Yes	Yes[b]
Miami-COMET	Yes[b]	No	Yes[b]
Newark	Yes	Yes	Yes
Rockford	Yes	Yes	Yes[b]
Sweetwater	Yes	Yes	Yes
High School Programs			
Boston-JFY	No	No	No
Chicago	Yes	Yes	Yes
Flowers (Queens)	No	No	No
Las Vegas	Yes	Yes	No
Miami-Academy	Yes[b]	Yes[b]	No
Seattle	No	No	No
St. Louis	No	No	No
Tulsa	No	No	No

[a]First follow-up (F1) math scores are available for cohort 1 only. Second follow-up (F2) math scores are not available.

[b]Only F1 available.

APPENDIX C

**IMPACT ESTIMATES FOR ADDITIONAL OUTCOMES,
BY PROGRAM**

TABLE C.1

PROGRAM IMPACTS ON ADDITIONAL OUTCOMES,
MIDDLE SCHOOL LEADERSHIP PROGRAM, ALBUQUERQUE, NEW MEXICO

| | Year 2 | | Year 3 | |
Outcome	Treatment Group Mean	Control Group Mean	Treatment Group Mean	Control Group Mean
Percentage of Year Attending School	93	95	84	85
Self-Reported Grades	76	76	76	74
Absent >1 per Week	30	26	34	34
Disciplinary Problems (Occurred During Year)				
Sent to office for doing something wrong	53	57	48	48
Sent to office because of schoolwork	19	26	19	19
Parents received warning about attendance	52	52	67	66
Parents received warning about behavior	28	30	29	25
Got into fight	25	25	25	29
Educational Aspirations				
Would like to graduate from college	58	66	51	53
Would like to attend graduate school	22*	32	28	26
Parents' Involvement in School Activities				
Attended school meeting	35	44	39	30
Phoned/spoke to teacher or counselor	66	64	73*	48
Visited classes	18	13	20	11
Attended school event	45	55	46	60
				38
Read for Fun Two or More Hours per Week	35	35	35	
Watched TV Two or Fewer Hours per Night	42	48	47	45
Ever Employed	26	32	51	43
Drank Alcohol Previous Month	43	42	49	43
Smoked Marijuana Previous Month	25*	17	26	33
Used Other Illegal Drugs Previous Month	9*	1	9	9
Got Pregnant Previous Year (Females)	3	9	12	24
Got Female Pregnant Previous Year (Males)	3	3	7	7
Sample Size	**185**	**105**	**120**	**69**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires and School Records.

NOTE: Treatment group means and control group means are adjusted using regression models.

*Significantly different from control group mean at the .10 level, two-tailed test.

TABLE C.2

PROGRAM IMPACTS ON ADDITIONAL OUTCOMES,
MIDDLE SCHOOL ACADEMY, ATLANTA, GEORGIA[a]

Outcome	Year 2	
	Treatment Group Mean	Control Group Mean
Percentage of Year Attending School	97	91
Self-Reported Grades	74	74
Absent >1 per Week	26	26
Disciplinary Problems (Occurred During Year)		
Sent to office for doing something wrong	86	80
Sent to office because of schoolwork	33	28
Parents received warning about attendance	40	25
Parents received warning about behavior	52*	36
Got into fight	48	43
Educational Aspirations		
Would like to graduate from college	45	49
Would like to attend graduate school	21*	10
Parents' Involvement in School Activities		
Attended school meeting	48	35
Phoned/spoke to teacher or counselor	62	71
Visited classes	38	28
Attended school event	44	36
Read for Fun Two or More Hours per Week	38	25
Watched TV Two or Fewer Hours per Night	28	26
Ever Employed	22	23
Drank Alcohol Previous Month	26	18
Smoked Marijuana Previous Month	9	9
Used Other Illegal Drugs Previous Month	1	1
Got Pregnant Previous Year (Females)	8	21
Got Female Pregnant Previous Year (Males)	4	4
Sample Size	**73**	**67**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires and School Records.

NOTE: Treatment group means and control group means are adjusted using regression models.

[a]Due to late start-up of random assignment, no year 3 data were collected for Atlanta.

  *Significantly different from control group mean at the .10 level, two-tailed test.

