The Challenge of Repeating Success in a Changing World

Final Report on the Center for Employment Training Replication Sites

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BUILDING KNOWLEDGE TO IMPROVE SOCIAL POLICY

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Overview

Succeeding in the labor market depends now more than ever on having the right education and training. This reality poses a particular challenge for out-of-school youth, who are no longer connected to institutions designed to provide them with training and connect them to good jobs. The Center for Employment Training (CET) in San Jose, California, is one such institution. CET in San Jose, with its training in a worklike setting and involvement of local employers, showed promise as a program for youth, having produced large positive effects on their employment and earnings in two earlier studies in the late 1980s.

Based on these earlier results, the U.S. Department of Labor launched the Evaluation of the Center for Employment Training Replication Sites in the mid-1990s, which was designed to test whether the CET model could be implemented successfully in different settings and have similarly positive effects on the youth served. This final report on the evaluation summarizes the replication effort's success and effects on youth after four and a half years.

Key Findings

- Replicating a program like CET is difficult, and fidelity to the original CET model varied greatly across the twelve sites. Only four of them (all older, CET-run programs) were deemed to have replicated the model with high fidelity. Sustaining program operations was a key challenge for several sites, and CET's job development component proved difficult to fully implement.

- Effects on training were much larger in the high-fidelity sites than in the other sites. For example, access to CET in the high-fidelity sites increased total time in training by 218 hours through Month 12 and by 145 hours through Month 54. The effects in the medium- and low-fidelity sites were 55 hours through Month 12 and no difference through Month 54.

- At Month 54, youth who had access to the program were still more likely than youth in the control group to have received a training certificate, although much of the effect occurred during the first 12 months. Effects were much larger in the high-fidelity sites.

- In the high-fidelity sites — the fairest test of the model's efficacy — access to CET did not increase youths' employment or earnings during the 54-month follow-up period. The positive effects on women's employment and earnings that were evident after 30 months did not persist beyond that point, while the negative effects on men's employment also did not persist. Positive effects did emerge on earnings for younger youth in the forth and fifth years, but these findings must be interpreted with caution due to small sample sizes. Effects in the medium- and low-fidelity sites were either negligible or negative.

Access to CET did not lead to better outcomes than youth would have had on their own, either by enrolling in other training programs or by gaining experience in the labor market. Several factors may have contributed to the pattern of results. Compared with CET-San Jose in the earlier studies, the replication sites served a broader and perhaps more employable group of youth; the sites also operated in a stronger labor market and in a competitive environment that offered more training options, some of which may have been similar to the CET approach.

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Preface

The Center for Employment Training (CET), headquartered in San Jose, California, gained the attention of policymakers in the early 1990s, when it proved to be the only training program in two major evaluations (one of which, JOBSTART, targeted disadvantaged youth) to produce large positive effects on participants' employment and earnings. Such documented success is rare among employment and training programs in general, but it is especially unusual among programs serving youth.

The Evaluation of the Center for Employment Training Replication Sites — initiated and funded by the U.S. Department of Labor — sought to build on this remarkable performance by testing the CET model on out-of-school youth beyond its traditional base in San Jose. This final report in a series evaluating the replication effort presents findings after four and a half years of follow-up. It shows that, even in the sites that best implemented the model, CET had no overall employment and earnings effects for youth in the program, even though it increased participants' hours of training and receipt of credentials.

Although these findings are discouraging, they do not necessarily repudiate the large positive effects for disadvantaged youth that were found in the earlier evaluation of CET in San Jose — because the context in which the replication took place was different. First, the youth who were served here are somewhat less disadvantaged than those in the JOBSTART evaluation. Second, CET is no longer the only game in town. In the best replication sites — all located in California — training options abound for out-of-school youth, through vocational institutes and the state's extensive community college system, and many youths in the control group took advantage of these options. Finally, the replication evaluation took place during the strong economic growth of the late 1990s. As a result, many of the youth could, and did, find decent jobs on their own, without CET.

In some ways, CET may be a victim of its own success. The positive findings from the earlier evaluations helped spur the growth of vocational training institutes. In addition, CET started out serving relatively disadvantaged adults but has since moved to a broader population, perhaps one that is less in need of its services. Nonetheless, the lack of effects in the replication study suggests the need to refine the CET model to make it stronger — perhaps by refocusing efforts on those disadvantaged youth who are least likely to succeed on their own or by strengthening the marketplace value of the training certificates that the program awards.

Finally, the findings do raise questions about whether a dynamic program like CET can, in fact, be replicated. CET-San Jose is unique in so many ways, having grown organically over 20 years, with an unusually committed founder and staff, very strong ties to the local community, and a tradition of political advocacy on behalf of the local Hispanic community. Perhaps a homegrown model like CET cannot be easily exported in a top-down way to other areas. More research is needed on how to transfer promising models to other areas, particularly given the difficulties that at-risk youth face in today's competitive job market.

Gordon L. Berlin
President

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The Authors

Executive Summary

Succeeding in the labor market depends now more than ever on having the right education and training. This reality poses a particular challenge for out-of-school youth, who are no longer connected to institutions designed to provide them with training and link them to good jobs. In addition, it is still not clear what is the most effective way to help these youth: Few of the programs that have been evaluated have produced impressive results. The Center for Employment Training, or CET, was one exception. CET in San Jose, California, was included in two large, multisite random assignment studies in the 1980s — the JOBSTART Demonstration for young high school dropouts and the Minority Female Single Parent (MFSP) Demonstration — and it was the only site in both studies to produce large, positive effects on employment and earnings.

The Evaluation of the Center for Employment Training Replication Sites, funded by the Department of Labor (DOL), is an outgrowth of this earlier success. Between 1995 and 1999, over 1,400 youth across twelve sites were assigned at random either to a program group that was eligible to receive CET services or to a control group that was not eligible for CET but could seek out and enroll in other education and training activities in the area. The replication evaluation was designed to test first whether the CET model could be implemented successfully in different settings. CET is noted for enrolling trainees with little prescreening, for providing training in a worklike setting, for requiring a full-time commitment from trainees, for involving employers in the design and delivery of training, for integrating instruction in basic skills into the training, and for allowing trainees to progress as they master competencies, without any fixed schedule. The second question was whether, once implemented, the program would have similarly positive effects for a broader sample of youth — all out-of-school youth, rather that just high school dropouts, as in the JOBSTART Demonstration — and in the economic environment of the late 1990s.

MDRC and Berkeley Policy Associates (BPA) are collaborating on the evaluation of the replication effort, and this is the third and final report in the evaluation. The first report documents program implementation in the twelve sites and finds that only four of the sites can be considered to have achieved high fidelity to the CET model.[1] The second report presents effects after 30 months and finds that the program increased training and certificate receipt and that it had much larger effects in the four "high-fidelity sites," which represent the fairest test of the CET approach. In the high-fidelity sites, the program did not increase employment and earn-

[1]See Stephen Walsh, Deana Goldsmith,Yasuyo Abe, and Andrea Cann, *Evaluation of the Center for Employment Training Replication Sites: Interim Report* (New York: MDRC, 2000).

ings for the full sample but did have positive effects for young women.[2] The present report looks at the program's effects after four and a half years (54 months). Did the effects that existed at the 30-month point persist longer term? And did the early training advantage eventually pay off for groups for whom there were no effects at 30 months?

Findings in Brief

- Implementing the CET approach is difficult, and fidelity to the original CET model varied greatly across the sites, affecting both implementation and program impacts. Only four sites were deemed to have replicated the model with high fidelity. Simply sustaining the model was a key challenge for several sites, and it also proved difficult to fully implement the job development component.

- Over the 54-month period, youth in the program group were more likely to have participated in training than their control group counterparts. The effect was largest in Year 1 and diminished thereafter, as the control group members continued to enroll in training on their own. Similarly, by Month 54, youth with access to the program were still more likely than control group youth to have a training certificate, although the impact was smaller than at the 30-month point.

- Effects on training and certificate receipt were much larger in the high-fidelity sites than in the other sites. For example, access to CET in the high-fidelity sites increased total time in training by 218 hours through Month 12 and by 145 hours through Month 54. The effects in the medium- and low-fidelity sites were 55 hours through Month 12 and no difference through Month 54.

- Across all sites, the program had no effect on youths' employment and earnings. However, the fairest test of the CET approach is among the smaller sample of youth in the four high-fidelity sites.

- In the high-fidelity sites, the positive effects on women's employment and earnings that were evident after 30 months did not persist beyond that point, while the negative effects on men's employment also did not persist. Effects on employment and earnings did not emerge for most other groups for whom there were no effects at 30 months. Positive effects on earnings did emerge

[2]Cynthia Miller, Johannes M. Bos, Kristin E. Porter, Fannie M. Tseng, Fred C. Doolittle, Deana N. Tanguay, and Mary P. Vencill, *Working with Disadvantaged Youth: Thirty-Month Findings from the Evaluation of the Center for Employment Training Replication Sites* (New York: MDRC, 2003).

for younger youth in the fourth and fifth years, but these findings must be interpreted with caution due to small sample sizes.

Several factors most likely contributed to the pattern of results. For example, the replication sites operated in a very different environment than the CET program in JOBSTART: They served a broader and perhaps more employable group of youth, and they operated in a stronger labor market and in an environment with more training options, some of which may have been similar to the CET approach. In addition, employers in today's labor market may view short-term training certificates differently than employers did in the past.

Implementing the CET Model

- **The CET approach is difficult to implement; only four of the twelve replication sites put all the key aspects of the model in place.**

Early implementation research determined that implementation of the model was strongest among four of the established sites in California that were part of the network of programs that CET developed and ran as it gradually expanded its operations. These high-fidelity sites were able to put in place all the key aspects of the program. Other sites that were newly established or that were operated by organizations other than CET — or that shared both characteristics — had much more difficulty implementing the full model. Six sites implemented it with medium fidelity, and two sites with low fidelity.

A key challenge for the sites was sustaining the CET model once it was implemented. While most sites implemented at least some program components, many of the sites experienced turnover in leadership and funding changes that led them to depart from the CET approach. As a result, four of the twelve sites shut their doors before the demonstration had ended — for example, in the second or third year of follow-up — and three other sites faced serious difficulties in maintaining program operations.

The program component that the sites were most likely to experience difficulty implementing was job development. Several sites did not have the close relationships with local employers that CET-San Jose has, and they were sometimes unable to provide participants with a suitable job opportunity on completion of training. Low intensity of participation was another frequent problem in medium- and low-fidelity sites: Many students did not attend regularly or dropped out before completing competencies and receiving job placement assistance.

Effects on Training and Education

- **In the high-fidelity sites, access to CET significantly increased participation in skills training in the first 12 months of follow-up. By Month 54, the effect was still statistically significant but smaller in size.**

In the first year of follow-up in the high-fidelity sites, survey respondents in the program group reported an average of 298 hours of skills training (which includes zero hours for those who did not participate), compared with 80 hours for control group members — for an impact of 218 hours. By Month 54, this difference had diminished to 145 hours. The effects in the medium- and low-fidelity sites were 55 hours through Month 12 and no difference through Month 54.

- **Access to CET significantly increased receipt of training credentials, with the biggest increase occurring in the high-fidelity sites. The effects on credential receipt were largest at the end of Year 1.**

By the end of Year 1, 45 percent of program group members in the high-fidelity sites reported having a training credential, compared with only 14 percent of control group members, for a difference of 30 percentage points. By Month 48, this difference had fallen to 21 percentage points. In the medium- and low-fidelity sites, the effects were 17 percentage points after 12 months and 7 percentage points after 48 months.

- **By the end of the follow-up period, total time spent in education and skills training activities was similar for the program and control groups.**

Although the control group in the high-fidelity sites accumulated fewer hours of skills training activities than the program group, they spent more total hours in education activities (typically, community college classes), particularly during the last year of follow-up. As a result, total hours in training and education combined were similar for the two groups.

Effects on Employment and Earnings

- **The problems in implementing the program made the detection of impacts all the more difficult. The best test of the CET approach is within the smaller sample of high-fidelity sites.**

Across all sites combined, access to CET had no positive effects on youths' employment and earnings. However, the sample of all twelve sites does not represent the best test of the CET model, given that a majority of the sites did not implement it successfully. Therefore, this report focuses largely on effects in the high-fidelity sites. The cost of limiting the analysis to these sites is a substantial reduction in sample size, making the detection of impacts more difficult and the resulting estimates more uncertain.

- **In the high-fidelity sites, access to CET did not increase youths' employment or earnings during the 54-month follow-up period. Although there were some effects in the early years for different subgroups of the full sample, these effects did not persist. Positive effects on earnings did emerge for the younger of two age subgroups, although these findings are suspect because of small sample sizes.**

At the 30-month point, women with access to CET in the high-fidelity sites were more likely to be working and were earning higher wages than women in the control group. In contrast, men in the program group were somewhat less likely than men in the control group to work, and they had substantially lower earnings. Neither of these effects lasted beyond Year 3. The effects at 30 months were due in part to a change in occupation and industry. For women, for example, CET led to a shift away from retail trade and professional services toward other industries (especially transportation) and a shift away from service occupations to clerical jobs. By Month 54, although some industry differences remained for women, there were no effects on employment or earnings. For men, in contrast, access to CET led to shifts into construction and manufacturing industries and a reduction in hours worked.

Differences in effects when analyzed by education level also occurred in the early years of follow-up, including negative effects on earnings for youth who entered the study as high school graduates. These effects did not persist into Years 4 and 5. Finally, during the fourth and fifth years of follow-up, earnings impacts did become positive for the younger subgroup. However, because the sample size for this subgroup is only 115, these positive impacts must be interpreted with caution.

- **In the medium- and low-fidelity sites, effects on employment and earnings were either negligible or negative.**

Most impacts in the lower-fidelity sites are not statistically significant, and the few that are significant tend to be negative. Access to CET, for example, reduced the employment rates of women in Year 3 and reduced the earnings of the younger subgroup in Year 4. These negative impacts highlight the potential consequences of a poorly implemented program.

Understanding the Results

Providing access to CET did not lead to better outcomes than these youth would have had on their own, either by enrolling in other training programs or by gaining experience in the labor market. Two possible reasons for the lack of effects may be the context in which the evaluation took place and the changing value to employers of short-term training.

The Context of the Replication Effort

The findings here differ from the large positive effects of CET that were found in the JOBSTART evaluation. But the replication effort took place in a very different context — so much so that these findings cannot be seen as a repudiation of the earlier results. The context can be regarded along three key dimensions: the population served, the labor market, and the training environment.

1. **A broader and more employable group of youth.** The application process for CET meant that only the most motivated applicants entered the evaluation. While this was true for the JOBSTART evaluation as well, that sample was restricted to youth who had low reading levels and had not completed high school. In contrast, the replication evaluation targeted all out-of-school youth, including high school graduates. (Efforts to identify a similarly disadvantaged subset of the larger replication sample were hindered by the small sample size within the high-fidelity sites.)

2. **The strong economy.** The CET replication effort began during a period of strong economic growth, with the result that employment rates for the control group were fairly high — considerably higher than the rates for a comparable JOBSTART sample. Although the economy did weaken later in the CET follow-up period, the effects on training received (which could lead to increased earnings) were substantially smaller by that point.

3. **Increased access to employment and training services.** Although CET was relatively unusual in the late 1980s, today's youth have access to a variety of training options, including those offered by community colleges. In addition, partly because of the earlier CET findings, many of the education and training programs that do exist are similar in structure to the CET approach.

These three factors interact to create conditions that are more favorable or less favorable for a particular training program. Consider the first two dimensions. It is possible, for example, that CET is successful with very disadvantaged youth in a relatively poor labor market (similar to the JOBSTART context) but that it does little for those who are more employable during a period of low unemployment. In fact, the combination of a more employable sample and a strong economy set a high hurdle for the replication sites to overcome. The employment rate for the control group in the high-fidelity sites reached 84 percent in Year 4, and average earnings among those who did work that year were over $18,000, suggesting that the youth in these sites did not need CET training credentials to obtain relatively well-paying jobs.

In addition, CET might be less successful even with less employable youth if those youth have a variety of other training options to choose from. The context for the replication sites is that CET and its approach are not as distinctive as they used to be. At a minimum, the existence of other options means that the evaluation is *not* measuring the effects of CET training compared with no training but, rather, is measuring the effects of access to CET training compared with access to the range of other education and training opportunities that are available in the local area.

The Changing Value of Short-Term Training

Youth who had access to CET received more training than their control group counterparts and yet still did not have higher employment rates or higher earnings. Although it could be argued that total hours in training is not a relevant measure unless that training is completed, access to CET also increased "completed training," or the receipt of training certificates. Surprisingly, receipt of a training certificate had no effect on increasing either employment rates or earnings — suggesting that employers may not value such certificates any more than they value other types of training or even work experience.

In addition, the results here suggest that the training received may not have been high quality relative to other training options available or that participants were trained for jobs in low-demand industries. For example, many of the youth who participated in training under CET and received certificates did not subsequently find jobs in the industries for which they trained. Others did initially find jobs in relevant industries but were working in different jobs by the 54-month point. In addition — and perhaps even more telling — a significant proportion of youth who were surveyed at Month 54 did not remember participating in training or receiving certificates four years earlier.

Youth today are receiving training certificates from a variety of institutions, ranging from proprietary institutions to community colleges, and employers may value some of these credentials more than others. Although CET-San Jose is a respected and well-known community organization, employers in some of the newer replication sites may not know of this track record, and they may have had difficulty distinguishing the quality of CET certificates from certificates offered by other, more established institutions.

The Challenges for Program Design

Targeting the Less Employable

The one aspect of a program's context that is changeable is the population it serves. The differences between the samples for the CET replication study and for JOBSTART suggest that these types of programs may be more effective for the more disadvantaged segment of out-of-

school youth, particularly in a strong economy where job opportunities are more abundant. The negative effects reported here for high school graduates, although short-lived, also suggest a role for targeting; that is, the more educated youth may have been better off gaining work experience. Serving youth who have more barriers to employment would require additional efforts to keep them engaged in program services and, possibly, to help them retain the jobs they subsequently find. Helping them establish strong ties to the labor market at a young age could have important payoffs in the future.

Modifying the Program Components

In a rapidly changing labor market where other training options exist, perhaps there are some modifications to the CET approach that would make it distinctive again and more effective with the youth it serves. Among the suggestions — which are not based on hard evidence — is that the program could continually assess its employer focus, to ensure that it is training youth for high-growth industries. This would include staying up to date on the skills and aptitudes that employers are looking for in new employees. Given that the replication sites seem to have had the most difficulty implementing the job development component, the program could also consider adding an internship to the end of training, to strengthen the transition to work.

The Challenges for Replication

CET-San Jose is a unique institution, with its strong ties to local employers, its history of involvement in the broader community, and its strong leadership. Can such a program that has been homegrown over so many years be replicated? The answer seems to be yes, but the challenges in transplanting it to other settings are daunting, and a new site may have to struggle for many years before its survival is ensured. Even in a deliberate and well-planned demonstration project like this one, the obstacles that local program operators face — often with limited or insufficient resources — are difficult to overcome, especially during a program's startup phase. The four programs that implemented the model with high fidelity in this study are all older, experienced, CET-operated programs in California. Future replication efforts should provide special outside technical assistance to facilitate the replication process and should also ensure that local programs have the resources and wherewithal to implement the intervention with high fidelity. Successful replication may also require extensive upfront marketing research to establish that there will be motivated customers (both trainees and employers) for the services that the local programs provide.