TABLE C.3

PROGRAM IMPACTS ON ADDITIONAL OUTCOMES,
ACCELERATED ACADEMICS ACADEMY, FLINT, MICHIGAN

Outcome	Year 2		Year 3	
	Treatment Group Mean	Control Group Mean	Treatment Group Mean	Control Group Mean
Percentage of Year Attending School	99*	96	100*	87
Self-Reported Grades	74	72	68	69
Absent >1 per Week	41	39	39	48
Disciplinary Problems (Occurred During Year)				
Sent to office for doing something wrong	80	68	73	48
Sent to office because of schoolwork	22	23	20	29
Parents received warning about attendance	24	30	46	35
Parents received warning about behavior	40*	58	31*	55
Got into fight	42	46	21	36
Educational Aspirations				
Would like to graduate from college	71*	64	67	62
Would like to attend graduate school	36	46	28	25
Parents' Involvement in School Activities				
Attended school meeting	58	50	49	61
Phoned/spoke to teacher or counselor	76	81	78	76
Visited classes	54	51	55	57
Attended school event	49	45	45	29
Read for Fun Two or More Hours per Week	26	25	32	44
Watched TV Two or Fewer Hours per Night	27	32	20	33
Ever Employed	18	22	36	11
Drank Alcohol Previous Month	31	24	22	28
Smoked Marijuana Previous Month	27*	14	15*	42
Used Other Illegal Drugs Previous Month	2	2	1	1
Got Pregnant Previous Year (Females)	1	1	NA	NA
Got Female Pregnant Previous Year (Males)	3	3	NA	NA
Sample Size	**100**	**72**	**40**	**36**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires and School Records.

NOTE: Treatment group means and control group means are adjusted using regression models.

NA = not available.

  *Significantly different from control group mean at the .10 level, two-tailed test.

TABLE C.4

PROGRAM IMPACTS ON ADDITIONAL OUTCOMES,
UP WITH LITERACY, LONG BEACH, CALIFORNIA

Outcome	Year 2		Year 3	
	Treatment Group Mean	Control Group Mean	Treatment Group Mean	Control Group Mean
Percentage of Year Attending School	95	96	91	89
Self-Reported Grades	80	81	77	78
Absent >1 per Week	26	18	23	39
Disciplinary Problems (Occurred During Year)				
Sent to office for doing something wrong	50	57	31	38
Sent to office because of schoolwork	14	10	5	3
Parents received warning about attendance	24	20	31	33
Parents received warning about behavior	42	37	28	23
Got into fight	37	32	21	39
Educational Aspirations				
Would like to graduate from college	73	74	65	64
Would like to attend graduate school	40	49	27	35
Parents' Involvement in School Activities				
Attended school meeting	55	65	61	53
Phoned/spoke to teacher or counselor	60	62	47	42
Visited classes	50	56	40	29
Attended school event	35	37	36	23
Read for Fun Two or More Hours per Week	30	38	47	47
Watched TV Two or Fewer Hours per Night	28	29	32	35
Ever Employed	4	10	17	12
Drank Alcohol Previous Month	NA	NA	15	15
Smoked Marijuana Previous Month	NA	NA	1	1
Used Other Illegal Drugs Previous Month	NA	NA	4	4
Got Pregnant Previous Year (Females)	4	4	4	4
Got Female Pregnant Previous Year (Males)	4	4	3	3
Sample Size	**150**	**94**	**58**	**39**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires and School Records.

NOTE: Treatment group means and control group means are adjusted using regression models.

NA = not available.

  *Significantly different from control group mean at the .10 level, two-tailed test.

TABLE C.5

PROGRAM IMPACTS ON ADDITIONAL OUTCOMES,
CAREER OPPORTUNITIES MOTIVATED THROUGH TECHNOLOGY, MIAMI, FLORIDA[a]

| Outcome | Year 2 | |
	Treatment Group Mean	Control Group Mean
Percentage of Year Attending School	99*	92
Self-Reported Grades	78	78
Absent >1 per Week	8	9
Disciplinary Problems (Occurred During Year)		
Sent to office for doing something wrong	50	44
Sent to office because of schoolwork	16	14
Parents received warning about attendance	16	17
Parents received warning about behavior	36	38
Got into fight	33	31
Educational Aspirations		
Would like to graduate from college	82	89
Would like to attend graduate school	22	15
Parents' Involvement in School Activities		
Attended school meeting	70	72
Phoned/spoke to teacher or counselor	75	77
Visited classes	74	67
Attended school event	67	66
Read for Fun Two or More Hours per Week	42*	27
Watched TV Two or Fewer Hours per Night	29	35
Ever Employed	9	0
Drank Alcohol Previous Month	NA	NA
Smoked Marijuana Previous Month	NA	NA
Used Other Illegal Drugs Previous Month	NA	NA
Got Pregnant Previous Year (Females)	NA	NA
Got Female Pregnant Previous Year (Males)	NA	NA
Sample Size	**97**	**50**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires and School Records.

NOTE: Treatment group means and control group means are adjusted using regression models.

[a]Due to late startup of random assignment, no year 3 data were collected for Miami.

NA = not available.

  *Significantly different from control group mean at the .10 level, two-tailed test.

TABLE C.6

PROGRAM IMPACTS ON ADDITIONAL OUTCOMES,
PROJECT ACCEL, NEWARK, NEW JERSEY

Outcome	Year 2		Year 3	
	Treatment Group Mean	Control Group Mean	Treatment Group Mean	Control Group Mean
Percentage of Year Attending School	95	96	88	87
Self-Reported Grades	77	77	76	74
Absent >1 per Week	21	17	20	27
Disciplinary Problems (Occurred During Year)				
Sent to office for doing something wrong	51	50	46*	59
Sent to office because of schoolwork	11	9	19*	9
Parents received warning about attendance	29	18	28	26
Parents received warning about behavior	36	36	30	39
Got into fight	40	45	35	42
Educational Aspirations				
Would like to graduate from college	74*	81	69	73
Would like to attend graduate school	31	33	33	36
Parents' Involvement in School Activities				
Attended school meeting	72	68	71	70
Phoned/spoke to teacher or counselor	83	87	80	81
Visited classes	84	86	66*	78
Attended school event	60*	69	63	62
Read for Fun Two or More Hours per Week	33*	40	44	35
Watched TV Two or Fewer Hours per Night	29	27	29	31
Ever Employed	9	10	31	28
Drank Alcohol Previous Month	12*	6	11*	19
Smoked Marijuana Previous Month	8	6	9	13
Used Other Illegal Drugs Previous Month	NA	NA	NA	NA
Got Pregnant Previous Year (Females)	6	9	13	13
Got Female Pregnant Previous Year (Males)	1	10	2	2
Sample Size	**341**	**195**	**187**	**109**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires and School Records.

NOTE: Treatment group means and control group means are adjusted using regression models.

NA = not available.

*Significantly different from control group mean at the .10 level, two-tailed test.

TABLE C.7

PROGRAM IMPACTS ON ADDITIONAL OUTCOMES,
EARLY INTERVENTION PROGRAM, ROCKFORD, ILLINOIS

Outcome	Year 2		Year 3	
	Treatment Group Mean	Control Group Mean	Treatment Group Mean	Control Group Mean
Percentage of Year Attending School	94	96	89	89
Self-Reported Grades	70	69	70	69
Absent >1 per Week	33	32	35	31
Disciplinary Problems (Occurred During Year)				
Sent to office for doing something wrong	82	76	73	65
Sent to office because of schoolwork	29	24	28	20
Parents received warning about attendance	46	44	51	46
Parents received warning about behavior	48*	58	42	36
Got into fight	54	52	40	35
Educational Aspirations				
Would like to graduate from college	57	60	44	49
Would like to attend graduate school	18	23	10	13
Parents' Involvement in School Activities				
Attended school meeting	47	46	46	41
Phoned/spoke to teacher or counselor	71	76	80	77
Visited classes	30	36	34	30
Attended school event	46	46	44	50
Read for Fun Two or More Hours per Week	33	32	41	47
Watched TV Two or Fewer Hours per Night	22	24	30	25
Ever Employed	17	16	31*	56
Drank Alcohol Previous Month	22	24	30	20
Smoked Marijuana Previous Month	15	17	14	19
Used Other Illegal Drugs Previous Month	3	2	1	1
Got Pregnant Previous Year (Females)	15*	1	17	4
Got Female Pregnant Previous Year (Males)	2	2	7	0
Sample Size	**355**	**199**	**155**	**73**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires and School Records.