Chapter 1

Introduction

Although making the successful transition to adulthood is difficult for all young people, out-of-school youth face particular challenges. Unlike their college-bound counterparts, for example, they are connected to few institutions that are devoted specifically to helping them acquire the right skills and training needed to succeed in the labor market.[1] Particularly at risk are "disconnected" youth, or those not in school or in jobs.[2] At the same time, these young people face increasingly stiff competition for jobs. Employer demand has shifted to favor workers who have higher skill levels, leaving fewer opportunities for those with limited education. Establishing a strong connection to the labor market is critical in these early years, given that early problems strongly affect employment prospects later in adulthood.[3]

There have been several programs designed to assist out-of-school youth in this transition to work by providing employment and training services, and, in general, the results from evaluations of these programs have not been encouraging.[4] The Center for Employment Training, or CET, was one exception. CET in San Jose, California, showed considerable promise as an alternative to prevailing employment and training services for youth. In two national random assignment evaluations of employment and training programs — the Minority Female Single Parent (MFSP) Demonstration and the JOBSTART Demonstration — CET was the only site to produce positive results.[5]

The Evaluation of the Center for Employment Training Replication Sites was an outgrowth of these earlier successes. Initiated in 1992 and funded by the U.S. Department of Labor (DOL), the replication evaluation was designed to test whether programs like CET-San Jose could be implemented successfully in different settings and similarly have positive effects on the youth they serve. In each of the twelve sites included in the evaluation, the national CET office in San Jose cooperated with the local program to provide employment and training services for out-of-school youth according to the CET model: providing training in a worklike environment, requiring intensive (full-time) participation in services, and involving local employers in the design and delivery of training. Between 1995 and 1999, the sites recruited 1,485 out-of-school youth, ages 16 to 21, to be in the study. Half of the youth were randomly assigned to the program group and were eligible to receive CET services, while half were assigned to a con-

[1]Wald and Martinez (2003).
[2]Sum, Khatiwada, Pond, and Trub'skyy (2002); Besharov (2000).
[3]Neumark (2002).
[4]For example, see Bloom et al. (1997).
[5]Zambrowski, Gordon, and Berenson (1993); Cave, Bos, Doolittle, and Toussaint (1993).

trol group and were not eligible for CET services for 24 months, although they could seek out other services on their own. Because members of the two groups were assigned at random, any differences that emerge between the groups after study entry can reliably be attributed to CET or, specifically, to providing access to CET services.

The CET replication effort is being evaluated by MDRC and Berkeley Policy Associates (BPA), and this report is the third and final report in the evaluation, examining the program's effects after 54 months. The first report describes the program's implementation experience, the characteristics of the youth who participated in the study, and early participation in program activities.[6] The second report presents effects 30 months after the youth entered the evaluation.[7]

Summary of Findings Through 30 Months

- Implementing the CET approach is difficult, and fidelity to the original model varied greatly across sites. Only four of the twelve replication sites were characterized as achieving "high fidelity" to the model — implementing and sustaining each of its key components — and thus provide a fair test of this approach.
- A key difficultly in implementing the CET model was sustaining it. Most sites also found it challenging to fully implement the job development component.
- CET substantially increased youths' participation in training and the receipt of training certificates. Effects were large at the high-fidelity sites and more modest at the other, lower-fidelity sites.
- In the high-fidelity sites, CET led to substantial positive effects on a range of employment outcomes for women. Effects for men in these sites were negative or negligible.
- In the medium/low-fidelity sites, effects on employment outcomes were negative or negligible for the full sample as well as for several subgroups.

The findings of the replication study at 30 months are similar to earlier results from CET-San Jose, where the overall effects were driven largely by positive effects for young women. The results for young men reflect the challenges that programs face in increasing their labor market outcomes. The relatively high employment rates of young men in the absence of training, for example, means that the program would need to move them into better, higher-

[6]Walsh, Goldsmith, Abe, and Cann (2000).
[7]Miller et al. (2003).

paying jobs — something that has been difficult for any program to achieve. In the case of CET, one hypothesis raised at the 30-month point was that the program led to a shift in job type, toward jobs that were lower-paying initially but that might lead to greater stability and advancement in the longer run. Finally, it is important to remember the context in which these results occurred. The very strong economy of the late 1990s led to relatively high employment and earnings levels for the control group, creating a higher hurdle for the program to overcome.

The key questions for this report, therefore, are whether the positive effects for women persisted through Month 54 and whether the increased training eventually paid off for the men, as well as for other subgroups for whom there were no impacts at 30 months. It is plausible that the effects of training — particularly on earnings and advancement — could take longer than 30 months to emerge. In addition, the 54-month follow-up extends into the economic slowdown that began in 2001, providing an opportunity to test whether the additional training that was produced by CET helped these young people maintain their employment and earnings better than their control group counterparts, who did not have access to the program.

Background

Youth Employment

The employment problems of young people have long been a concern among policymakers. In 2004, for example, while the overall unemployment rate was 5.5 percent, the rate for 16- to 24-year-olds was 12.3 percent. Unemployment rates are especially high for black youth; the rate was 26.6 percent in 2004.[8] Unemployment tends to be higher among out-of-school youth than enrolled youth and is much higher for those who lack a high school diploma or General Educational Development (GED) certificate.[9] Although young people benefited from the strong economy of the 1990s, this group is also typically the first to feel the brunt of recession. Between 2000 and 2001 — the first year into the economic downturn — the employment-to-population ratio for 16- to 24-year-olds fell by 2.7 percentage points, compared with a decrease of 0.6 percentage point for adults ages 25 and over.[10] High rates of youth unemployment are a concern, given that early problems in the labor market can have lasting effects.[11]

Youth today also face a different labor market than 20 or 30 years ago. The loss of well-paying jobs for less-educated workers — such as in the manufacturing sector — coupled with

[8]U.S. Department of Labor Web site: http://www.bls.gov/news.release/youth.nr0.htm and http://www.bls.gov/cps/home.htm.

[9]U.S. Department of Labor Web site: ftp://ftp.bls.gov/pub/suppl/empsit.cpseea16.txt.

[10]Sum and Taggart (2001).

[11]Neumark (2002).

rising demand by employers for more highly skilled workers has severely limited young people's employment and earnings prospects. While the payoff to a college education is higher than ever, less-educated workers today are earning (in real terms) less than they were in the 1970s. Between 1979 and 2002, for example, median weekly earnings for men without a high school diploma fell by 27 percent. Earnings for those with a diploma but no college fell by 13 percent.[12] As a result, the range of career paths that can be followed by individuals who have no postsecondary education has narrowed. Or, put differently, it has become critical to link out-of-school youth to jobs through education and training.

Previous Training Programs

A variety of programs, using different approaches, have attempted to provide the link between training and employment, to overcome the obstacles that many youth face and to help them develop the skills needed for a changing labor market. However, most of the programs that have been evaluated have failed to produce positive effects.[13]

The National JTPA Study

The U.S. Department of Labor funded a random assignment evaluation of the Job Training Partnership Act (JTPA) to measure the impacts of its services for economically disadvantaged adults and out-of-school youth. The National JTPA Study is possibly the largest evaluation of federally funded employment and training services to date.[14] Implemented between 1987 and 1989, the study assessed the impacts of three major "service strategies": classroom training in occupational skills; on-the-job training/job search assistance; and other services, which consisted of an assortment of basic education and employment-related services. Study participants were recommended for one of these three types of services and then were assigned to either an experimental group or a control group.

The findings for out-of-school youth were discouraging. The program led to negative or negligible effects, depending on the data source used, on young men's earnings through Month 18. The results differed somewhat by service strategy. The negative effects for young men who were recommended for on-the-job training/job search assistance are statistically significant, whereas the effects are slightly negative and not statistically significant for young men who were recommended for classroom training — the strategy most similar to services offered by CET-San Jose. Further analysis suggested that the negative effects for all young men may have

[12]U.S. Department of Labor Web site: http://www.bls.gov/opub/ted/2003/oct/wk3/art04.txt.

[13]The residential Job Corps program is one exception and was found to substantially increase earnings (Burghardt et al., 2001). However, few programs are as intensive or as expensive as Job Corps.

[14]Bloom et al. (1993, 1994, 1997); Orr et al. (1996).

been driven by strong negative effects for the subgroup that had previous arrests. The program had few effects for young women.

In the short run, policymakers responded to the findings of the National JTPA Study by reducing funding for youth programs. In the longer run, the authors of the Workforce Investment Act (WIA) of 1998 recognized the importance of developing successful strategies for serving youth, especially out-of-school youth. WIA encouraged the development of long-term comprehensive youth services and mandated that 30 percent of youth funds be used to serve out-of-school youth.

CET Successes: The Minority Female Single Parent Demonstration and the JOBSTART Demonstration

CET received extensive attention in the early 1990s through the involvement of its San Jose headquarters in two major random assignment studies of employment and training programs, the Minority Female Single Parent (MFSP) Demonstration and the JOBSTART Demonstration. The replication evaluation is an outgrowth of CET's remarkable performance in both studies.

The MFSP Demonstration — implemented between 1982 and 1988 — was designed to increase the self-sufficiency of single mothers and to decrease their reliance on welfare by providing a comprehensive set of employment-related services, along with child care assistance, basic education, occupational skills training, and job placement assistance.[15] The configuration of these services across the four demonstration sites, which included CET-San Jose, varied substantially.

An evaluation after 30 months showed that only the CET-San Jose site had produced measurable gains in average earnings and educational attainment. CET's earnings impacts for the first 30 months totaled $2,062 per enrollee.[16] In addition, these gains persisted for the longer term. A subsequent follow-up survey that was limited to CET-San Jose enrollees and conducted 60 months after program entry found that program group members were still averaging close to $100 per month more in earnings than control group members.[17] Although the study had not been designed to identify specific program components responsible for these results, the evaluators hypothesized that several distinctive features of the CET-San Jose program might help explain its performance, including the immediate availability of occupational training to applicants without regard to prior education or test results, close coordination with employers to ensure that training courses were targeted to hiring needs, extensive job placement assistance, and assistance with locating and paying for child care.

[15]Burghardt, Rangarajan, Gordon, and Kisker (1992); Zambrowski, Gordon, and Berenson (1993).
[16]Burghardt, Rangarajan, Gordon, and Kisker (1992).
[17]Zambrowski, Gordon, and Berenson (1993).

The JOBSTART Demonstration, which operated between 1985 and 1988, sought to test whether an array of comprehensive employment-related services could be implemented within the constraints of JTPA and whether such services could produce gains in educational attainment, employment, earnings, and other outcomes. Whereas the MFSP Demonstration set no restrictions on the age of enrollees, JOBSTART targeted 17- to 21-year-old economically disadvantaged youth who had dropped out of school and whose reading skills were below the eighth-grade level. The thirteen participating sites were selected to include an array of organizational types (community-based organizations, Job Corps centers, adult vocational schools, and a community college), and they were required to implement a service model that included self-paced basic skills training, occupational skills training, training-related support services, and job placement assistance. Sites were required to offer participating youth at least 200 hours of basic skills training and at least 500 hours of occupational skills training.

Overall, JOBSTART's results mirrored those found in the National JTPA Study, showing few positive impacts across the thirteen sites. CET-San Jose again was the exception. Its impacts on earnings averaged close to $7,000 per enrollee over the 48-month follow-up period. As with the MFSP study, JOBSTART's evaluators could not definitively explain CET's success but offered similar hypotheses, including the absence of educational requirements for entry into the program, CET-San Jose's organizational emphasis on employment as the chief goal for trainees, training courses targeted to local job openings, strong job placement efforts, substantial services provided during a relatively short period, and a strong local labor market.[18]

The CET Replication and Model

Encouraged by CET-San Jose's performance in the JOBSTART and MFSP evaluations, the U.S. Department of Labor sought to test whether CET-San Jose's successes could be replicated. In 1992, DOL awarded the CET corporate office, which was headquartered in San Jose, the first of several grants to provide technical assistance to local employment and training programs and to organizations interested in replicating the CET model. Organizations that wanted to receive such training were encouraged to submit applications to DOL; those that were selected received no funding but were eligible for CET's technical assistance, to help them replicate its services. Because CET had long administered training centers in several western states, the replication sites that were selected were primarily set in eastern and midwestern states. Between 1992 and 1997, 22 organizations had been selected to receive technical assistance from CET.

DOL saw sufficient promise in the replication sites to commission a rigorous evaluation of their impacts on out-of-school youth, and it invited the sites to participate. Random assign-

[18]Burghardt, Rangarajan, Gordon, and Kisker (1992); Cave, Bos, Doolittle, and Toussaint (1993).

ment at the replication sites began in 1995 and continued through 1999. However, the site-selection process proved to be more difficult than anticipated. Of the first ten eastern and midwestern replication sites that were invited to participate, six agreed to do so. Potential obstacles to participation in the evaluation may have included the need for programs that primarily served adults to expand services to out-of-school youth, the need to secure required local matching funds, or the reluctance to participate in a random assignment study. Such studies typically create new responsibilities for programs, requiring them to deny services to some applicants, which, in turn, can create the need to step up recruitment to assume that all slots will be filled and produce a sufficiently large research sample. Many organizations are unwilling to take on this burden. Of the six sites that agreed to participate in the replication evaluation, many faced challenges in implementing the CET model, and some struggled to implement key program elements.[19] Further, enrollment of youth at many sites lagged behind expectations.

To supplement the initial group of eastern and midwestern replication sites, DOL awarded a separate grant to CET in July 1997 to support expansion of the evaluation with six western sites. These were selected at random from among the seventeen sites directly administered by CET in California and Nevada, all of which had been operating for at least five years and, in some cases, for as many as twenty years. The inclusion of these western sites in the evaluation also offered an opportunity to test a more mature version of a replication of the CET model. This test helps to address the extent to which CET-San Jose's many years of development and experience (which it shares with many of the other western sites) account for its success in serving out-of-school youth. See Figure 1.1 for the locations of the twelve replication sites.

Key Elements of the CET Model

Although it is widely recognized that CET-San Jose is different from other employment and training programs in many regards, the importance of these differences to CET-San Jose's success is not yet fully understood, even by the organization itself.[20] The distinctive elements of the CET model can be summarized as follows:[21]

- **Provision of employment and training services in a worklike setting.** Employment and training services that mirror the workplace provide the core feature of the CET model. Occupational training emphasizes job-specific

[19]Two of these sites were run directly by CET, and the remaining sites included two community-based organizations and two administrative entities under JTPA.

[20]Tershy (1995).

[21]For details, see Walsh, Goldsmith, Abe, and Cann (2000).

Figure 1.1

Locations of the CET Replication Sites

skills, and trainees advance at their own pace by demonstrating their attainment of specific competencies. Even basic skills training is designed to mirror the workplace. Individuals requiring assistance with English, reading, or math receive this instruction in the context of tasks that they might encounter in the jobs for which they are being trained. Trainees do not terminate from CET programs until they find employment, and CET provides active job placement assistance to locate positions for its trainees. These features reflect a key assumption of the CET approach: that trainees should learn in an environment that resembles the workplace.

- **Intensive participation in services.** While most training programs offer a part-time schedule of classes, the CET model requires a full-time commitment from trainees. This requirement accustoms trainees to a regular work schedule, and it provides the time necessary for them to acquire the skills of their intended trade. It also allows them to acquire these skills quickly, mini-

mizing the opportunity cost of participation in training (that is, the wages lost while participants substitute training for employment).

- **Employers' involvement in the design and delivery of training.** Close connections with industry enhance the responsiveness of CET programs to employers, facilitating the design of services that meet employers' needs. These connections also provide CET programs with access to jobs for their graduates. Each CET program is supposed to have a job developer who works closely with local industry. CET programs develop their connections with industry actively and continuously. Rather than seeking out employers only when trainees are ready for placement, CET programs involve employers in the design of their programs and as reviewers of training curricula. The recruitment of industry representatives as instructors further enhances connections with employers. In each of these ways, CET programs integrate employers' needs and build relationships that enhance success in job placement.

- **Organizational capacity and stability.** Although inherently difficult to replicate, organizational capacity and stability have played a clear role in the past success of CET. CET-San Jose is the headquarters of a substantial community-based organization that has existed for 33 years, during which it has evolved from a single center to a network of more than thirty sites. Simultaneously, it has developed a cadre of highly experienced and dedicated managers. Although difficult to replicate, these features cannot be ignored. CET as an organization has proved highly resilient and has withstood three decades of changes in policy and funding priorities for employment and training organizations. Stable funding and staff are considered essential elements of organizational capacity that enable organizations like CET to focus on their mission — to prepare trainees for employment — instead of focusing all their energy on their own survival. Only stable organizations can pursue the more advanced goals of developing training programs that provide a worklike environment, of ensuring the intensive participation of trainees, and of involving employers in their programs. These goals demand substantial commitments of time and energy from training organizations and their staff. They also require steady funding and organizational stability over an extended period.

- **Enrollment and orientation.** Much of the attention given to the CET model has emphasized the sequence of services provided to young trainees. These services begin with the intake process. CET has often been noted for providing relatively open access to its programs with little upfront screening. Prospective applicants are not excluded from participation based on test scores, and indi-

viduals who are considered too hard to serve by other employment and training providers may often participate at CET. Instead of prescreening applicants, CET conducts an extensive preenrollment orientation that stresses the program's rigor and the level of commitment expected from students. During this enrollment phase, many less-motivated applicants drop out of the program.

Implementing the CET Model

The first research report for this evaluation focused on the implementation of the CET model (as found at CET-San Jose) at the replication sites.[22] The twelve programs were assessed in terms of their fidelity to each of four elements: (1) employment and training services designed to mirror the workplace, (2) intensive participation in such services, (3) close involvement of employers in program design and operation, and (4) organizational capacity and stability. Programs that scored high on all four elements were considered to manifest high fidelity to the CET model. Table 1.1 summarizes the findings of this assessment and shows that fidelity to the CET model was disappointingly low.

The bottom row of Table 1.1 shows that only four sites had overall ratings of high fidelity (H) to the CET model. These sites were the most mature of the western sites, were all located in California, and were all directly run by CET. Six sites were rated as moderately successful (M, MH), and two sites were rated as relatively unsuccessful (ML, L). Half of the medium/low-fidelity sites were run by CET, and the remaining were run by community-based organizations or private industry councils. Note that the high-fidelity sites achieved that ranking not because they performed better relative to the other sites but because they were judged to have fully implemented the model. Thus, for the impact analysis, these sites represent a fair test of the CET approach.

What were the major obstacles to implementing the CET model? A key challenge for sites was not in implementing each of the components but in sustaining them. While most sites implemented at least some program components, many sites experienced managerial and financial problems, with the result that four of the twelve sites were forced to shut their doors before the demonstration had ended. Three others faced serious difficulties in maintaining program operations. Future efforts at replication of CET or similar programs for youth should consider organizational stability as a critical element of success. The sites that were most successful in sustaining services had run employment and training programs for many years, had close connections to the community and local funders, and were equipped to weather ongoing challenges.

[22]Walsh, Goldsmith, Abe, and Cann (2000).

Table 1.1

Summary of the Replication Sites' Fidelity to the CET Model

	Eastern/Midwestern Sites						Western Sites					
Model Feature	New York, NY	Newark, NJ	Camden, NJ	Reidsville, NC	Orlando, FL	Chicago, IL	Reno, NV	San Francisco, CA	El Centro, CA	Oxnard, CA	Riverside, CA	Santa Maria, CA
Training that mirrors the workplace	MH	M	M	M	MH	M	MH	MH	H	H	H	H
Intensive participation in training	L	L	L	L	L	L	L	L	H	H	H	H
Employer involvement in design and training	M	H	M	L	M	H	M	M	H	H	H	H
Organizational stability	L	M	L	L	L	L	L	L	H	H	H	H
Overall fidelity to the CET model	**M**	**MH**	**ML**	**L**	**M**	**M**	**M**	**M**	**H**	**H**	**H**	**H**

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: L = low; M = medium; H = high; ML = medium to low; MH = medium to high.

In terms of program components, the implementation researchers found that sites that did not replicate CET's model faithfully were most likely to experience difficulty with the job development component. They did not have the close relationships with local employers that CET-San Jose has, and they were sometimes unable to provide participants with a suitable job opportunity on completion of training. Low intensity of participation was another frequent problem in medium/low-fidelity sites: Many students did not attend regularly or dropped out before completing competencies and receiving job placement assistance.

Characteristics of the Youth

The target group for the CET replication project was economically disadvantaged, out-of-school youth ages 16 to 21.[23] However, the application process was such that the youth who ultimately enrolled in the study were likely to be a relatively motivated subset of this broader population. Eligible youth who were interested in applying for CET attended orientation sessions at the site. Those who were still interested after this initial session were encouraged to return to the site on a later day to obtain necessary documents and to attend classes. At some sites, youth were required to return to the site for as many as five consecutive days to confirm their interest in the program. This strategy was used to screen out less motivated applicants and to reduce the number of applicants who would subsequently drop out of the program. After this period of application — ranging from two to five days across the sites — applicants who were still interested in CET were randomly assigned either to the program group and were eligible for CET services or to a control group and were not eligible for CET for 24 months.

This section examines selected characteristics of the control group members to present a picture of the youth over time, in the absence of the program, and to assess the hurdles that the program had to overcome in order to produce effects. The data document that the youth were gradually making the transition to adulthood, as shown by changes in household structure, parenting, and employment outcomes. Data for all sites combined are shown first, followed by data for three key subgroups (defined by gender, age, and education level) in the high-fidelity sites only. Subsequent chapters focus primarily on the high-fidelity sites.[24]

[23]CET used the JTPA definition of "economically disadvantaged." In general, the individuals or their families must have recently received welfare or food stamps or must have had incomes that would make them eligible for these programs.

[24]A conditional impact analysis (see Appendix A) suggests that the differences in effects between the high-fidelity sites and the lower-fidelity sites are due mostly to fidelity status and not to other characteristics of sample members that varied across sites. There is one exception. Variation in the percentage Hispanic appears to explain about half the differences in training impacts across sites. However, it is difficult to disentangle the effect of percentage Hispanic from the effect of high-fidelity status, since these two factors are so highly correlated: 93 percent of youth in the high-fidelity sites are of Hispanic origin.

All Sites Combined

- **More youth were leaving the parental household, having children, and coupling.**

Table 1.2 presents selected characteristics of the control group members at 30 months and at 54 months and illustrates the transition to adulthood that many of them were making over time. For example, 65 percent of the youth had children at 54 months, compared with 58 percent at 30 months. The proportion who had children differed substantially by gender. At 54 months, 77 percent of the women had children, versus only 48 percent of the men (not shown). Recall that the sample members were ages 16 to 21 at program entry; they thus were ages 21 to 26 at the 54-month follow-up.

Fewer of the youth were living with their parents at the 54-month point — a trend that matches the fact that more sample members reported renting their own home at 54 months. The men in the sample and the 16- to 18-year-olds (at random assignment) were more likely than the women and the older youth to still be living with their parents or other adult relatives at 54 months (not shown). The data also show a slight increase in marriage and cohabitation over time, although most of the coupling involved informal cohabitation rather than formal marriage.

Finally, the table shows an increase in the number of youth who had been arrested — from 11 percent at 30 months to 17 percent at 54 months. Not surprisingly, arrests were much more common among the men: 30 percent of the men had been arrested at 54 months (up from 23 percent at 30 months), versus only 7 percent of the women (not shown).

- **The sample members experienced steady rates of employment, an increase in job quality, and more training and credentials over time.**

Table 1.3 presents selected data on employment for control group members at the time of the 30- and 54-month surveys. The data show that, despite the economic downturn, roughly similar proportions of the sample were employed at each survey — 74 percent versus 72 percent. The most significant change over time was an increase in job quality. Wages in the current or most recent job were $2 higher, on average, at 54 months. In addition, 50 percent of these jobs included employer-provided health insurance (up from 47 percent at 30 months).

The 30-month report documents a fairly high rate of participation in education and training activities among the control group. The bottom panel of Table 1.3 shows that the youth continued participating; by Month 54, 77 percent had participated in some activity — typically, education. Within education, the most common activities were community college and GED classes. The control group also had more credentials at 54 months than at 30 months, largely because of an increase in the receipt of training certificates.

The Evaluation of the CET Replication Sites

Table 1.2

Selected Characteristics of the Control Group at 30 Months and at 54 Months

Characteristic	30 Months	54 Months
Female (%)	60.8	--
Ethnicity (%)		
Hispanic	41.6	--
African-American	52.0	--
White or other	5.9	--
Age (years)	21.9	23.9
Children		
Has own or step children (%)	57.6	65.1
Number of children	1.5	1.8
Household structure (%)		
Has children:		
Living with parent(s) or other adult relative	25.3	21.0
Living with spouse or partner	49.8	51.4
Living alone	18.6	23.3
Does not have children:		
Living with parent(s) or other adult relative	62.5	57.4
Living with spouse or partner	19.8	16.3
Living alone	13.5	19.6
Marriage and cohabitation (%)		
Living with spouse (married)	13.3	16.2
Living with partner (married or unmarried)	33.9	35.4
Housing status (%)		
Owns home	4.6	6.9
Rents own home	44.6	51.4
Pays rent to person in household	26.5	22.6
Doesn't pay rent	22.0	14.0
Other	0.2	3.9
Arrested since random assignment (%)	11.4	17.2
Sample size	511	511

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

The Evaluation of the CET Replication Sites

Table 1.3

Selected Employment Data for the Control Group at 30 Months and at 54 Months

Characteristic	30 Months	54 Months
Employment (%)		
Worked in past 6 months	74.2	72.2
Job characteristics		
Average wage ($)	7.64	9.74
Average hours worked	37.9	37.4
Employer-provided health insurance (%)	46.6	49.9
Industry (%)		
Construction/manufacturing	14.8	13.8
Retail trade	26.1	26.0
Professional services	19.3	24.1
Other services	21.9	20.9
Other	17.9	15.2
Occupation (%)		
Sales	15.0	14.1
Clerical	21.6	20.3
Services	29.8	27.9
Operatives/laborers	19.5	17.1
Other	13.7	20.1
Education and training (%)		
Participated in past 6 months	29.9	29.2
Ever participated		
Any activity	60.7	76.7
Vocational training	20.6	30.2
Education	37.8	55.6
Credentials held		
GED certificate	17.8	21.5
High school diploma	36.8	38.9
Training certificate	27.4	43.2
Sample size	511	511

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

The Three Key Subgroups in the High-Fidelity Sites

- **Some subgroups saw a reduction in employment in the last 12 to 18 months of follow-up. Participation in education and training remained steady over time but was relatively low in any given month.**

Figure 1.2 presents rates of employment and participation in education and training, by month, for each of the subgroups in high-fidelity sites. The first two panels of the figure show fairly notable reductions in employment for men and for the younger subgroup, who were ages 16 to 18 at program entry. Men's employment, for example, fell from a high of 85 percent in Month 31 to 71 percent in Month 54. The third panel of the figure shows that high school graduates also saw a drop in employment, which started around Month 40. In contrast, employment rates for the other subgroups stayed fairly steady between the first and second survey waves.

Rates of participation in education and training stayed between 10 percent and 20 percent each month and were generally similar across subgroups, except for the relatively low participation rates after Month 30 for high school dropouts. Across all subgroups, a reduction in employment rates does not appear to be associated with an increase in participation rates. Note that the drop in participation rates after Month 30 reflects a certain amount of recall bias; that is, after Month 30, the rates are based on responses to the 54-month survey, and respondents were less likely to remember participation that took place up to 23 months earlier.[25]

- **All three subgroups got more credentials over time, particularly training certificates. GED receipt also increased but to a much lesser extent.**

Figure 1.3 presents credential receipt among the three subgroups in high-fidelity sites at the time of the two survey waves, separating credentials into high school diploma/GED versus training certificates. (Few youth received an associate's degree.) Consistent with the continued participation shown in Table 1.3, all subgroups got more credentials over time — typically, training certificates. The increases in the receipt of training certificates were especially large for women and for high school graduates, while the younger subgroup saw a notable increase in GED receipt. The increase in credential receipt is one indication that the control group members were highly motivated to seek out training options on their own, which is also shown by their applying for the CET study in the first place.

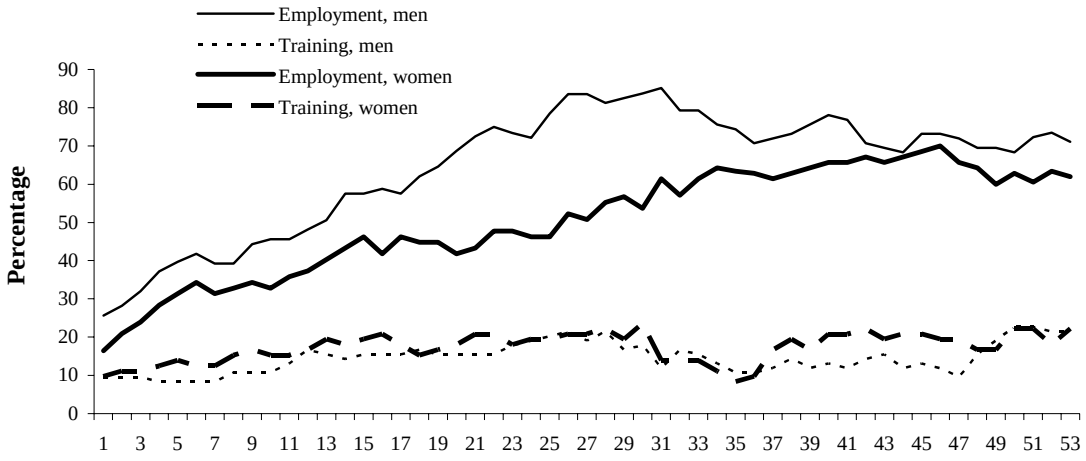
[25]The employment data also show a drop in employment rates after Month 30. However, these data were "smoothed" in an effort to more accurately portray employment over time. For more information on the smoothing process for employment rates, see Chapter 3.

The Evaluation of the CET Replication Sites

Figure 1.2

Employment and Participation in Education and Training Among the Control Groups: High-Fidelity Sites

By Gender



By Age

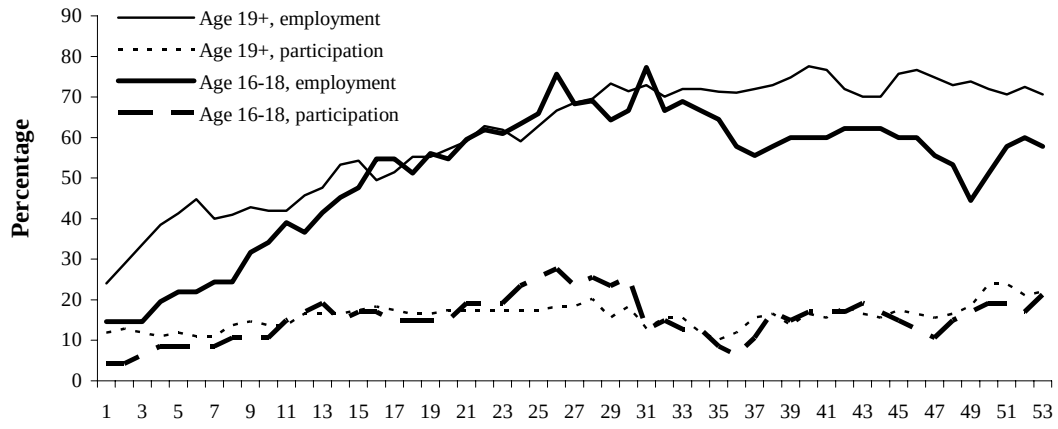


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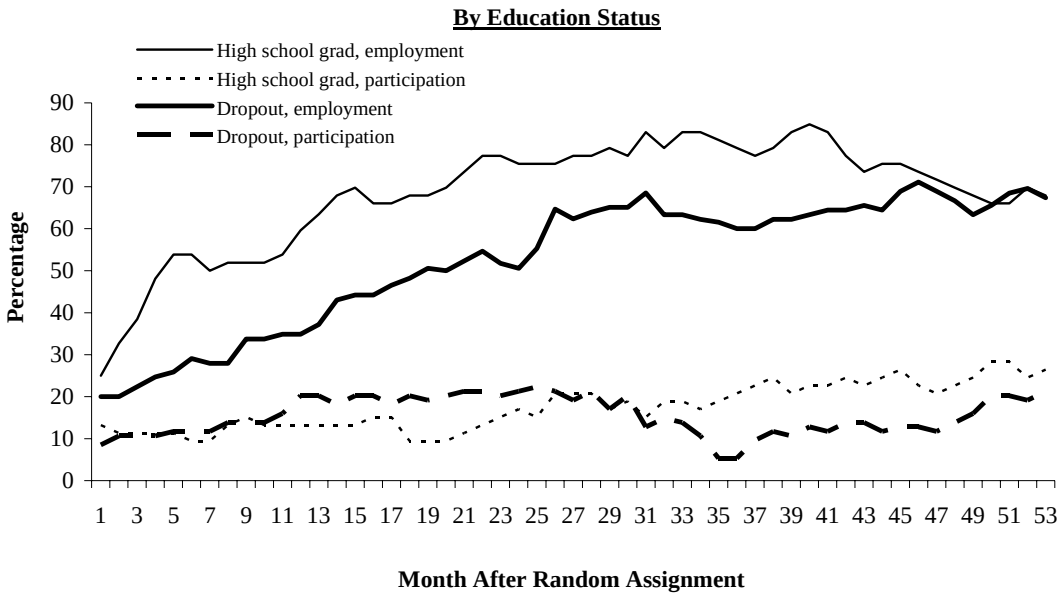
Figure 1.2 (continued)



SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

The Organization of This Report

The remainder of the report is organized as follows. Chapter 2 presents CET's impacts on participation in education and training activities and on the receipt of credentials over the 54-month period. Chapter 3 presents CET's impacts on employment and earnings.[26] Chapter 4 concludes the report and offers some lessons for future programs. Given that the high-fidelity sites represent the fairest test of the CET model, the chapters focus largely on effects in these sites, for both the full sample and the three key subgroups.

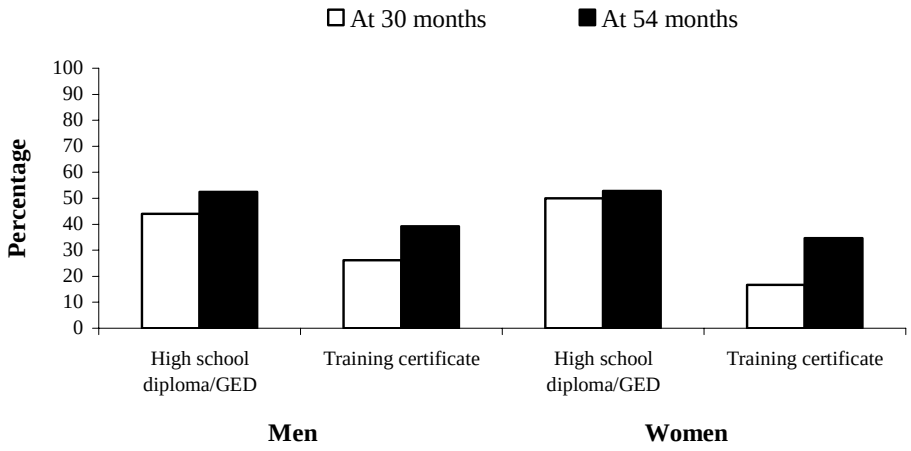
[26]Effects on other outcomes — such as living arrangements, childbearing, drug and alcohol use, and arrests — are presented in Appendix E.

The Evaluation of the CET Replication Sites

Figure 1.3

Credential Receipt Among the Control Groups: High-Fidelity Sites

By Gender



By Age

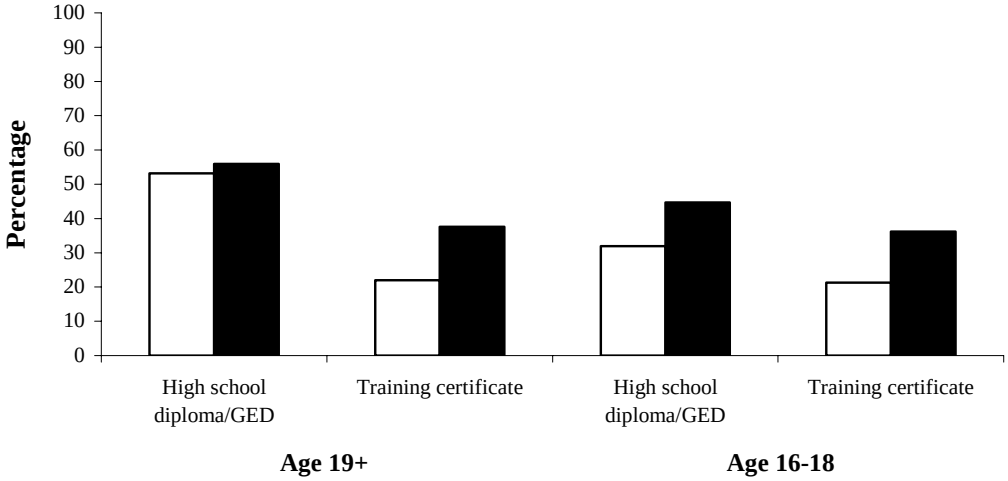


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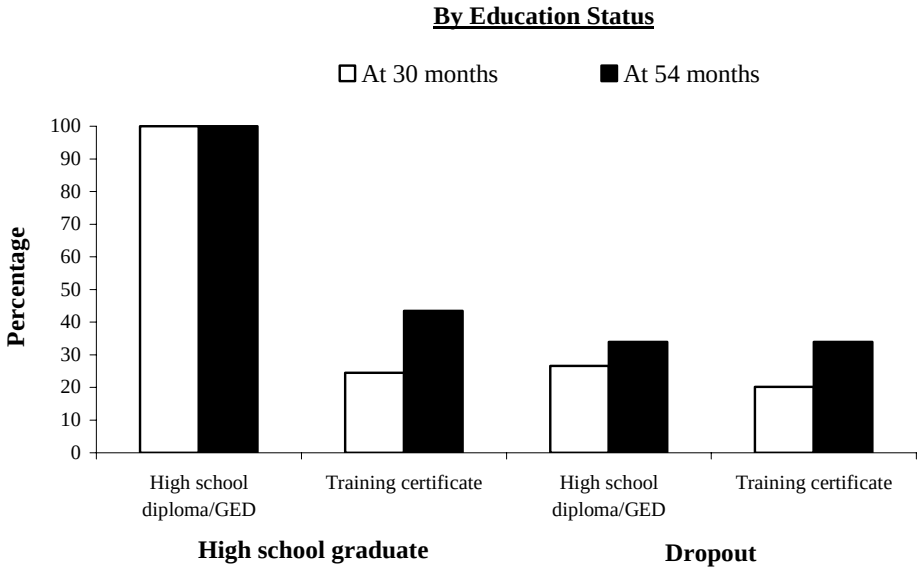
Figure 1.3 (continued)



SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

Chapter 2

Impacts of the CET Model on Participation in Training and Education and on Credential Receipt

This chapter discusses the effects of the Center for Employment Training (CET) program on participation in training and education and on the receipt of credentials. The training that program participants received was in line with the CET model, especially at the four high-fidelity sites in California (see Table 1.1 in Chapter 1). A key component of the CET model is that the skills training activities offered by each CET program were linked to the employment needs of local industry. Table 2.1 summarizes the types of skills training in which program group members participated.[1] The table shows that they took part in a range of skills activities, though a large proportion participated in clerical activities: The most widely used training courses were medical clerical (27 percent) and office skills (26 percent).