NOTE: Treatment group means and control group means are adjusted using regression models.

  *Significantly different from control group mean at the .10 level, two-tailed test.

TABLE C.8

PROGRAM IMPACTS ON ADDITIONAL OUTCOMES,
TWELVE TOGETHER PROGRAM, SWEETWATER UNION SCHOOL DISTRICT, CALIFORNIA

Outcome	Year 2		Year 3	
	Treatment Group Mean	Control Group Mean	Treatment Group Mean	Control Group Mean
Percentage of Year Attending School	97	96	93	92
Self-Reported Grades	80	79	78	79
Absent >1 per Week	17	18	26	22
Disciplinary Problems (Occurred During Year)				
Sent to office for doing something wrong	44	49	36	45
Sent to office because of schoolwork	19	18	15	15
Parents received warning about attendance	31	27	34	32
Parents received warning about behavior	24	28	17	13
Got into fight	19	20	14	18
Educational Aspirations				
Would like to graduate from college	87	86	83	88
Would like to attend graduate school	52	55	43	42
Parents' Involvement in School Activities				
Attended school meeting	61	63	54	46
Phoned/spoke to teacher or counselor	66	68	58	62
Visited classes	36	34	24	34
Attended school event	55	56	47	46
Read for Fun Two or More Hours per Week	46	45	52	43
Watched TV Two or Fewer Hours per Night	42	43	40	51
Ever Employed	11	10	17*	26
Drank Alcohol Previous Month	28	31	32*	46
Smoked Marijuana Previous Month	11	13	16	19
Used Other Illegal Drugs Previous Month	4	5	5	4
Got Pregnant Previous Year (Females)	4	3	7	7
Got Female Pregnant Previous Year (Males)	1	1	NA	NA
Sample Size	**246**	**220**	**119**	**100**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires and School Records.

NOTE: Treatment group means and control group means are adjusted using regression models.

NA = not available.

  *Significantly different from control group mean at the .10 level, two-tailed test.

TABLE C.9

PROGRAM IMPACTS ON ADDITIONAL OUTCOMES,
JOBS FOR YOUTH AND UNIVERSITY HIGH SCHOOLS, BOSTON, MASSACHUSETTS

	Year 2	
	Treatment Group Mean	Control Group Mean
Disciplinary Problems (Occurred During Year)		
Sent to office for doing something wrong	28	40
Sent to office because of schoolwork	11	7
Parents received warnings about attendance	43	50
Parents received warnings about behavior	17	9
Got into fight	17	26
Educational Aspirations		
Would like to graduate from college	50	52
Would like to attend graduate school	18	16
Parents' Involvement in School Activities		
Attended school meeting	36	44
Phoned/spoke to teacher or counselor	58	71
Visited classes	28	41
Attended school event	33	25
Student Employed in Previous Year	68	66
Read for Fun Two or More Hours per Week	67*	55
Watched TV for Two or Fewer Hours per Night	36	29
Sample Size	**132**	**80**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires and School Records.

NOTE: Treatment group means and control group means are adjusted using regression models.

[a]Due to late startup of random assignment, no year 3 data were collected for Boston.

*Significantly different from control group mean at the .10 level, two-tailed test.

TABLE C.10

PROGRAM IMPACTS ON ADDITIONAL OUTCOMES,
SCHOOL-WITHIN-A-SCHOOL, CHICAGO, ILLINOIS

	Year 2		Year 3	
	Treatment Group Mean	Control Group Mean	Treatment Group Mean	Control Group Mean
Disciplinary Problems (Occurred During Year)				
Sent to office for doing something wrong	55*	42	40	40
Sent to office because of schoolwork	9	8	21	0
Parents received warnings about attendance	35	23	34	3
Parents received warnings about behavior	23	19	11	11
Got into fight	23	16	18	17
Educational Aspirations				
Would like to graduate from college	51	59	45	46
Would like to attend graduate school	17	21	26	9
Parents' Involvement in School Activities				
Attended school meeting	38	37	52	33
Phoned/spoke to teacher or counselor	65	51	77	32
Visited classes	41	40	46	19
Attended school event	39	45	51	42
Student Employed in Previous Year	37	21	62	70
Read for Fun Two or More Hours per Week	45	44	51*	33
Watched TV for Two or Fewer Hours per Night	33	42	44	37
Sample Size	**113**	**75**	**63**	**33**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires and School Records.