"Training impacts" are defined as the differences between the control group's and the program group's percentage participation or hours of participation in training. In this chapter, "vocational training" includes either vocational education or on-the-job training. "Education activities" include high school classes, General Educational Development (GED) classes, English as a Second Language (ESL) classes, and community college classes. Finally, "training and education" is defined as any vocational training, education, or job club/job search activity.[2]

The training discussion in the 30-month impact report concentrates mostly on the type and amount of training that program group members received and on how that training varied according to site fidelity ratings.[3] The present analysis of CET's 54-month impacts on training, education, and credential receipt serves a broader purpose than the earlier report. This chapter examines whether the positive shorter-term training impacts that were found at 30 months persisted throughout the five-year follow-up period. It also provides context for the other impacts that are discussed in Chapter 3. The key questions explored in the chapter are:

- How did CET affect the type of the training and education activities that program group members undertook after the program ended?

[1]The table uses data from the CET Management Information System (MIS), available only from the eight CET-operated sites.

[2]Job club/job search activities make up a very small percentage of the training activities that participants reported in the follow-up survey. For example, in Month 54, only 35 participants (4 percent of program and control group members combined) took part in these activities. Therefore, participation in job club/job search activities is not examined separately.

[3]See Miller et al. (2003).

The Evaluation of the CET Replication Sites

Table 2.1

Average Number of Months and Hours of CET Participation, by Type of Training

Type of Training	Percentage of Participants	Average Hours	Published Course Hours
Accounting	4.9	682	899
Office	25.9	677	875
Medical insurance billing	3.2	975	802
Medical clerical	26.5	571	1,112
Medical clinical	2.3	694	665
Retail	0.9	710	630
Electronic mechanics	1.2	434	630
Metal trade	9	618	913
Building and maintenance	14.8	630	929
Shipping and receiving	11.3	558	815
Sample size		1,136	

SOURCES: MDRC and BPA calculations from the CET enrollment form, 54-month follow-up survey data, and CET Management Information System (MIS) data.

NOTE: The sample used in this table only includes experimentals who were assigned to one of the eight CET sites (Chicago, El Centro, New York, Oxnard, Reno, Riverside, San Francisco, and Santa Maria) and who subsequently enrolled at a CET site.

- Are the long-term training and education paths different for certain groups? If so, how might such differences affect employment outcomes?

Summary of Findings

In general, CET affected the timing, intensity, and the type of training that program participants received, but the total five-year training impact was small because the control group "caught up" in terms of training received by Year 5. The program's impacts on participation and hours of vocational training received were high in the first year after random assignment, but — following CET participation — the program group members' training activities decreased significantly. In contrast, control group members' participation in training activities was relatively steady throughout the five-year follow-up period. The CET program also had a long-term effect on the receipt of training credentials. Finally, the control group participated in training at a high rate, suggesting that its members were highly motivated. The key findings are summarized below.

- **Consistent with the CET model, the program group's rate of vocational training participation and hours of participation were concentrated in the first year after random assignment, resulting in positive and significant impacts; the positive impacts were especially large at the high-fidelity sites.** At the high-fidelity sites, the impacts on participation rate and hours of participation in the first year after random assignment were, respectively, 21.4 percentage points (30.7 percent for the program group and 9.3 percent for the control group) and 218 hours (298 hours for the program group and 80 hours for the control group).

- **At the high-fidelity sites, over the 54-month survey period, the net effect of the CET program on vocational training was small, though still positive and significant.** At the end of the survey period at the high-fidelity sites, the impacts on the rate of vocational training participation and hours of participation were, respectively, 12.9 percentage points (41.1 percent for the program group and 28.2 percent for the control group) and 145 hours (458 for the program group and 313 hours for the control group).

- **A high proportion of the control group participated in training or education during the 54-month follow-up period, setting a high bar for the program group.** The CET control group members were highly motivated and had access to training or education services. Their training and education participation rate (70 percent) was significantly higher than the rates found in the earlier JOBSTART and Minority Female Single Parent (MFSP) studies (56 percent and 59 percent, respectively).

- **Program group participation in training and education dropped significantly in Years 4 and 5, resulting in a significant negative impact.** This negative effect was especially strong at the high-fidelity sites and was driven mainly by the drop in program group participation, rather than by an increase in control group participation.

- **The 4-year impact on the receipt of training credentials was positive and significant and was especially large at the high-fidelity sites.** Although the size of the positive impact diminished over time, as control group members caught up, by Month 48 after random assignment, the impact on the rate of credential receipt was 11.2 percentage points (52.7 percent for the program group and 41.5 percent for the control group). At the high-fidelity sites, this impact was 21.3 percentage points (58.4 percent for the program group and 37.1 percent for the control group).

- **The impacts on credential receipt among female participants remained significantly positive and large through the 54-month follow-up period at the high-fidelity sites, even though the size of the impacts diminished over time.** The impacts on male participants were positive but smaller and were not consistently significant over time. Among women at the high-fidelity sites, the program impacts reached 44.4 percentage points at Month 24 (62.5 percent for the program group and 18.1 percent for the control group) and then leveled to 32.0 percentage points at Month 48 (66.7 percent for the program group and 34.7 percent for the control group).

The 54-month impact results also reveal some new and interesting patterns in training and education activities among youth in the program group. While they were less inclined than the control group to participate in training after CET, those who did participate did so for more hours than their counterparts in the control group. Younger program group members at the high-fidelity sites were also more likely than older program participants to undertake more intensive training activities after CET. Furthermore, among high school dropouts, control group members were more likely than program group members to pursue education credentials.

The remainder of this chapter first presents the impacts of CET on training and education participation rates, hours of participation, and the receipt of credentials during the five years after random assignment. Impacts are then examined by subgroups defined by site fidelity rating and selected demographic characteristics. The chapter concludes by highlighting key findings and discussing their implications for interpreting employment outcomes.

Overall Impacts on Rates and Hours of Participation in Training and Education

This section examines the 54-month impacts of CET on training and education participation rates and hours. The study sample used in this report is slightly different from the 30-month study sample. Of 1,306 sample members included in the earlier study, 236 did not respond to the 54-month survey and consequently are not included in this study; 1,070 sample members are included in both studies. The 54-month study sample totals 1,136, which includes an additional 66 respondents who are not part of the 30-month sample. Due to this change in the composition of the sample, point estimates of descriptive statistics as well as impacts are not identical for the same measures in the two studies. The total sample of 1,136 for the 54-month survey represents a response rate of 77 percent, based on the original study sample of 1,484. Appendix B analyzes the potential for nonresponse bias and concludes that the 54-month survey sample is representative of the full sample of youth.

Participation in Training and Education by the Control Group

The 30-month report documents that a high proportion of the CET control group members participated in training or education activities, indicating that they had the motivation to find training on their own and that such training was available to them even if they were excluded from CET. Training and education impacts from the 54-month survey underscore this point. The CET control group participated in training and education at high rates, and their participation rates were significantly higher than the rates for the control groups in the earlier MFSP and JOBSTART studies. For example, by Month 54 after random assignment, 70 percent of the CET replication control group participated in a training or education activity, whereas 59 percent of the CET control group subsample in the MFSP study and 56 percent in the JOBSTART control group had participated in training or education by the final wave of the study. This indicates that the CET control group was particularly motivated and set a bar for training participation that was significantly higher than was set by the control groups in previous studies.

Participation Rates and Hours Among the Full Sample

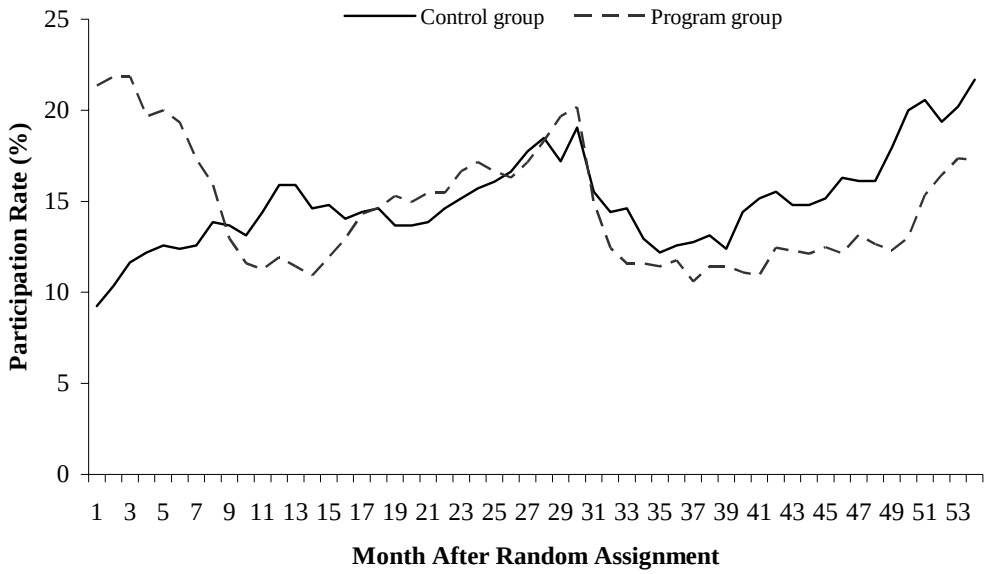
The impact of the CET program on participation in training and education over the five years after random assignment is illustrated in Figure 2.1. The graph shows — by month after random assignment — the rates of training and education participation for the program group and the control group.[4] It shows that reported training participation among the program group was high for the first six months after random assignment but that the reported rates dropped sharply in subsequent months. Though the rates then increased again, participation impacts (the differences between the program and control groups' graph lines) were close to zero or negative for the remainder of the survey period.

As shown in Table 2.2, the CET program did produce a small impact (5.6 percentage points) on vocational training participation for the full sample over the five years after random assignment. However, because the control group participated in education activities at higher rates than the program group, the five-year total impact on participation in all training and education activities combined was basically zero. The bottom panel of the table shows a statistically significant negative impact (–4.0 and –3.2 percentage points) on participation in community

[4]The 30-month study (Miller et al., 2003) found that survey-reported participation in education and training was underreported. CET administrative data for program group members show significantly higher rates and hours of participation than the 30-month survey. Because underreporting was likely a problem that also affected the control group (for which there was no alternative data source), no correction was made for this underreporting, in the 30-month report or this report. Thus, it is likely that the *absolute* levels of participation in education and training, as reported here, are biased downward. The effect of such underreporting on the program impacts is impossible to estimate but, if anything, was probably larger during the early part of the follow-up period than in the later years.

Figure 2.1

Training and Education Participation Among the Program and Control Groups, by Month After Random Assignment



SOURCES: MDRC and BPA calculations from CET 54-month follow-up survey data.

college classes during Years 4 and 5 of the follow-up period. This negative impact occurred because the control group's participation in community college classes increased while the program group's participation decreased slightly. There was also a small negative impact (–2.6 percentage points) on participation in training in Year 5, which occurred mainly because the program group's participation in training decreased.

Like the impacts on participation in training activities, the impacts on the hours of participation were positive and high in the first year after random assignment and then became negative in the following four years. Because of this dropoff in participation by the program group during the later years, the five-year total impact on hours in training and education activities is only 47 hours, which is not statistically significant.

While the program group members were less likely than the control group to participate in training after CET, those who did participate did so for more hours than the control group

The Evaluation of the CET Replication Sites

Table 2.2

Impacts on Receipt of Training and Education: Full Sample

Outcome	Program Group	Control Group	Difference	P-Value for Difference
Participation in training activities (%)				
Year 1	21.9	12.2	9.7 ***	0.000
Year 2	8.7	13.4	-4.7 **	0.012
Year 3	9.9	13.1	-3.2 *	0.094
Year 4	8.5	9.3	-0.8	0.653
Year 5	6.1	8.7	-2.6 *	0.096
Years 1-5	38.1	32.4	5.6 **	0.048
Hours of training activities				
Year 1	181.0	79.5	101.5 ***	0.000
Year 2	51.5	95.6	-44.0 **	0.013
Year 3	45.2	52.4	-7.2	0.520
Year 4	46.5	45.5	1.0	0.937
Year 5	50.0	67.0	-17.0	0.309
Years 1-5	374.2	339.9	34.3	0.465
Participation in education activities (%)				
Year 1	16.0	17.7	-1.7	0.446
Year 2	19.9	19.0	0.9	0.691
Year 3	26.1	26.0	0.1	0.979
Year 4	17.1	21.9	-4.8 **	0.043
Year 5	16.1	20.7	-4.6 **	0.046
Years 1-5	49.9	53.1	-3.2	0.272
Hours of education activities				
Year 1	60.1	56.9	3.2	0.788
Year 2	82.0	66.4	15.6	0.251
Year 3	100.4	87.0	13.4	0.354
Year 4	87.2	98.7	-11.5	0.532
Year 5	99.6	115.5	-15.9	0.436
Years 1-5	429.3	424.5	4.7	0.931
Participation in training, education, and other activities (%)				
Year 1	35.7	27.8	7.9 ***	0.004
Year 2	28.9	31.6	-2.7	0.314
Year 3	34.5	39.1	-4.6	0.112
Year 4	26.2	29.9	-3.7	0.169
Year 5	22.2	28.7	-6.5 **	0.013
Years 1-5	70.7	69.9	0.8	0.770
Hours of training, education, and other activities				
Year 1	252.7	141.1	111.6 ***	0.000
Year 2	145.7	176.4	-30.8	0.200
Year 3	159.7	159.0	0.7	0.971
Year 4	149.1	159.0	-9.9	0.682
Year 5	170.7	195.1	-24.4	0.405
Years 1-5	877.9	830.5	47.3	0.546

(continued)

Table 2.2 (continued)

Outcome	Program Group	Control Group	Difference	P-Value for Difference
Participation in high school classes (%)				
Year 1	1.8	3.0	-1.1	0.215
Year 2	3.0	3.0	0.0	0.993
Year 3	2.3	3.4	-1.0	0.289
Year 4	0.0	0.2	-0.2	0.298
Year 5	0.0	0.2	-0.2	0.296
Years 1-5	5.3	6.7	-1.4	0.330
Participation in General Educational Development (GED) classes (%)				
Year 1	9.1	8.3	0.7	0.657
Year 2	7.8	8.8	-1.1	0.497
Year 3	12.7	11.0	1.8	0.348
Year 4	7.7	8.2	-0.5	0.753
Year 5	6.3	7.3	-1.0	0.493
Years 1-5	27.3	27.5	-0.3	0.915
Participation in English as a Second Language (ESL) classes (%)				
Year 1	1.3	1.8	-0.5	0.482
Year 2	1.7	1.0	0.7	0.318
Year 3	1.5	1.9	-0.4	0.571
Year 4	0.6	0.8	-0.2	0.633
Year 5	0.3	0.8	-0.5	0.246
Years 1-5	2.7	3.3	-0.6	0.559
Participation in community college classes (%)				
Year 1	5.2	5.8	-0.6	0.656
Year 2	9.6	7.6	2.0	0.221
Year 3	12.1	12.2	-0.2	0.931
Year 4	10.1	14.1	-4.0 **	0.038
Year 5	10.3	13.5	-3.2 *	0.090
Years 1-5	23.1	26.2	-3.1	0.209
Sample size		1,136		

SOURCES: MDRC and BPA calculations from the CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

For consistency, dollar amounts and hours for Months 49 through 53, the first five months of Year 5, have been annualized.

members who participated in training. Table 2.2 shows, for example, that the average participating program group member received 776 hours of training (170.7/0.22) in Year 5 after random assignment, whereas the average participating control group member received 673 hours (195.1/0.29). This difference between hours of participation for participating program and control group members exists for every activity and in every year following random assignment except for Year 2. This result indicates that the CET program may have influenced the way that program group members pursued training and education in subsequent years, by encouraging them to seek more intensive training and/or by discouraging participation in further training among those who otherwise would have participated for only minimal hours.

Overall Impacts on Receipt of Education and Training Credentials

Credentials indicate to potential employers an individual's level of skills and latent ability and motivation to pursue and attain a goal like a diploma or certificate.[5] In particular, vocational credentials are believed to be especially important for high school dropouts and other educationally disadvantaged youth, who otherwise may have a difficult time gaining entry into the labor market. The added value of credentials may diminish in tight labor markets and may be less important for individuals who already have a considerable employment history. Still, individuals who attain recognized educational and training credentials may be more likely to succeed in the job market than those who complete comparable amounts of training without obtaining a credential. For this reason, credential receipt is viewed as a mediating outcome measure, with a view toward providing insights into an individual's future employment outcomes and career paths.[6]

The CET model neither makes credential attainment an explicit goal for participants during the program nor encourages participants to pursue credentials after leaving the program. Instead, by combining an open-entry, open-exit enrollment policy with a series of competency-based milestones, the CET program dispenses with traditional curricula in favor of well-defined

[5]The data on credential receipt and on training and education participation and hours are constructed independently and are not necessarily consistent. For example, the receipt of a training certificate does not necessarily follow participation in training activities, because the definition of "training" is not the same. For the analysis in this report, survey responses regarding the receipt of credentials were corrected using the baseline data; that is, if an individual reported a high school diploma at the baseline, it was assumed that the person had at least a high school diploma for all the following periods. Similarly, any inconsistencies between the 30-month and the 54-month surveys were corrected by assuming the receipt of a given credential at the earlier reported date.

[6]The impact of CET on receipt of education and training credentials is measured through self-reports in follow-up surveys conducted at 30 months and 54 months after random assignment. In addition to asking about vocational training credentials, GED certificates, and high school diplomas, these surveys inquired about the participants' attainment of associate's and bachelor's degrees. Unfortunately, the number of sample members who reported having obtained such degrees turned out to be too small to allow meaningful inferences. Consequently, the chapter focuses on secondary education and training credentials.

points of graduation. Nevertheless, the program does certify participants who complete specific courses of training, with a greater emphasis on certification in such areas as building trades, where certification is often a prerequisite for employment. To the extent that program group members were exposed to the CET program that provides certificates, impacts are expected on training credential receipt. Moreover, because the CET model focuses on intensive, short-term vocational training, program group members should be more likely to obtain vocation-related credentials than education credentials in the period following participation. As a result, the program may have a negative impact on the receipt of traditional education credentials, such as a high school diploma or a GED certificate.[7]

Educational and Training Attainment at Baseline

At the time of random assignment, 48 percent of participants (48 percent of the program group and 49 percent of the control group) in the 54-month study sample had either a high school diploma or a GED, while 52 percent (52 percent of the program group and 51 percent of the control group) were high school dropouts. Of the 56 percent who did not have a high school diploma or GED, 49 percent completed the eleventh grade; 46 percent completed the ninth to tenth grades; and 5 percent completed the eighth grade or less. As noted in the 30-month report, the study sample here is similar to the samples of other training program studies with respect to the baseline level of education (including the MFSP Demonstration study and the National JTPA Study described in Chapter 1). The CET sample, however, contrasts with the sample in the JOBSTART Demonstration, which was designed specifically for high school dropouts and had no participants who had either a high school diploma or a GED.

At random assignment, CET participants were not asked about training credentials. However, about 9 percent of the 54-month study sample (11.0 percent of the program group and 7.4 percent of the control group) had received a trade license or certificate by the first month after random assignment. This first-month estimate approximates the training credential status at the baseline.

54-Month Impacts on Training Credentials

The 30-month study found that the CET program had significant positive impacts on the attainment of training credentials but had little impact on the attainment of a high school diploma or GED.[8] Similar to the impacts on participation and hours, the impacts on training

[7]CET's programs are generally too short to support GED attainment, except for students who are very close to being able to pass the GED test when they first join the program.

[8]The impact of the CET program on the attainment of a high school diploma or GED for those who were without these credentials at the baseline is discussed later in the chapter. For the overall sample, as shown in Table 2.3, the impacts on education credentials tended to be negative but are small and statistically insignifi-

(continued)

credentials were largest in the high-fidelity sites. The 54-month follow-up survey findings are largely consistent with the 30-month findings.

Overall, the CET model had a positive and statistically significant impact on the attainment of a trade license or certificate over the 54 months after random assignment.[9] The size of the impact diminished over time, however, as the control group members began to catch up. This is consistent with the effects on training hours: As shown in Table 2.2, during Year 1, the program group spent significantly more hours in training than the control group, whereas, in subsequent years, control group members spent more time in training than their counterparts in the program group. It is not surprising, therefore, that the percentage of the control group who attained training credentials started to catch up with the percentage among the program group.

Table 2.3 summarizes the impacts of CET on the attainment of training credentials at selected points in time. As shown, by Month 12 after random assignment, the percentage of the program group who had attained a training certificate was 20.7 points higher than the percentage among the control group (37.7 percent versus 17.0 percent). After the CET program, however, the group difference diminished — although it was still positive and statistically significant — from 20.7 percentage points (Month 12) to 12.8 percentage points (Month 36) and to 11.2 percentage points (Month 48).

It is worth noting that, among both the program group and the control group, the proportion of sample members with training credentials increased considerably in just over four years. As mentioned above, immediately after random assignment, only 11.0 percent of the program group and 7.4 percent of the control group reported having earned a training credential. By the end of the fourth year after random assignment, 52.7 percent of the program group and 41.5 percent of the control group had earned a training credential, indicating about a fivefold increase for the sample. By comparison, in the earlier JOBSTART study, only 33.1 percent of the program group and 17.3 percent of the control group had received a training credential through the fourth year after random assignment.

The significant number of program and control group members who received training credentials suggests that the youth in this study were highly motivated to pursue training and

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cant. However, the negative impacts on diploma receipt seem to have been growing slowly over time and, as discussed below, are found to be significant among high school dropouts.

[9]Measures for the receipt of education and training credentials are constructed using the baseline data collected at random assignment and the 30- and 54-month follow-up surveys. During data processing, inconsistencies among data sets were addressed, and many of them seem to have arisen from recall bias. The inconsistency regarding training credentials is notable and is equally serious for the program group and the control group. Of those who reported having a training credential at the 30-month survey, 42 percent reported *not* having one at the 54-month survey. Such recall bias may be explained by the credentials' becoming irrelevant to the respondents between the two surveys.

The Evaluation of the CET Replication Sites

Table 2.3

Impacts on Receipt of Education and Training Credentials: Full Sample

Outcome (%)	Program Group	Control Group	Difference	P-Value for Difference
Received training certificate by				
Month 1	11.0	7.4	3.6 **	0.046
Month 12	37.7	17.0	20.7 ***	0.000
Month 24	45.1	30.4	14.7 ***	0.000
Month 36	48.9	36.0	12.8 ***	0.000
Month 48	52.7	41.5	11.2 ***	0.000
Received high school diploma by				
Month 1	45.2	45.9	-0.6	0.635
Month 12	46.9	47.5	-0.6	0.671
Month 24	47.6	48.7	-1.1	0.501
Month 36	47.9	49.2	-1.3	0.430
Month 48	48.2	50.4	-2.1	0.213
Received GED by				
Month 1	10.4	10.4	0.0	0.996
Month 12	15.6	15.5	0.1	0.973
Month 24	19.5	18.1	1.5	0.536
Month 36	22.3	22.0	0.4	0.882
Month 48	25.5	24.8	0.7	0.780
Received GED or high school diploma by				
Month 1	48.3	49.3	-0.9	0.560
Month 12	54.0	54.7	-0.7	0.724
Month 24	57.7	57.7	0.1	0.970
Month 36	59.8	61.5	-1.7	0.452
Month 48	62.7	64.6	-1.9	0.405
Sample size		1,136		

SOURCES: MDRC and BPA calculations from the CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

earn credentials. Taken together with the shrinking advantage of the program group in attaining training credentials, one implication for the employment outcomes is that the impacts would likely diminish over time, given the program-control group differences in the attainment of training credentials.

Impacts Analyzed by Site Fidelity

The implementation study for this evaluation found that only four of the twelve demonstration sites — El Centro, Oxnard, Riverside, and Santa Maria (all in California) — can be described as complying consistently with the original CET model.[10] Since the primary goal of the replication study is to assess the impacts of the CET model specifically — not the impacts of any training program — the results from those four high-fidelity sites are of particular interest.

As discussed above, the 30-month study found that positive service receipt differentials in training and education participation were the strongest at the high-fidelity sites and that training and education participation impacts at the medium/low-fidelity sites were fairly low. These impact results — along with the data collected from the implementation study — lead to the conclusion that the fairest test of the CET model was, indeed, at the high-fidelity sites. This section analyzes the impacts on training and education outcomes in terms of site fidelity, to examine whether the sites' implementation difference persisted through the 54-month follow-up.

Participation and Hours in Education and Training, by Site Fidelity

Isolating the impacts of CET according to site fidelity improves the 54-month story, and Table 2.4 presents impacts on participation and hours in training and education. As in the 30-month report, the effects that were found for the full sample were more pronounced at the high-fidelity sites. Both the early positive impacts and the later negative impacts on training were stronger at the high-fidelity sites. For example, the impact in Year 1 on hours of training received was 218 hours at the high-fidelity sites but only 55 hours at the medium/low-fidelity sites. Moreover, participation in training and education and the hours of training received by the program group dropped by a larger amount after CET participation at the high-fidelity sites. The negative impact in Year 5 on education participation was substantially higher at the high-fidelity sites, driven mainly by the program group's low participation rate.

[10]Walsh, Goldsmith, Abe, and Cann (2000).

The Evaluation of the CET Replication Sites

Table 2.4

Impacts on Hours of Participation in Training and Education, by Site Fidelity

Outcome	High-Fidelity Sites				Medium/Low-Fidelity Sites				P-Value for Subgroup Difference	
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference		
Participation in training activities (%)										
Year 1	30.7	9.3	21.4	*** 0.000	18.3	13.3	5.0	* 0.055	0.001	***
Year 2	6.0	10.4	-4.4	0.150	10.0	14.3	-4.3	* 0.063	0.981	
Year 3	10.4	9.4	0.9	0.779	9.9	14.5	-4.6	** 0.047	0.176	
Year 4	7.0	9.3	-2.3	0.454	9.3	9.1	0.3	0.894	0.485	
Year 5	2.8	9.0	-6.2	** 0.018	7.5	8.5	-1.0	0.595	0.111	
Years 1-5	41.1	28.2	12.9	** 0.017	37.0	34.0	3.0	0.379	0.117	
Hours of training activities										
Year 1	298.1	79.7	218.4	*** 0.000	133.4	78.6	54.8	** 0.030	0.003	***
Year 2	62.3	79.7	-17.4	0.619	49.1	99.9	-50.8	** 0.013	0.409	
Year 3	50.5	40.2	10.3	0.612	44.0	56.3	-12.3	0.357	0.351	
Year 4	24.4	47.5	-23.1	0.249	55.9	44.2	11.8	0.465	0.175	
Year 5	22.2	65.3	-43.1	0.136	61.1	68.1	-7.1	0.730	0.309	
Years 1-5	457.6	312.5	145.1	0.111	343.4	347.1	-3.7	0.946	0.161	
Participation in education activities (%)										
Year 1	17.0	17.3	-0.3	0.938	15.5	17.9	-2.4	0.372	0.678	
Year 2	16.9	18.8	-1.9	0.654	21.0	19.2	1.7	0.539	0.476	
Year 3	22.1	30.1	-8.0	0.106	27.5	24.6	3.0	0.340	0.060	*
Year 4	14.5	23.2	-8.7	** 0.047	18.2	21.3	-3.1	0.272	0.280	
Year 5	10.8	22.2	-11.4	*** 0.006	18.2	20.1	-2.0	0.476	0.058	*
Years 1-5	45.3	53.3	-8.0	0.150	51.7	53.1	-1.5	0.668	0.319	
Hours of education activities										
Year 1	60.0	51.4	8.6	0.705	59.7	59.7	-0.1	0.996	0.746	

(continued)

Table 2.4 (continued)

Outcome	High-Fidelity Sites				Medium/Low-Fidelity Sites				P-Value for Subgroup Difference	
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference		
Year 2	67.0	70.3	-3.3	0.904	87.4	65.6	21.8	0.165	0.424	
Year 3	69.3	71.7	-2.4	0.918	113.2	93.4	19.8	0.274	0.451	
Year 4	50.3	72.7	-22.4	0.312	102.7	109.1	-6.4	0.794	0.627	
Year 5	49.6	106.9	-57.3	0.044	119.5	119.8	-0.3	0.990	0.141	
Years 1-5	296.2	373.0	-76.8	0.405	482.5	447.7	34.8	0.607	0.329	
Hours of education, training, and other activities										
Year 1	383.8	135.3	248.5 ***	0.000	198.8	143.2	55.6 *	0.065	0.003 ***	
Year 2	156.0	180.3	-24.4	0.622	143.4	172.6	-29.3	0.286	0.931	
Year 3	137.9	120.7	17.2	0.613	170.1	173.3	-3.2	0.900	0.631	
Year 4	81.4	129.5	-48.1	0.135	177.9	170.2	7.7	0.805	0.213	
Year 5	73.2	180.6	-107.5 **	0.014	209.6	202.5	7.2	0.848	0.045 **	
Years 1-5	832.3	746.6	85.8	0.543	899.8	861.8	38.0	0.689	0.779	
Sample size	332				804					

SOURCES: MDRC and BPA calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

For consistency, dollar amounts and hours for Months 49 through 53, the first five months of Year 5, have been annualized.

Training and Education Credentials, by Site Fidelity

Like the impacts on training participation and hours, the impacts on credential receipt varied by the sites' fidelity to the CET model over the five years after random assignment. Table 2.5 shows (1) that both high-fidelity sites and medium/low-fidelity sites had significant positive impacts on training credentials, which slowly diminished over time, and (2) that high-fidelity sites had considerably larger impacts on the attainment of training credentials. The differences in these impacts between the two groups of sites are statistically significant.

For example, by Month 48 after random assignment, 58.4 percent of the program groups in high-fidelity sites had earned a training credential, compared with 50.4 percent in medium/low-fidelity sites. By the same month, 37.1 percent of the control groups in high-fidelity sites had earned a training credential, compared with 43.2 percent in medium/low-fidelity sites. Thus, in the high-fidelity sites, the program groups were more likely to attain training credentials at the same time that the control groups were less likely to do so, resulting in a significant positive impact. This difference in impacts across the sites likely reflects the fact that the high-fidelity sites were better able to implement the full-time intensive vocational training that is called for in the CET model. At the same time, control group members in the medium/low-fidelity sites were more successful in finding training that would lead to a credential.

As seen above for the full sample, CET had few impacts on receipt of education credentials in either the high-fidelity or the medium/low-fidelity sites. Therefore, the following discussion of subgroup findings is limited to the high-fidelity sites. Appendix C presents subgroup impacts in the medium/low-fidelity sites.

Impacts in High-Fidelity Sites, by Subgroup

The impacts of CET on participation and hours of training and education and on credential receipt in the high-fidelity sites are further examined below for subgroups defined by participants' key baseline characteristics, including gender, age group, and education level. Because the impacts on education credentials are statistically insignificant for most subgroups, these outcomes are shown only for the subgroup defined by education level. Overall, the positive impacts observed for the full sample are found significant again for most subgroups, although some subgroups experienced stronger effects than others.

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Table 2.5

Impacts on Receipt of Education and Training Credentials, by Site Fidelity

Outcome (%)	High-Fidelity Sites				Medium/Low-Fidelity Sites				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Received training certificate by									
Month 1	7.2	6.8	0.5	0.874	12.6	7.7	4.9 **	0.028	0.236
Month 12	44.7	14.4	30.2 ***	0.000	34.9	18.0	16.9 ***	0.000	0.025 **
Month 24	51.7	25.4	26.3 ***	0.000	42.5	32.3	10.1 ***	0.004	0.013 **
Month 36	56.3	31.4	24.9 ***	0.000	45.9	37.8	8.0 **	0.025	0.011 **
Month 48	58.4	37.1	21.3 ***	0.000	50.4	43.2	7.2 **	0.049	0.035 **
Received high school diploma by									
Month 1	43.2	41.9	1.3	0.575	46.1	47.4	-1.3	0.434	0.365
Month 12	46.1	44.4	1.7	0.569	47.3	48.7	-1.4	0.440	0.376
Month 24	46.7	47.7	-1.0	0.758	48.1	48.9	-0.9	0.639	0.968
Month 36	46.6	49.0	-2.4	0.472	48.6	49.2	-0.6	0.731	0.645
Month 48	46.5	49.7	-3.2	0.348	49.0	50.5	-1.5	0.442	0.671
Received GED by									
Month 1	8.4	8.8	-0.4	0.899	11.4	10.9	0.5	0.831	0.820
Month 12	14.5	11.2	3.3	0.382	16.2	17.2	-0.9	0.723	0.358
Month 24	17.9	13.2	4.7	0.256	20.3	20.0	0.4	0.892	0.391
Month 36	20.3	15.7	4.6	0.295	23.4	24.5	-1.1	0.719	0.287
Month 48	21.5	16.9	4.6	0.305	27.3	27.9	-0.6	0.863	0.349
Received GED or high school diploma by									
Month 1	46.5	44.7	1.8	0.548	49.2	51.0	-1.8	0.349	0.310
Month 12	53.9	49.5	4.4	0.242	54.2	56.6	-2.5	0.284	0.119

(continued)

Table 2.5 (continued)

Outcome (%)	High-Fidelity Sites				Medium/Low-Fidelity Sites				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Month 24	56.7	54.7	2.0	0.628	58.3	58.7	-0.4	0.871	0.618
Month 36	58.4	58.5	-0.2	0.968	60.6	62.6	-2.0	0.434	0.711
Month 48	59.5	60.4	-0.9	0.830	64.2	66.2	-2.0	0.454	0.830
Sample size	332				804				

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

Gender

Table 2.6 presents impacts on training and education participation and hours, by gender, at the high-fidelity sites. The positive impacts in Year 1 and the negative impacts in subsequent years for both men and women are similar to the story for the full sample at high-fidelity sites. Few statistically significant differences are seen across gender: There is a negative impact (–10.8 percentage points) on vocational training participation for the men but a very small impact (–1.5 percentage points) for the women. This occurred mainly because, among the program group, training participation by men dropped dramatically in Years 4 and 5 while participation by women did not drop by as large a margin.

The previous report highlights that the 30-month impacts of CET on training credentials were substantially larger for women than for men in the high-fidelity sites. This trend continued through the fourth year. As shown in Table 2.7, both women and men experienced positive impacts on training receipt, but for men the impacts are not consistently statistically significant.

In the high-fidelity sites, the proportion of program group women with training credentials increased from 7.7 percent at Month 1 after random assignment to 66.7 percent at Month 48, and the proportion of control group women with credentials increased from 4.7 percent at Month 1 to 34.7 percent at Month 48. The size of the impact on this outcome diminished from a peak of over 40 percentage points at Month 24 to just over 30 percentage points at Month 48. At all times, both the percentage of participants who had a credential and the difference between the program and control groups in this regard were greater for women than for men.

Age Group

Table 2.8 displays the impacts in high-fidelity sites on training and education for two age groups: sample members who were ages 16 to 18 and those who were age 19 and over. The impacts in Year 1 are similar for the two subgroups, but an interesting disparity between their impacts is seen in Years 2 and 3: The impacts on hours of training are positive and significant for the younger subgroup and are negative for the older subgroup. This occurred because (1) the younger program group members were more likely to stay engaged in vocational training following CET participation and (2) the participation and hours of the younger control group lagged behind those of the older control group. In Years 4 and 5, the two subgroups' participation rates and impacts are similar.

As shown in Table 2.9, both the younger and the older subgroup experienced positive impacts on receipt of a training credential, closely following the pattern observed for the high-fidelity sites as a whole. The older cohort experienced a slightly larger impact in the first two years.

Table 2.6

Impacts on Participation in Training and Education, by Gender: High-Fidelity Sites

Outcome	Women				Men				P-Value for Subgroup Difference	
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference		
Participation in training activities (%)										
Year 1	36.0	10.5	25.5 ***	0.000	26.9	6.7	20.2 ***	0.001	0.559	
Year 2	5.4	10.8	-5.4	0.210	7.4	9.5	-2.2	0.624	0.594	
Year 3	7.1	3.8	3.3	0.378	11.5	15.0	-3.5	0.521	0.301	
Year 4	8.5	7.4	1.1	0.812	5.0	10.9	-5.8	0.169	0.260	
Year 5	4.2	5.7	-1.5	0.666	1.5	12.3	-10.8 ***	0.005	0.072	*
Years 1-5	44.9	26.5	18.5 **	0.020	37.0	28.4	8.6	0.251	0.360	
Hours of training activities										
Year 1	392.6	91.3	301.4 ***	0.000	223.0	50.9	172.1 ***	0.004	0.188	
Year 2	45.6	75.9	-30.3	0.507	80.1	83.8	-3.7	0.946	0.707	
Year 3	27.5	12.0	15.5	0.319	69.5	70.0	-0.5	0.988	0.689	
Year 4	29.9	32.6	-2.6	0.929	19.0	63.0	-44.1	0.108	0.304	
Year 5	36.9	48.5	-11.6	0.804	6.4	85.1	-78.7 **	0.023	0.248	
Years 1-5	532.6	260.3	272.3 **	0.034	398.0	352.9	45.1	0.733	0.215	
Participation in education activities (%)										
Year 1	23.1	18.3	4.8	0.480	11.7	16.1	-4.5	0.412	0.286	
Year 2	16.0	23.7	-7.7	0.234	17.9	14.3	3.6	0.545	0.197	
Year 3	26.0	35.9	-9.9	0.193	18.8	24.6	-5.8	0.375	0.684	
Year 4	18.2	26.4	-8.2	0.227	12.2	19.3	-7.1	0.215	0.905	
Year 5	8.5	24.3	-15.8 ***	0.009	14.0	19.9	-5.9	0.312	0.236	
Years 1-5	50.9	57.5	-6.6	0.428	41.4	48.9	-7.5	0.342	0.937	
Hours of education activities										
Year 1	92.6	61.5	31.1	0.463	32.7	37.8	-5.1	0.809	0.443	
Year 2	58.3	99.6	-41.4	0.299	76.8	42.0	34.8	0.369	0.169	
Year 3	71.2	98.0	-26.7	0.411	69.7	45.3	24.4	0.481	0.281	
Year 4	44.7	94.5	-49.8 *	0.080	59.0	49.7	9.3	0.790	0.188	

(continued)

Table 2.6 (continued)

Outcome	Women				Men				P-Value for Subgroup Difference	
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference		
Year 5	40.1	122.1	-82.0 **	0.032	63.2	90.1	-26.9	0.537	0.338	
Years 1-5	306.9	475.6	-168.7	0.163	301.4	264.9	36.5	0.801	0.274	
Hours of training, education, and other activities										
Year 1	525.5	155.2	370.3 ***	0.000	268.3	93.6	174.7 ***	0.008	0.099	*
Year 2	160.7	187.2	-26.4	0.716	157.5	171.4	-13.9	0.843	0.901	
Year 3	127.6	112.9	14.7	0.702	146.9	129.9	17.0	0.763	0.973	
Year 4	77.0	130.1	-53.1	0.246	89.0	128.2	-39.3	0.402	0.832	
Year 5	78.0	170.3	-92.3	0.117	70.9	192.8	-121.9 *	0.060	0.733	
Years 1-5	968.8	755.7	213.2	0.269	732.6	716.0	16.6	0.938	0.492	
Sample size	163				167					

SOURCES: MDRC and BPA calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

For consistency, dollar amounts and hours for Months 49 through 53, the first five months of Year 5, have been annualized.