NOTE: Treatment group means and control group means are adjusted using regression models.

*Significantly different from control group mean at the .10 level, two-tailed test.

TABLE C.11

PROGRAM IMPACTS ON ADDITIONAL OUTCOMES,
HORIZON HIGH SCHOOL, LAS VEGAS, NEVADA

	Year 2		Year 3	
	Treatment Group Mean	Control Group Mean	Treatment Group Mean	Control Group Mean
Disciplinary Problems (Occurred During Year)				
Sent to office for doing something wrong	55	60	21	44
Sent to office because of schoolwork	16	20	26	7
Parents received warnings about attendance	65	61	42	75
Parents received warnings about behavior	27	30	35	14
Got into fight	31	31	18	47
Educational Aspirations				
Would like to graduate from college	35	36	31	25
Would like to attend graduate school	15	14	7	10
Parents' Involvement in School Activities				
Attended school meeting	26	24	44	12
Phoned/spoke to teacher or counselor	65	61	77	46
Visited classes	18	15	17	17
Attended school event	26	31	24	24
Student Employed in Previous Year	53	53	75	70
Read for Fun Two or More Hours per Week	48	50	55	54
Watched TV for Two or Fewer Hours per Night	36	38	41	42
Sample Size	**235**	**164**	**77**	**73**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires and School Records.

NOTE: Treatment group means and control group means are adjusted using regression models.

*Significantly different from control group mean at the .10 level, two-tailed test.

TABLE C.12

PROGRAM IMPACTS ON ADDITIONAL OUTCOMES,
CORPORATE ACADEMY, MIAMI, FLORIDA[a]

	Year 2	
	Treatment Group Mean	Control Group Mean
Disciplinary Problems (Occurred During Year)		
Sent to office for doing something wrong	48	43
Sent to office because of schoolwork	19	36
Parents received warnings about attendance	54	52
Parents received warnings about behavior	28	19
Got into fight	36	26
Educational Aspirations		
Would like to graduate from college	54	52
Would like to attend graduate school	16	18
Parents' Involvement in School Activities		
Attended school meeting	32	36
Phoned/spoke to teacher or counselor	68	62
Visited classes	26	29
Attended school event	25	34
Student Employed in Previous Year	53	58
Read for Fun Two or More Hours per Week	46	67
Watched TV for Two or Fewer Hours per Night	39	41
Sample Size	**63**	**57**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires and School Records.

NOTE: Treatment group means and control group means are adjusted using regression models.

[a]Due to late startup of random assignment, no year 3 data were collected for the Corporate Academy in Miami.

*Significantly different from control group mean at the .10 level, two-tailed test.

TABLE C.13

PROGRAM IMPACTS ON ADDITIONAL OUTCOMES,
FLOWERS WITH CARE YOUTH SERVICES, QUEENS, NEW YORK

| | Year 2 | | Year 3 | |
	Treatment Group Mean	Control Group Mean	Treatment Group Mean	Control Group Mean
Disciplinary Problems (Occurred During Year)				
Sent to office for doing something wrong	33	35	NA	NA
Sent to office because of schoolwork	12	25	NA	NA
Parents received warnings about attendance	24*	66	NA	NA
Parents received warnings about behavior	12*	29	NA	NA
Got into fight	4*	40	NA	NA
Educational Aspirations				
Would like to graduate from college	36	44	67*	37
Would like to attend graduate school	7	15	19	5
Parents' Involvement in School Activities				
Attended school meeting	49	56	NA	NA
Phoned/spoke to teacher or counselor	69	69	NA	NA
Visited classes	29	42	NA	NA
Attended school event	20	24	NA	NA
Student Employed in Previous Year	49	53	71	60
Read for Fun Two or More Hours per Week	57	60	73	62
Watched TV for Two or Fewer Hours per Night	31	43	27	40
Sample Size	**81**	**41**	**42**	**18**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires and School Records.

NOTE: Treatment group means and control group means are adjusted using regression models.

*Significantly different from control group mean at the .10 level, two-tailed test.