Table 2.7

Impacts on Receipt of Education and Training Credentials, by Gender: High-Fidelity Sites

Outcome (%)	Women				Men				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Received training certificate by									
Month 1	7.7	4.7	2.9	0.479	7.4	8.4	-1.0	0.830	0.523
Month 12	51.6	11.7	39.9 ***	0.000	39.9	15.0	24.9 ***	0.001	0.134
Month 24	62.5	18.1	44.4 ***	0.000	43.0	30.9	12.1	0.125	0.003 ***
Month 36	65.4	25.5	39.9 ***	0.000	47.8	36.0	11.8	0.150	0.012 **
Month 48	66.7	34.7	32.0 ***	0.000	50.5	38.4	12.1	0.141	0.084 *
Received high school diploma by									
Month 1	50.5	46.3	4.2	0.200	36.6	36.9	-0.3	0.940	0.348
Month 12	52.9	48.8	4.1	0.313	40.0	39.5	0.6	0.893	0.553
Month 24	54.2	51.2	2.9	0.510	40.0	43.3	-3.3	0.480	0.333
Month 36	54.0	54.0	0.0	0.996	40.0	43.3	-3.3	0.480	0.620
Month 48	53.8	55.5	-1.6	0.735	40.0	43.3	-3.3	0.480	0.803
Received GED by									
Month 1	6.3	3.5	2.7	0.444	10.1	14.7	-4.6	0.361	0.234
Month 12	11.6	6.8	4.7	0.327	17.2	15.8	1.4	0.811	0.657
Month 24	15.9	9.9	6.0	0.277	19.7	17.0	2.6	0.666	0.681
Month 36	17.2	9.7	7.5	0.186	23.3	22.0	1.3	0.847	0.481
Month 48	17.1	11.1	6.0	0.294	25.7	23.2	2.6	0.712	0.698
Received GED or high school diploma by									
Month 1	52.9	46.2	6.7 *	0.064	40.3	43.0	-2.6	0.571	0.112
Month 12	59.6	51.7	7.9	0.115	48.8	46.9	2.0	0.720	0.429

(continued)

Table 2.7 (continued)

Outcome	Women				Men				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Month 24	63.1	56.8	6.3	0.265	51.2	51.9	-0.7	0.902	0.390
Month 36	64.2	59.4	4.8	0.412	53.4	56.9	-3.5	0.575	0.332
Month 48	64.0	62.2	1.8	0.761	55.8	58.1	-2.4	0.711	0.632
Sample size	163				167				

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

The Evaluation of the CET Replication Sites

Table 2.8

Impacts on Participation in Training and Education, by Age: High-Fidelity Sites

Outcome	Age 16-18 at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	Age 19 and Older at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Participation in training activities (%)									
Year 1	31.0	4.1	26.8 ***	0.001	31.0	11.7	19.3 ***	0.001	0.418
Year 2	10.0	5.3	4.9	0.367	4.0	13.1	-8.9 **	0.021	0.036 **
Year 3	13.0	11.4	1.5	0.827	7.0	8.6	-1.3	0.720	0.715
Year 4	4.0	6.7	-2.9	0.485	9.0	10.0	-1.3	0.760	0.782
Year 5	2.0	8.3	-5.9	0.187	3.0	9.4	-6.3 *	0.062	0.939
Years 1-5	43.0	20.1	22.8 **	0.014	40.0	31.5	8.1	0.229	0.196
Hours of training activities									
Year 1	267.5	36.6	230.8 ***	0.003	322.6	95.0	227.6 ***	0.000	0.974
Year 2	121.0	7.9	113.2 *	0.063	36.5	113.6	-77.1 *	0.080	0.011 **
Year 3	100.5	26.6	73.9 *	0.096	23.4	46.6	-23.2	0.270	0.046 **
Year 4	15.6	41.9	-26.3	0.230	33.7	46.1	-12.3	0.660	0.694
Year 5	5.7	36.1	-30.4	0.111	34.8	78.1	-43.3	0.320	0.785
Years 1-5	510.3	149.1	361.2 **	0.012	451.1	379.4	71.7	0.546	0.117
Participation in education activities (%)									
Year 1	22.0	21.6	0.3	0.967	14.0	15.9	-2.0	0.675	0.804
Year 2	18.0	22.0	-3.7	0.648	17.0	16.9	-0.4	0.943	0.731
Year 3	19.0	30.8	-12.2	0.161	24.0	29.8	-5.3	0.388	0.517
Year 4	18.0	18.5	-0.4	0.953	13.0	25.6	-12.4 **	0.023	0.201
Year 5	14.0	14.1	-0.4	0.959	10.0	25.8	-15.3 ***	0.004	0.082 *
Years 1-5	47.0	58.1	-11.3	0.262	45.0	50.7	-5.4	0.438	0.624
Hours of education activities									
Year 1	101.1	57.7	43.3	0.419	35.1	52.2	-17.0	0.439	0.296
Year 2	117.4	87.3	30.2	0.659	39.3	63.4	-24.1	0.293	0.450
Year 3	78.3	83.2	-4.9	0.924	63.9	67.5	-3.6	0.874	0.981
Year 4	63.6	66.8	-3.2	0.947	41.5	79.2	-37.8	0.103	0.517

(continued)

Table 2.8 (continued)

Outcome	Age 16-18 at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	Age 19 and Older at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Year 5	90.2	68.6	21.5	0.700	30.5	126.7	-96.2 ***	0.004	0.070 *
Years 1-5	450.6	363.6	86.9	0.700	210.3	389.0	-178.7 **	0.032	0.267
Hours of training, education and other activities									
Year 1	400.4	102.6	297.7 ***	0.006	379.9	149.7	230.2 ***	0.002	0.596
Year 2	276.2	149.0	127.2	0.218	100.2	191.1	-90.9 *	0.097	0.061 *
Year 3	207.6	118.7	88.9	0.247	101.1	121.6	-20.6	0.535	0.189
Year 4	93.4	113.9	-20.5	0.716	78.7	136.0	-57.3	0.146	0.592
Year 5	98.6	110.2	-11.6	0.846	66.8	213.9	-147.1 **	0.014	0.108
Years 1-5	1,076.2	594.5	481.7 *	0.093	726.7	812.4	-85.7	0.590	0.081 *
Sample size			115				215		

SOURCES: MDRC and BPA calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

For consistency, dollar amounts and hours for Months 49 through 53, the first five months of Year 5, have been annualized.

The Evaluation of the CET Replication Sites

Table 2.9

Impacts on Receipt of Education and Training Credentials, by Age, High-Fidelity Sites

Outcome (%)	Age 16-18 at Program Entry				Age 19 and Older at Program Entry				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Received training certificate by									
Month 1	4.8	4.6	0.2	0.964	8.8	7.7	1.2	0.771	0.868
Month 12	35.4	17.9	17.5 *	0.057	49.6	12.8	36.8 ***	0.000	0.079 *
Month 24	49.0	26.4	22.6 **	0.017	54.0	24.4	29.7 ***	0.000	0.541
Month 36	56.2	32.3	23.9 **	0.015	56.7	30.2	26.5 ***	0.000	0.826
Month 48	60.5	37.3	23.2 **	0.018	57.8	36.2	21.6 ***	0.002	0.894
Received high school diploma by									
Month 1	32.0	31.1	0.9	0.210	48.8	47.9	1.0	0.781	0.992
Month 12	38.4	35.1	3.2	0.476	49.9	49.7	0.2	0.958	0.608
Month 24	39.9	40.8	-0.9	0.868	49.9	51.5	-1.6	0.686	0.921
Month 36	39.7	43.0	-3.3	0.566	50.0	52.5	-2.5	0.534	0.910
Month 48	39.4	45.1	-5.7	0.337	50.0	52.5	-2.5	0.534	0.658
Received GED by									
Month 1	4.0	6.8	-2.8	0.530	10.8	10.1	0.7	0.872	0.571
Month 12	7.5	6.6	0.9	0.851	18.2	13.8	4.4	0.394	0.628
Month 24	12.2	8.8	3.4	0.585	21.0	15.7	5.2	0.344	0.824
Month 36	14.4	13.9	0.6	0.933	23.8	16.6	7.2	0.206	0.451
Month 48	15.9	15.9	0.0	0.999	24.8	17.5	7.3	0.205	0.418
Received GED or high school diploma by									
Month 1	33.5	33.1	0.4	0.879	52.8	51.3	1.6	0.712	0.822
Month 12	42.6	37.1	5.4	0.319	59.5	56.6	2.9	0.555	0.736
Month 24	48.7	45.0	3.8	0.591	60.7	60.2	0.4	0.937	0.700

(continued)

Table 2.9 (continued)

Outcome	Age 16-18 at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	Age 19 and Older at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Month 36	50.7	52.0	-1.4	0.856	62.6	62.0	0.6	0.915	0.833
Month 48	51.9	56.2	-4.3	0.578	63.6	62.9	0.7	0.895	0.593
Sample size	115				215				

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

Education Level

Table 2.10 presents impacts at the high-fidelity sites both for youth who had a high school diploma or GED certificate at random assignment and for those who did not. The 54-month impact on the rate of participation in vocational training remains positive and significant for the subgroup that had no diploma or GED at program entry, while the impact is not significant for the subgroup that did have such a credential. In Year 2 — the year immediately following most participation in the CET program — the impacts on the rate of participation in education for the subgroup that had a diploma or GED are positive and significant, as program group members who had a high school credential were more likely than control group members to participate in education activities. The opposite pattern occurred for the subgroup without a credential: Control group members were more likely than program group members to participate in education activities in Year 2, resulting in a negative and statistically significant impact.

As discussed above, impacts on the attainment of a high school diploma or GED are generally not found statistically significant when including all sample members. These outcome measures, however, are relevant only to those who did *not* have either a diploma or a GED. By definition, impacts for individuals who had a high school credential at random assignment are expected to be nil.

Table 2.11 presents impacts on education credentials among high school dropouts at the high-fidelity sites. As shown, the impacts of CET on the receipt of a GED among dropouts are positive but not statistically significant. Impacts on the receipt of a high school diploma, on the other hand, were negative and grew in size over time and became statistically significant after Month 36.[11] This pattern is consistent with the findings about an increase in hours of participation in high school activities among the control group in Years 2 and 3.

Though not surprising, the negative impacts on receipt of high school credentials indicate that program group members were less likely than control group members to pursue a diploma. As mentioned above, a key feature of the CET model is its strong emphasis on vocation-oriented training and on services that focus on job placement. As a result, the program group youth may have become less likely to value completion of a formal education credential and thus were set on a path favoring specific vocational training linked to a job, rather than pursuing continued or remedial secondary education. This is troubling, especially given the findings in Chapter 3 that the vocation-oriented career path favored by program group members did not result in higher earnings or greater rates of employment.

[11]There is a question whether most of these new high school credentials that were reported on the 54-month survey were earned in a regular high school setting. It is likely that many of them are GEDs, which in many states are referred to as "high school equivalency diplomas."

The Evaluation of the CET Replication Sites

Table 2.10

Impacts on Participation in Training and Education, by Education Status: High-Fidelity Sites

Outcome	High School or GED at Program Entry				No High School or GED at Program Entry				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Participation in training activities (%)									
Year 1	36.0	13.0	23.0 ***	0.004	29.0	7.3	21.3 ***	0.000	0.861
Year 2	4.0	12.4	-8.3	0.111	7.0	9.6	-2.4	0.553	0.375
Year 3	5.0	14.3	-8.9 *	0.096	12.0	7.6	4.2	0.340	0.057 *
Year 4	5.0	11.5	-6.6	0.207	8.0	8.1	-0.5	0.893	0.352
Year 5	3.0	10.0	-6.7	0.159	2.0	9.9	-7.7 **	0.026	0.872
Years 1-5	41.0	34.9	6.0	0.515	41.0	25.5	15.5 **	0.028	0.410
Hours of training activities									
Year 1	396.5	101.7	294.8 ***	0.001	249.1	66.8	182.3 ***	0.003	0.298
Year 2	59.8	56.9	2.8	0.955	64.5	100.3	-35.8	0.486	0.590
Year 3	17.0	53.4	-36.4	0.123	68.2	41.0	27.2	0.386	0.103
Year 4	37.7	51.6	-13.9	0.736	16.6	44.3	-27.7	0.198	0.765
Year 5	44.3	61.9	-17.6	0.777	7.5	76.8	-69.3 **	0.024	0.453
Years 1-5	555.3	325.5	229.8	0.141	405.8	329.2	76.6	0.530	0.437
Participation in education activities (%)									
Year 1	8.0	14.3	-5.9	0.325	23.0	21.3	2.1	0.727	0.344
Year 2	23.0	9.2	13.9 *	0.051	14.0	24.9	-10.6 *	0.073	0.008 ***
Year 3	28.0	27.6	0.4	0.967	19.0	31.7	-12.5 *	0.053	0.230
Year 4	13.0	28.2	-15.5 **	0.036	15.0	21.4	-5.9	0.304	0.304
Year 5	10.0	28.2	-18.5 **	0.011	11.0	21.0	10.0 *	0.060	0.341
Years 1-5	38.0	48.8	-11.1	0.232	51.0	59.8	8.5	0.252	0.821
Hours of education activities									
Year 1	55.5	64.7	-9.2	0.837	63.5	50.4	13.0	0.629	0.670
Year 2	109.5	55.4	54.1	0.330	44.4	70.2	-25.8	0.359	0.198
Year 3	129.2	72.6	56.5	0.303	31.6	67.3	-35.7 *	0.062	0.111
Year 4	65.1	100.3	-35.2	0.475	39.1	61.7	-22.6	0.313	0.815

(continued)

Table 2.10 (continued)

Outcome	High School or GED at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	No High School or GED at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Year 5	76.7	134.1	-57.4	0.325	27.1	109.1	-82.0 **	0.011	0.710
Years 1-5	436.0	427.1	8.9	0.968	205.7	358.7	-153.0 **	0.045	0.483
Hours of training, education, and other activities									
Year 1	475.9	174.4	301.5 ***	0.006	339.4	120.6	218.9 ***	0.003	0.525
Year 2	170.9	146.0	25.0	0.761	149.6	206.1	-56.6	0.397	0.440
Year 3	144.4	146.7	-2.3	0.969	130.0	112.0	18.0	0.677	0.784
Year 4	103.5	170.5	-66.9	0.331	66.1	110.9	-44.8	0.192	0.773
Year 5	121.0	209.5	-88.5	0.288	36.1	192.9	-156.7 ***	0.003	0.486
Years 1-5	1,015.7	847.0	168.7	0.548	721.2	742.5	-21.3	0.897	0.558
Sample size	126				192				

SOURCES: MDRC and BPA calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

For consistency, dollar amounts and hours for Months 49 through 53, the first five months of Year 5, have been annualized.

The Evaluation of the CET Replication Sites

Table 2.11

Impacts on Receipt of Education and Training Credentials, by Education Level: High-Fidelity Sites

Outcome (%)	High School or GED at Program Entry				No High School or GED at Program Entry				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Received high school diploma by									
Month 1	NA	NA	NA	NA	5.6	8.2	-2.6	0.469	NA
Month 12	NA	NA	NA	NA	10.4	12.7	-2.2	0.632	NA
Month 24	NA	NA	NA	NA	11.4	18.3	-6.8	0.188	NA
Month 36	NA	NA	NA	NA	11.4	20.6	-9.2 *	0.085	NA
Month 48	NA	NA	NA	NA	11.3	21.7	-10.4 *	0.055	NA
Received GED by									
Month 1	NA	NA	NA	NA	5.5	4.8	0.7	0.819	NA
Month 12	NA	NA	NA	NA	12.7	8.8	3.9	0.389	NA
Month 24	NA	NA	NA	NA	17.7	12.1	5.6	0.29	NA
Month 36	NA	NA	NA	NA	21.7	16.4	5.3	0.355	NA
Month 48	NA	NA	NA	NA	23.7	17.5	6.2	0.29	NA
Received training certificate by									
Month 1	7.7	5.9	1.8	0.726	7.6	7.7	-0.1	0.979	0.768
Month 12	56.9	15.2	41.7 ***	0.000	38.9	13.6	25.3 ***	0.000	0.131
Month 24	68.1	28.0	40.1 ***	0.000	43.7	20.9	22.7 ***	0.001	0.127
Month 36	68.7	36.6	32.1 ***	0.001	49.5	26.6	22.9 ***	0.002	0.436
Month 48	71.0	43.1	27.9 ***	0.004	51.6	32.3	19.3 ***	0.009	0.470
Sample size	126				192				

(continued)

Table 2.11 (continued)

SOURCES: MDRC and BPA calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

Impacts on Training Credentials, by English Language Proficiency

This section examines the effects of the CET model according to sample members' level of English language proficiency at the time of random assignment. In the CET program, individuals with limited English proficiency (LEP) were not provided with general language training. Instead, they received instruction for developing needed language skills in the context of specific job-related tasks. Regardless of participants' level of language proficiency or basic skills (such as reading and math), the program places them in training upon enrollment, and it helps them develop those skills as needed during the course of training in classroom settings that simulate the workplace. While the program is not designed specifically to serve the LEP population, this signature approach of the CET model is expected to help such individuals bridge their language gaps by emphasizing vocation-focused skills.

Although only a small number of sample members were LEP participants, impacts on their attainment of training credentials were very large and statistically significant both in the high-fidelity sites and for the full sample. The 48-month impact in the high-fidelity sites (29 sample members) was 46.7 percentage points (79.9 percent for the program group and 33.2 percent for the control group). For the full group of LEP sample members (109), the 48-month impact was 26.9 percentage points.

The significant difference between the program and control groups in the attainment of training credentials likely reflects the absence of alternative vocational training opportunities for the LEP population. Although the sample size for this analysis is too small for the results to be conclusive, the findings suggest that the CET program may also be effective in helping the LEP population gain a training credential.[12] The results here merit further study — perhaps at the implementation level — to determine best practices for keeping LEP youth engaged in vocational training.

Conclusions

This chapter reviews the effects of the CET program on participation in training and education and on the receipt of training and education credentials. The CET program did have effects on the timing, intensity, and type of training that sample members received, particularly at the high-fidelity sites. Similarly, strong positive impacts on training credentials were found by the end of the first year after random assignment. On the other hand, because the control group participated in training and education at fairly high rates over the five years after random

[12]Similarly, large positive impacts were observed for those who were receiving welfare at random assignment, who represent a population with limited basic skills. The impacts on those who had been on welfare are, however, not significant, most likely due to the small subgroup size (n = 29).

assignment, the 54-month vocational impacts at the high-fidelity sites are significantly smaller than the positive impacts found in the 30-month study. Moreover, because the control group participated in educational activities at higher rates than the program group, the 54-month effects on participation and hours in the combined category of training and educational activities are negligible, even at the high-fidelity sites.

One key finding in this chapter is that the participants in this study appear to have been an exceptionally motivated group of people, based on their participation in training and education and on their receipt of credentials over the survey period. It is important to underscore the implications of this highly motivated group of participants, especially among the control group. These young people undoubtedly had a high level of determination to pursue training and education opportunities and were, therefore, highly likely to be successful in the job market. The downside of having a very motivated control group is that the program-control group differentials that arise from any program intervention are relatively small and hard to discern.

This chapter also suggests how the CET model may have affected the post-CET career path that participants followed, which led to the impact outcomes discussed above. As noted, the CET model offers participants intensive, full-time job skills training in a workplace-simulated environment and strongly emphasizes and supports job placement. This job-focused approach may have impressed on participants the practical benefits of intensive vocation-oriented training and may have influenced their post-CET decisions about what type of training and education opportunities they would seek. For example, among those who did participate in training after CET, program group members engaged in more intensive training than control group members. At the same time, there were negative impacts on the receipt of a high school diploma among dropouts, indicating that program group members were less likely than control group members to pursue formal education credentials, possibly because CET emphasized the benefits of vocational training rather than education credentials.

Chapter 3

Impacts of the CET Model on Employment, Earnings, and Job Characteristics

Chapter 2 shows that the CET model increased both hours of training activities and receipt of training credentials and that these increases persisted over time in the sites that implemented the model with high fidelity. Most of the participants who accumulated training hours and received vocational training certificates did so by the end of the first year after random assignment. Therefore, a follow-up that extends 54 months offers a valuable opportunity to test whether the effects on training translated into greater success in the labor market several years later. The preceding CET report presents effects for the first 30 months of follow-up, during a strong labor market.[1] The present report provides a test of employment and earnings effects for an additional two years, during a weaker economy. The findings are disappointing. The effects on hours of training and receipt of training credentials did not translate into improved employment and earnings outcomes. Across all sites — and even at the high-fidelity sites — replication of CET did not produce effects above and beyond what the youth would have achieved with alternative options for training.

This chapter presents the impact results related to employment, earnings, and job characteristics. Following a summary of the findings, the chapter gives an overview of how the youth fared without access to CET. It then presents findings for the full sample of CET replication sites and for the high-fidelity sites. Lastly, the chapter presents findings for subgroups defined by gender, age group, and education level.

Summary of Findings

- **Overall, the CET model had little effect on employment and earnings outcomes, whether in the short or long term; the control group set a high bar throughout the follow-up period.** Among the full sample, a high proportion of disadvantaged youth in the control group went to work early in the follow-up period, when there was a strong labor market. Despite an economic slowdown later in the follow-up, employment rates among the control group remained high, and average earnings increased. Among those with access to CET, there was an initial and expected reduction in employment in the first six months, as youth in the program group participated in training. In

[1] Miller et al. (2003).

subsequent months, these youth achieved similar employment and earnings outcomes but did not exceed the high benchmarks among their peers in the control group. Even at high-fidelity sites, where the model was well implemented, CET had little effect on employment and earnings outcomes throughout the 54-month follow-up period. Both in the short and long run, program group youth at high-fidelity sites worked at similar rates and earned similar amounts as youth in the control group.

- **In high-fidelity sites, CET produced positive impacts for women and negative impacts for men at the 30-month follow-up, but the impacts did not persist with a longer follow-up.** At the 30-month follow-up, CET increased employment among women at high-fidelity sites; it also appeared to increase earnings. For men, in contrast, CET led to decreases in employment and earnings. In the 30-month follow-up report, the authors suggest that the results for women were related to a shift from retail trade toward other industries and away from service occupations toward clerical occupations. For men, the authors posit that those with access to CET training may have held out for higher-wage jobs or perhaps received training for jobs that were not available in their local area. Employment and training programs have typically had more success with women than men, and these early results suggest that CET was no different, at least in the short term.[2]

  With a longer follow-up, however, the positive impact on women's employment faded, because employment among women in the control group increased each year while employment among women in the program group declined. Also, with a longer follow-up, the men who had access to CET at the high-fidelity sites caught up to the control group's employment rate. Their wages and earnings also increased each year until reaching the levels of the control group.

- **There may have been an increase in earnings for younger CET applicants in high-fidelity sites.** Comparing youth who were age 18 or younger at the time of random assignment with those who were older than 18 shows a substantial and statistically significant positive effect on earnings in Years 4 and 5 among the younger group. The program group's earnings were $4,400 more than the control group's earnings in Year 4 and $5,600 more in Year 5

[2]See, for example, Bloom et al. (1993, 1994, 1997); Orr et al. (1996); Burghardt, Rangarajan, Gordon, and Kisker (1992); Zambrowski, Gordon, and Berenson (1993); Knox, Miller, and Gennetian (2000); Miller and Knox (2001).

(projected from the first five months of the year). The hourly wage at the most recent job before the 54-month survey was also higher for the program group — $10.50 compared with $8.80. However, these findings do not hold up to sensitivity tests. Dividing the sample at age 19 instead of 18, for example, produces different results. Also, the sample size of those 18 or younger at high-fidelity sites is quite small, reducing the precision of the estimates. Therefore, it is not certain that the findings represent true program effects.

- **CET produced early negative impacts for high school graduates in high-fidelity sites. The impacts tapered off by Year 4 so that, by the end of the 54-month follow-up, there was no significant difference in effects according to education level.** At the 30-month follow-up, there were significant decreases in earnings for those in high-fidelity sites who had a high school diploma at random assignment — resulting primarily, it seems, from declines in employment and in the number of months worked. This may reflect consequences of taking time out of the labor market. However, with a longer follow-up, the high school graduates who had access to CET in high-fidelity sites caught up to the control group; by Year 5, the months employed and earnings levels were the same.

Employment Experiences of Disadvantaged Youth

Before examining the effects of CET on young people's labor market outcomes, it is important to document what their experiences would have been in the absence of the program. To what extent would they have worked, and what types of jobs would they have held? How much would they have earned? This information provides a sense of what CET was up against and where there was room for the program to improve employment and earnings outcomes. With random assignment, the control group provides an estimate of what would have happened to youth who were accepted into CET had they *not* been accepted to participate.[3] Also, comparing the control group with similar populations indicates whether CET served participants who were representative of disadvantaged youth or were a particularly motivated group who would have done relatively well with or without access to CET services. This section presents an overview of the control group's employment experiences.

[3]Appendix B shows that the control group members were, on average, identical to the program group members at the start of the program. The only difference was that the control group did not have access to CET services. An analysis of survey response rates reveals that the program group responded to the 54-month follow-up survey at a slightly higher rate than the control group but that the differing response rates did not lead to bias that could affect the research findings.

Figure 3.1 shows the percentage of control group members who were employed in each month after random assignment, or after entry into the evaluation.[4] In the month after they entered the evaluation, for example, only about 19 percent were working. In subsequent months, employment rates increased substantially. By Month 30, 64 percent of the control group were working, which may be considered high for disadvantaged youth. For context, it is helpful to compare these employment rates with control groups' rates in other studies targeting a similar population.[5] Both the JOBSTART evaluation and the Job Corps evaluation served disadvantaged youth. In the JOBSTART study, 62 percent of control group members reported working in the third year after random assignment, compared with 84 percent of the CET control group.[6] The third year of follow-up roughly corresponds to the year 1989 in the JOBSTART evaluation, when the national unemployment rate was 5.3 percent, and to 1999 in the CET evaluation, when the national employment rate was just 4.2 percent. Therefore, the relatively high employment rates among the CET control group could reflect the strong economy of the late 1990s. For a comparison during a more similar time period, employment rates during the fourth year of follow-up for the Job Corps control group — corresponding roughly to 1999 — were only slightly lower than the 84 percent among the CET control group members.[7] Thus, the high bar set by the CET control group may be a function of both high motivation levels and a relatively strong economy.

The years covered by the latter part of the CET replication follow-up were characterized by dropping employment rates. For example, among all workers in the United States, average monthly unemployment rates rose from 4.2 percent in 1999 to 5.8 percent in 2002, the beginning of the second CET follow-up period. High unemployment particularly affects young people. Among workers age 16 to 24, for example, average monthly unemployment rose from 9.9 percent in 1999 to 12.0 percent in 2002.[8] Unemployment remained near this level through 2004, the last year of the follow-up. However, throughout this period, Figure 3.1 shows that monthly employment rates among disadvantaged youth in the CET control group remained fairly constant. The resilient employment rates of control group members may indicate that earlier employment experiences helped them to weather a tougher job market. The rates also show

[4]Due to recall difficulties, participants in both research groups often did not report employment or earnings at the start of the second follow-up period (the months just after the 30-month survey but approximately two years before the 54-month survey). Using previous employment histories and probability algorithms, some employment and earnings information was imputed for those participants who were working in Month 30 but not in the months immediately following.

[5]The best comparisons for putting the employment rate of the control group in context are the employment rates of control groups in studies targeting similar populations, in which the study participants not only share the same demographic characteristics but also chose to apply to a job training program and, therefore, may be more motivated than the overall population.

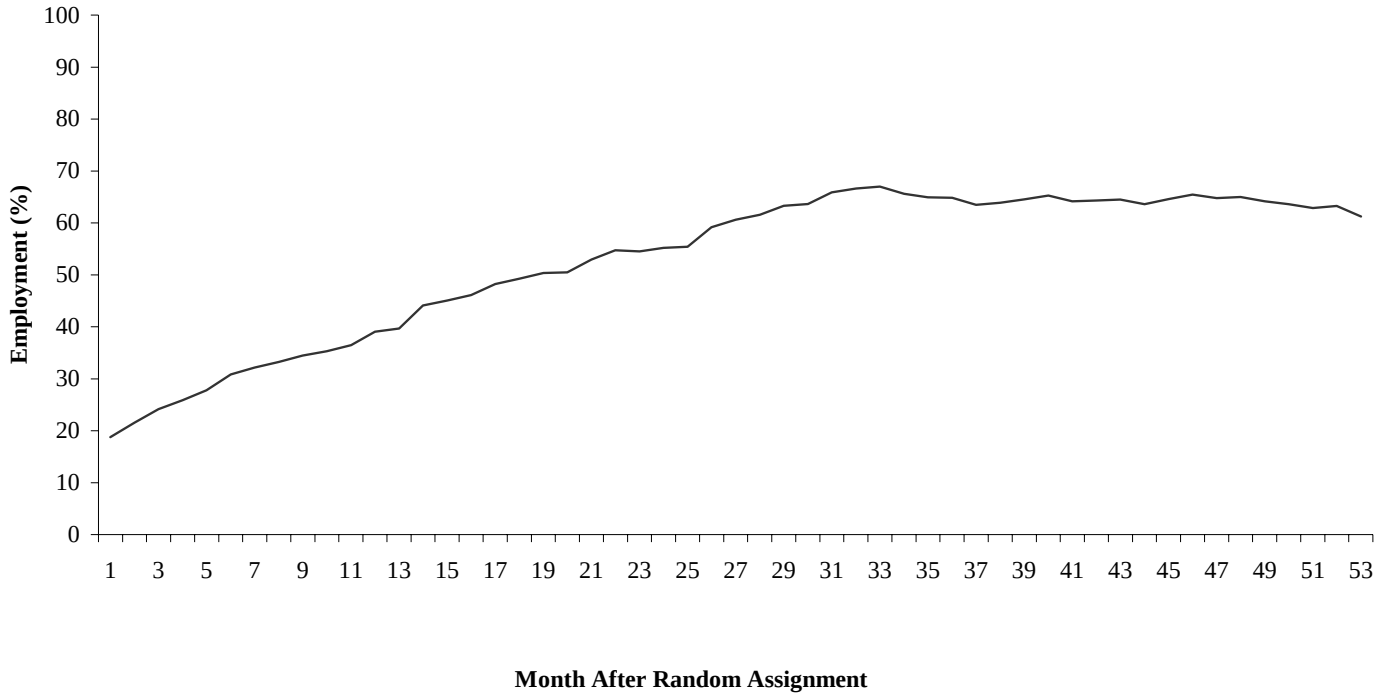
[6]Cave, Bos, Doolittle, and Toussaint (1993).

[7]Unpublished findings from the Job Corps evaluation.

[8]U.S. Department of Labor (2005).

Figure 3.1

Percentage of the Control Group Ever Employed, by Month After Random Assignment



SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

that CET control group members may have been a particularly motivated or capable group of disadvantaged youth.

Figure 3.2 presents average monthly earnings of all control group members in each month after random assignment. It shows that as employment rates climbed early in the follow-up period, earnings increased accordingly; but the figure also shows that even as employment rates tapered off after Month 30, earnings continued to climb, reflecting either increased hours or better wages. For example, among all control group members, average earnings by Month 30 were $776 and by Month 53 were $973. It is important to note, however, that these earnings levels do not represent the earnings of working control group members, because the averages were calculated over the full sample and nonworking individuals were counted as having earnings of zero. The average annual earnings of *workers* in the control group were approximately $12,300 in Year 3 and $16,300 in Year 4 (not shown in the figure).

These earnings levels are also considered high for this population and further illustrate that disadvantaged youth in the CET replication study were, on average, a particularly motivated and capable group. Their increasing earnings throughout the follow-up period may indicate that control group members not only benefited from a strong economy but also achieved improved wages as they gained experience in the labor force. Again to put the level of these earnings in context, consider that average earnings (adjusted for inflation) in the JOBSTART evaluation were about $10,700 for those who worked during the third year of follow-up and $10,991 for those who working during the fourth year of follow-up.[9] In the Job Corps evaluation, average earnings were about $14,000 for those who worked during the fourth year of follow-up.[10]

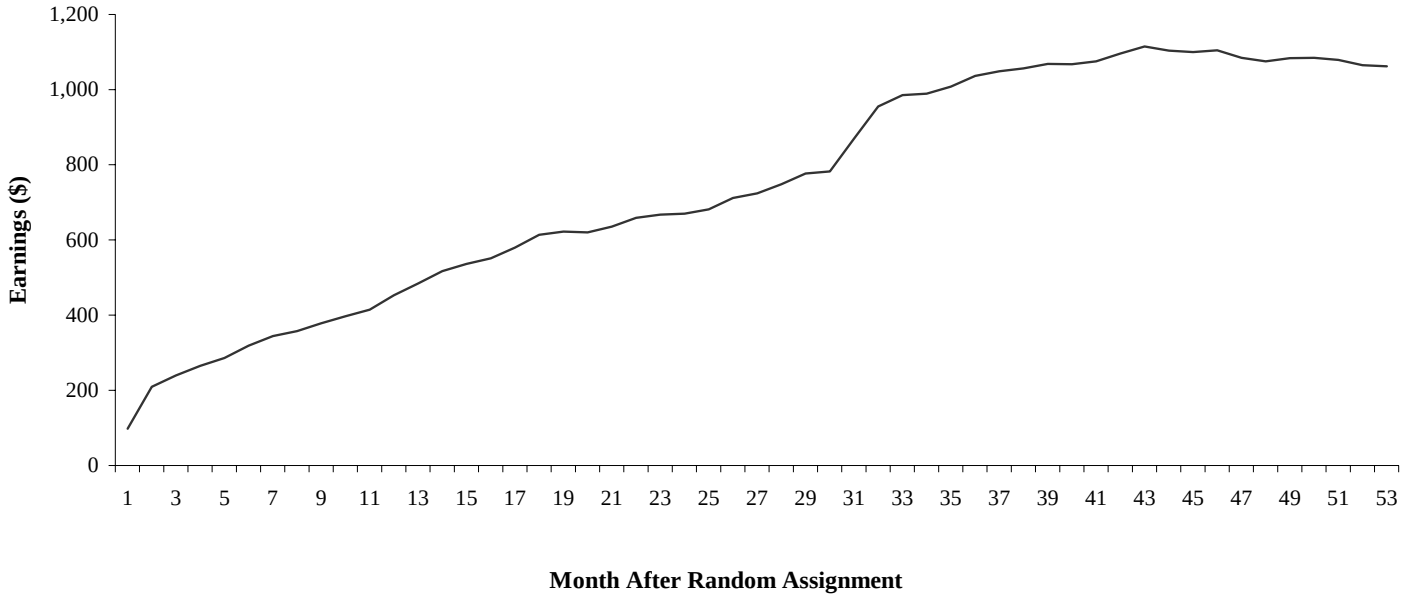
The relatively high employment rates and earnings among youth who were randomly assigned to the control group show that CET confronted high benchmarks to improve upon, at least on average for the full sample. On average, the CET replication sample appears to have been more motivated or more qualified for the job market than the CET sample in the JOBSTART study. Therefore, although the same model was replicated, the CET study was testing the effects on a less disadvantaged population.

It may be the case, however, that there was more room for improvement among particular groups of CET applicants. For example, CET may have been more likely to affect women and high school dropouts because, as Table 3.1 shows, these subgroups had lower employment rates and earnings than men and high school graduates did. Overall, however, the differences between the subgroups tend to be small, and all groups defined by these characteristics set a high bar for CET to overcome. Also, when assessing for whom CET may be most effective, it is

[9]Cave, Bos, Doolittle, and Toussaint (1993).
[10]Schochet, Burghardt, and Glazerman (2001).

Figure 3.2

Earnings Among the Control Group, by Month After Random Assignment



SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

The Evaluation of the CET Replication Sites

Table 3.1

Employment and Earnings: Control Group

Outcome	Number of Months Worked in Year 3	Earnings in Year 3 ($)	Number of Months Worked in Year 5	Earnings in Year 5 ($)
Age				
18 and younger	7.6	10,355	7.0	12,014
Older than 18	7.6	10,314	7.7	13,671
Gender				
Women	7.3	8,903	7.4	11,759
Men	8.1	12,515	7.7	15,354
Education level				
Less than high school	7.0	9,255	7.2	12,177
High school and above	8.4	11,861	7.8	14,708
Site fidelity				
High fidelity	8.5	12,777	8.0	14,671
Medium/low fidelity	7.2	9,260	7.1	12,078
Between 30- and 54-month follow-up surveys:				
Worked fewer than 12 months (N = 193)	3.6	3,664	2.6	2,974
Worked 12 months or more (N = 348)	9.6	13,729	10.1	18,583
Sample size	541			

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

For consistency, dollar amounts for Months 49 through 53, the first five months of Year 5, have been annualized.

useful to investigate the extent to which the sample, across all subgroups, consists of some individuals who have a lot of room for improvement and some who would succeed in the labor market with or without CET. Table 3.1 splits the sample based on control group members' employment stability during the second follow-up period. Just one-third of the sample worked fewer than 12 months during the 23 months of the second follow-up period, and the other two-thirds worked 12 months or more. Among the first group, who had weaker attachment to the labor market, the average number of months employed was 3.6 in Year 3 and 2.6 (annualized) in Year 5. Among the second group, who had stronger attachment to the labor market, the aver-

age number of months worked was 9.6 in Year 3 and 10.1 (annualized) in Year 5. The large contrasts in earnings levels between the two groups reflect the different employment rates. In sum, these statistics show that, for one-third of the sample, there was room to raise employment and earnings but that, for a larger proportion of the sample, CET had a high hurdle to clear.

Impacts on Employment, Earnings, and Job Characteristics

Impacts for the Full Sample of CET Replication Sites

Table 3.2 presents key summary measures of employment and earnings outcomes for the program and control groups in the full sample. Across all measures, it shows similar employment and earnings outcomes for both groups. For example, almost 90 percent of both groups went to work at some point during the 30-month follow-up, and approximately 95 percent of both groups went to work by the end of the 54-month follow-up. At the time of the final survey, however, less than 60 percent were working, which indicates that substantial proportions of both groups experienced job turnover or job loss. The table also presents employment rates for each year, showing that nearly 50 percent of both groups worked during the first year after entry into the evaluation. It is interesting to note the similarity between the two groups in Year 1, when most of the training among program group members occurred. Not shown in this table is that there was a decrease in employment in the first six months after entering the study. Yet CET participants did not sacrifice being in the workforce for long because — as is indicated here — those who had access to CET still caught up to the control group's employment levels by the end of Year 1. Even so, the program group's employment levels were similar to the control group's throughout the extended follow-up period.

Earnings also increased over time. For the program group, average annual earnings increased from $3,640 in Year 1 to an annualized equivalent of $12,857 in Year 5. The differences in earnings between program and control group members are likely not meaningful, as they are both small and not statistically significant. As discussed above, the average earnings do not accurately represent the earnings of the working respondents, because the averages were calculated over the full sample and nonworking respondents were counted as having zero earnings. The average earnings of working respondents can be estimated, however, by dividing the average earnings for the full sample by the percentage of the sample who worked during that period. Therefore, in Year 4, the estimated earnings of workers are $15,727 for the program group and $16,324 for the control group.