TABLE C.14

PROGRAM IMPACTS ON ADDITIONAL OUTCOMES,
MIDDLE COLLEGE HIGH SCHOOL, SEATTLE, WASHINGTON

	Year 2		Year 3	
	Treatment Group Mean	Control Group Mean	Treatment Group Mean	Control Group Mean
Disciplinary Problems (Occurred During Year)				
Sent to office for doing something wrong	28*	35	27	36
Sent to office because of schoolwork	16	11	33	7
Parents received warnings about attendance	43	41	36	19
Parents received warnings about behavior	11*	23	5	29
Got into fight	17	24	21	21
Educational Aspirations				
Would like to graduate from college	44	49	51	53
Would like to attend graduate school	23	17	18	11
Parents' Involvement in School Activities				
Attended school meeting	25	17	21	54
Phoned/spoke to teacher or counselor	43	45	32	54
Visited classes	23	16	16*	47
Attended school event	23*	34	41*	13
Student Employed in Previous Year	70	65	71*	63
Read for Fun Two or More Hours per Week	55	54	61	56
Watched TV for Two or Fewer Hours per Night	38	42	35	29
Sample Size	**245**	**150**	**132**	**85**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires and School Records.

NOTE: Treatment group means and control group means are adjusted using regression models.

  *Significantly different from control group mean at the .10 level, two-tailed test.

TABLE C.15

PROGRAM IMPACTS ON ADDITIONAL OUTCOMES,
METROPOLITAN YOUTH ACADEMY, ST. LOUIS, MISSOURI

	Year 2		Year 3	
	Treatment Group Mean	Control Group Mean	Treatment Group Mean	Control Group Mean
Disciplinary Problems (Occurred During Year)				
Sent to office for doing something wrong	40*	25	NA	NA
Sent to office because of schoolwork	18	9	NA	NA
Parents received warnings about attendance	34	26	NA	NA
Parents received warnings about behavior	28*	13	NA	NA
Got into fight	28	17	NA	NA
Educational Aspirations				
Would like to graduate from college	38*	26	31	43
Would like to attend graduate school	14*	6	5	13
Parents' Involvement in School Activities				
Attended school meeting	46	39	NA	NA
Phoned/spoke to teacher or counselor	62	57	NA	NA
Visited classes	45*	29	NA	NA
Attended school event	49	37	NA	NA
Student Employed in Previous Year	57	64	66	67
Read for Fun Two or More Hours per Week	47	49	53	61
Watched TV for Two or Fewer Hours per Night	33	27	33	16
Sample Size	**186**	**115**	**58**	**59**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires and School Records.

NOTE: Treatment group means and control group means are adjusted using regression models.

NA = not available.

*Significantly different from control group mean at the .10 level, two-tailed test.

TABLE C.16

PROGRAM IMPACTS ON ADDITIONAL OUTCOMES,
STUDENT TRAINING AND REENTRY PROGRAM, TULSA, OKLAHOMA

	Year 2		Year 3	
	Treatment Group Mean	Control Group Mean	Treatment Group Mean	Control Group Mean
Disciplinary Problems (Occurred During Year)				
Sent to office for doing something wrong	41*	54	NA	NA
Sent to office because of schoolwork	31*	21	NA	NA
Parents received warnings about attendance	38	31	NA	NA
Parents received warnings about behavior	14*	30	NA	NA
Got into fight	17*	32	NA	NA
Educational Aspirations				
Would like to graduate from college	37	30	36	29
Would like to attend graduate school	14	12	8	12
Parents' Involvement in School Activities				
Attended school meeting	24	29	NA	NA
Phoned/spoke to teacher or counselor	51	57	NA	NA
Visited classes	15	13	NA	NA
Attended school event	22	25	NA	NA
Student Employed in Previous Year	83	86	90*	77
Read for Fun Two or More Hours per Week	56	49	59	53
Watched TV for Two or Fewer Hours per Night	40	40	50	33
Sample Size	**214**	**121**	**124**	**83**

SOURCE: Evaluation of the School Dropout Demonstration Assistance Program, Follow-Up Questionnaires and School Records.

NOTE: Treatment group means and control group means are adjusted using regression models.

NA = not available.

*Significantly different from control group mean at the .10 level, two-tailed test.