Table 3.3 presents more detail about employment trends, focusing on job stability over the 54-month follow-up period. The top row shows the percentage of CET applicants who went to work within the first year after random assignment, and the following rows present a story of em-

The Evaluation of the CET Replication Sites

Table 3.2

Impacts on Employment and Earnings: Full Sample

Outcome	Program Group	Control Group	Difference	P-Value for Difference
Ever worked during 30-month follow-up (%)	87.3	88.9	-1.6	0.428
Ever worked during 54-month follow-up (%)	95.1	93.6	1.4	0.297
Working at 54-month follow-up survey (%)	56.2	57.6	-1.3	0.651
Ever worked (%)				
Year 1	50.7	47.6	3.0	0.318
Year 2	70.6	68.4	2.2	0.421
Year 3	80.2	84.0	-3.8	0.108
Year 4	79.8	79.7	0.1	0.979
Year 5	73.0	70.8	2.2	0.440
Number of months worked				
Year 1	3.5	3.6	-0.1	0.723
Year 2	5.8	5.8	0.0	0.994
Year 3	7.3	7.6	-0.3	0.222
Year 4	7.5	7.7	-0.1	0.662
Year 5	7.7	7.4	0.2	0.463
Earnings ($)				
Year 1	3,640	3,767	-127	0.722
Year 2	7,008	7,156	-149	0.767
Year 3	9,600	10,274	-674	0.231
Year 4	12,550	13,011	-461	0.540
Year 5	12,857	13,002	-145	0.865
Total earnings during 54-month follow-up ($)	37,508	40,243	-2,735	0.216
Sample size	595	541		

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

For consistency, dollar amounts and months worked for Months 49 through 53, the first five months of Year 5, have been annualized.

The Evaluation of the CET Replication Sites

Table 3.3

Impacts on Job Stability: Full Sample

Outcome (%)	Program Group	Control Group	Difference	P-Value for Difference
Went to work within first year and… [a]	50.7	47.6	3.0	0.318
Worked 12 consecutive months or less	21.0	19.9	1.1	0.659
Worked 13-24 consecutive months	7.4	6.6	0.8	0.602
Worked 25-36 consecutive months	5.7	5.5	0.2	0.881
Worked more than 36 consecutive months	16.5	15.6	0.9	0.684
Number of jobs held during 54-month follow-up				
1	11.2	7.6	3.6 **	0.039
2 or 3	45.4	46.7	-1.2	0.673
4 or more	38.4	39.0	-0.6	0.839
Sample size	595	541		

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

[a]The number of consecutive months represents the first employment spell after random assignment.

ployment stability. For example, 21 percent of the program group went to work within the first year and remained employed for one year or less. On the other hand, 17 percent of the program group went to work within the first year and had stable employment in the longer term, for 36 or more consecutive months.[11] Therefore, of those who went to work early in the follow-up period, 41 percent did not have stable employment for more than a year (21 percent divided by the 51 percent who went to work in the first year); a third had stable employment for at least three years; and the rest fell somewhere in between. The pattern among control group members is very simi-

[11]The consecutive months of employment may include job changes.

lar, indicating no effect on employment stability. Table 3.3 also shows the number of jobs held during the 54-month follow-up. The program group was 3.6 percentage points more likely to have had just one job; this is difficult to interpret, however, as some people who held one job may have worked for only a short time while others persisted at one job for a longer period.

Table 3.4 presents impacts on characteristics of study participants' most recent job before the 54-month follow-up. A key goal of the CET model is to help participants find better jobs than they would otherwise; therefore, the table presents various measures of job quality and job type. First, the table presents information on the wages, calculated over the full sample rather than just people who worked. About 45.6 percent of the program group earned an hourly wage of $9.00 or more, compared with 43.0 percent of the control group. Average wages among workers were also quite similar for the two groups. Comparing this finding with the wages of the most recent job reported in the earlier, 30-month follow-up survey indicates that wages had risen over time; at the 30-month follow-up, 19.8 percent of the program group and 18.3 percent of the control group earned an hourly wage of $9.00 or more.

Table 3.4 next presents weekly hours worked. It shows that a majority of both the program and the control group members worked full time or more at their most recent job. When comparing the program and control groups, the table shows that CET led to an increase in hours worked; however, the increase is small (3.4 percent) and difficult to interpret in isolation. Next the table presents the percentages of the sample who had each of three key job benefits: health insurance offered by the employer, paid sick days, and paid vacation days. Among those sample members who worked, 42 percent of the program group (39.5 percent divided by the 95.0 percent who worked during the follow-up period) had a job in which health insurance was offered by their employer. Similarly, the proportions of workers who had a job that offered paid sick days and paid vacation days were 39 percent and 46 percent, respectively. These numbers for job benefits are lower than national averages, and they likely reflect the fact that lower-wage jobs or jobs that tend to be filled by younger workers do not typically offer such benefits. CET also had no effect on job quality as measured by these types of benefits.

Finally, Table 3.4 presents the percentages of young people who were employed in particular industries and occupations at their most recent job. For example, two of the more common industries among program group members were retail trade and professional services (such as health services or daycare services), in which 20 percent and 19 percent were employed, respectively. However, "other services" and "other industries" were also common. An analysis to explore whether any particular types of services or industries stood out among these two categories did not find any patterns. The occupation numbers indicate that clerical and service occupations were most common. Except for a small decrease in health service jobs, CET does not appear to have had any effects on the types of jobs that young people held toward the end of the follow-up period.

The Evaluation of the CET Replication Sites

Table 3.4

Impacts on Job Characteristics: Full Sample

Outcome	Program Group	Control Group	Difference	P-Value for Difference
Characteristics of most recent job				
Hourly wage (%)				
$9.00 or more	45.6	43.0	2.6	0.365
Average wage among workers ($)	*9.56*	*9.46*	*0.1*	*NA*
Weekly hours worked (%)				
35 hours or more	77.5	71.9	5.6 **	0.041
Average hours worked among workers	*38.0*	*36.7*	*1.3*	*NA*
Benefits provided (%)				
Health insurance	39.5	40.4	-0.9	0.752
Paid sick days	37.5	38.0	-0.5	0.862
Paid vacation days	43.8	43.4	0.4	0.883
Industry (%)				
Construction/manufacturing	13.0	13.0	0.0	0.997
Retail trade	19.9	22.7	-2.8	0.253
Eating/drinking establishments	7.4	6.8	0.6	0.702
Professional services	18.5	20.3	-1.8	0.445
Health services	9.1	13.1	-3.9 **	0.033
Other services	21.2	18.1	3.0	0.203
Other industry	22.4	19.3	3.1	0.201
Occupation (%)				
Sales	10.8	13.5	-2.6	0.167
Clerical	20.2	18.7	1.5	0.509
Services	22.8	23.0	-0.3	0.916
Operatives/laborers	14.8	15.6	-0.8	0.695
Other	26.5	22.8	3.8	0.141
Sample size	595	541		

SOURCE: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, sample size may be smaller than the full sample size due to missing observations.

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

Italics indicate comparisons that are nonexperimental.

In sum, the analyses so far indicate that, across all the replication sites, the CET model did not have any noticeable effects on employment and earnings or on job characteristics. On the one hand, some positive effects might have been expected, given that CET did increase training certificate receipt across all sites (mostly in the first year). On the other hand, these findings for the full sample are not surprising, given that several sites had difficulty implementing the CET model and that there were no employment and earnings impacts at the 30-month follow-up. As mentioned earlier, the real test of the model is in the high-fidelity sites. The next section, therefore, presents effects separately for the high-fidelity sites and for the medium/low-fidelity sites.

Impacts Analyzed by Site Fidelity

As discussed earlier, four of the twelve replication sites — El Centro, Oxnard, Riverside, and Santa Maria (all in California) — were determined by the implementation research to have successfully put in place all the key components of the CET model and were classified as being high-fidelity sites in the evaluation's first report, on implementation.[12] The other eight sites were able to implement only one or two of the key components and were classified as medium- or low-fidelity sites. Table 3.5 presents the key summary measures of employment and earnings, dividing the sample into high-fidelity sites and medium/low-fidelity sites.[13] (The rightmost column of the table indicates whether the differences in impacts between the two sets of sites are themselves statistically significant and did not arise by chance.)

First, the key finding to note is that, even at the high-fidelity sites, there are not any noticeable effects on employment and earnings for the overall sample. As shown in the set of four columns at the left, there are few substantial differences between the program and control groups at the high-fidelity sites, and none of the differences are statistically significant. Employment rates and average numbers of months worked are similar across all time periods. The program group had higher earnings in Years 4 and 5, but the differences between the two research groups are not statistically significant, meaning either that the sample size is too small to say with confidence that these are true differences or that these differences occurred just by chance.[14]

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[12]Walsh, Goldsmith, Abe, and Cann (2000).

[13]Readers may question whether the different results for high-fidelity and medium/low-fidelity sites actually reflect other differences between the two groups, such as differences in the populations served (such as race and ethnicity) or differences in the sites (such as rural versus urban). The conditional impact analysis shown in Appendix A tests for the effects of differences in population characteristics. The results suggest that population differences explain some but not most of the differences between high-fidelity sites and medium/low-fidelity sites.

[14]Youth at these four sites entered the study between November 1997 and September 1999. Therefore, Year 4 could correspond to any 12-month period between November 2000 and September 2003. An analysis of annual earnings during calendar years 2000 through 2003 rather than the years following random assignment did not reveal any impacts on earnings.

The Evaluation of the CET Replication Sites

Table 3.5

Impacts on Employment, Earnings, and Job Stability, by Site Fidelity

Outcome	High-Fidelity Sites				Medium/Low-Fidelity Sites				
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Ever worked during 30-month follow-up (%)	92.6	89.8	2.9	0.371	85.0	88.6	-3.6	0.147	0.110
Ever worked during 54-month follow-up (%)	95.9	96.3	-0.4	0.862	94.7	92.6	2.1	0.223	0.370
Working at 54-month follow-up survey (%)	60.0	62.8	-2.8	0.603	54.8	55.4	-0.6	0.858	0.734
Ever worked (%)									
Year 1	56.4	51.4	5.0	0.371	48.0	46.4	1.6	0.653	0.607
Year 2	77.6	75.7	1.9	0.695	67.6	65.8	1.8	0.587	0.986
Year 3	80.6	85.1	-4.5	0.301	80.0	83.7	-3.6	0.199	0.870
Year 4	82.4	84.8	-2.4	0.572	78.8	77.4	1.4	0.642	0.465
Year 5	76.8	74.2	2.6	0.584	71.4	68.8	2.6	0.461	0.999
Number of months worked									
Year 1	3.6	4.2	-0.6	0.237	3.4	3.3	0.1	0.831	0.264
Year 2	6.5	6.8	-0.2	0.670	5.5	5.5	0.0	0.989	0.713
Year 3	8.1	8.5	-0.4	0.482	6.9	7.2	-0.3	0.315	0.955
Year 4	8.2	8.4	-0.2	0.717	7.2	7.3	-0.1	0.797	0.877
Year 5	8.3	8.0	0.3	0.606	7.4	7.1	0.3	0.512	0.972
Earnings ($)									
Year 1	3,834	4,633	-799.0	0.236	3,536	3,437	98.8	0.816	0.259
Year 2	8,267	8,881	-614.0	0.532	6,424	6,514	-89.9	0.878	0.646
Year 3	11,070	12,777	-1,707.3	0.121	8,967	9,260	-292.9	0.654	0.268
Year 4	15,639	15,488	151.2	0.920	11,235	11,919	-683.9	0.425	0.630
Year 5	16,003	14,671	1331.5	0.405	11,359	12,078	-719.0	0.471	0.276

(continued)

Table 3.5 (continued)

Outcome	High-Fidelity Sites				Medium/Low-Fidelity Sites				
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Went to work within first year and…[a] (%)	56.4	51.4	5.0	0.371	48.0	46.4	1.6	0.653	0.607
Worked 12 consecutive months or less	20.6	14.3	6.3	0.156	21.3	22.1	-0.9	0.775	0.180
Worked 13-24 consecutive months	8.1	7.2	0.8	0.789	7.0	6.5	0.6	0.746	0.946
Worked 25-36 consecutive months	4.8	5.5	-0.8	0.765	6.2	5.5	0.7	0.680	0.633
Worked more than 36 consecutive months	23.0	24.3	-1.3	0.782	13.6	12.4	1.2	0.624	0.640
Number of jobs held during 54-month follow-up (%)									
1	8.0	8.3	-0.3	0.911	12.6	7.4	5.2 **	0.015	0.141
2 or 3	53.7	44.7	9.0	0.113	42.2	47.3	-5.1	0.144	0.034 **
4 or more	34.2	42.1	-7.8	0.148	39.9	37.9	2.0	0.560	0.125
Sample size	332				804				

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

For consistency, dollar amounts and months worked for Months 49 through 53, the first five months of Year 5, have been annualized.

[a]The number of consecutive months represents the first employment spell after random assignment.

Also, comparing the results for the high-fidelity sites with the results for the medium/low-fidelity sites, few of the differences are statistically significant, but there are some patterns worth noting. First, the control group at the high-fidelity sites tended to set a higher bar than the control group at the medium/low-fidelity sites. But even at the lower-fidelity sites — despite a small positive effect on training certificate receipt (see Table 2.5 in Chapter 2) — the program group's employment and earnings levels did not exceed the control group's. The preceding CET report found that, in medium/low-fidelity sites, the program reduced the employment during the first follow-up period and at the time of the 30-month survey.[15] The findings presented in Table 3.5 show that these negative effects on employment at medium/low-fidelity sites did not persist with a longer follow-up.

Table 3.6 looks in more detail at whether CET had an effect on the types of jobs that young people found in high-fidelity versus medium/low-fidelity sites. Among the impacts presented for high-fidelity sites, there are few statistically significant differences between the program and control groups. The table shows a statistically significant increase in hours worked, with 89.6 percent of the program group working 35 hours or more, compared with 78.1 percent of the control group. Also, there was a negative effect on the proportions of youth in the high-fidelity sites whose most recent job at the 54-month follow-up was in the professional services industry and in service occupations. This observation is discouraging because several of the training options at the high-fidelity sites were for jobs that can be classified as professional services.

The impacts on job type, however, measure employment in these jobs across all sample members. Were there different patterns among those who earned training credentials? Box 3.1 presents a nonexperimental analysis that focuses on the occupations of program and control group members who had a training certificate at the 30-month follow-up. It shows that CET participants with certificates were less likely to work in services than control group members with certificates. They were also more likely to work as operators, assemblers, or inspectors. On the one hand, the negative relationship between credential receipt and service jobs may raise questions about the value of a CET training certificate above and beyond other training programs for service jobs. On the other hand, CET training for skills as a technician or mechanic may have been helpful for related jobs. For this analysis, however, the *type* of training certificate is unknown, so the extent to which the workers were employed in jobs that did not match their training confounds the interpretation of the results.

[15]Miller et al. (2003).

The Evaluation of the CET Replication Sites

Table 3.6

Impacts on Job Characteristics, by Site Fidelity

Outcome	High-Fidelity Sites				Medium/Low-Fidelity Sites				
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Characteristics of most recent job									
Hourly wage (%)									
$9.00 or more	52.8	46.3	6.4	0.249	42.7	41.6	1.1	0.741	0.420
Average wage among workers ($)	*10.00*	*9.66*	*0.3*	*NA*	*9.37*	*9.37*	*0.0*	*NA*	*NA*
Weekly hours worked (%)									
35 hours or more	89.6	78.1	11.4 ***	0.009	72.3	69.2	3.2	0.364	0.136
Average hours worked among workers	*39.9*	*39.1*	*0.8*	*NA*	*37.1*	*35.7*	*1.4*	*NA*	*NA*
Benefits provided (%)									
Health insurance	36.6	47.7	-11.1 **	0.039	40.7	37.6	3.1	0.362	0.025 **
Paid sick days	36.3	39.2	-2.9	0.588	38.0	37.6	0.4	0.905	0.601
Paid vacation days	45.1	52.2	-7.1	0.206	43.2	39.8	3.4	0.322	0.110
Industry (%)									
Construction/manufacturing	26.4	25.3	1.1	0.821	7.4	8.0	-0.6	0.745	0.742
Retail trade	14.1	18.0	-3.8	0.354	22.5	24.4	-1.9	0.517	0.710
Eating/drinking establishments	3.2	4.7	-1.5	0.475	9.1	7.8	1.3	0.507	0.329
Professional services	13.4	20.1	-6.7 *	0.092	20.6	20.5	0.1	0.968	0.160
Health services	7.5	12.0	-4.4	0.176	9.9	13.5	-3.6	0.104	0.837
Other services	17.4	15.0	2.3	0.575	22.7	19.4	3.3	0.253	0.846
Other industry	24.6	17.3	7.3	0.109	21.5	20.3	1.2	0.675	0.258
Occupation (%)									
Sales	7.2	9.2	-2.0	0.513	12.3	15.2	-3.0	0.217	0.805
Clerical	20.7	20.2	0.5	0.903	20.0	18.0	2.0	0.468	0.782
Services	11.9	19.8	-7.8 *	0.053	27.1	24.5	2.6	0.392	0.039 **

(continued)

Table 3.6 (continued)

Outcome	High-Fidelity Sites: Program Group	High-Fidelity Sites: Control Group	High-Fidelity Sites: Difference	High-Fidelity Sites: P-Value for Difference	Medium/Low-Fidelity Sites: Program Group	Medium/Low-Fidelity Sites: Control Group	Medium/Low-Fidelity Sites: Difference	Medium/Low-Fidelity Sites: P-Value for Difference	P-Value for Subgroup Difference
Operatives/laborers	23.8	17.4	6.4	0.136	11.3	14.5	-3.1	0.170	0.049 **
Other	32.2	29.1	3.0	0.556	24.0	20.4	3.6	0.228	0.932
Sample size	332				804				

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

Italics indicate comparisons that are nonexperimental.

Box 3.1

Types of Jobs Held by Sample Members Who Had Training Certificates at High-Fidelity Sites

At high-fidelity sites, what kinds of jobs did CET training certificate holders and control group training certificate holders have?

If CET training certificate recipients were not employed in jobs for which they trained, then what types of jobs did they have? And how did their occupations compare with the occupations of their control group peers who had training certificates? The table below compares the most recent jobs of certificate holders in both groups at high-fidelity sites.

	Most Recent Job Before 30-Month Survey		Most Recent Job Before 54-Month Survey	
Type of Job	Program Group	Control Group	Program Group	Control Group
Clerical	33.5	22.3	18.0	23.9
Operator, assembler, or inspector	16.8	7.7	18.0	0.0 ***
Laborer	13.0	14.2	14.4	11.7
Sales	12.3	3.9	7.4	3.2
Service	9.4	25.2 **	5.7	22.4 **
Managerial or administrative	3.8	4.1	3.9	18.6
Technician	3.9	2.4	6.8	6.6
Mechanics and repair	3.8	11.9	11.9	9.3
Farm work	0.0	3.1 *	1.2	0.3
Other	3.5	4.9	12.7	4.0

At both surveys, training certificate holders in the program group were more likely to have jobs as operators, assemblers, or inspectors, which may reflect training opportunities at the CET sites or the program's relationship with employers in these sectors. CET certificate holders were more likely to be in sales but were also more likely to avoid service jobs. By the end of the follow-up period, most differences between the two groups were similar. One exception was a shift out of clerical jobs among program group members. Also, control group certificate holders were much more likely to have taken on managerial or administrative jobs later in the follow-up; 19 percent of control group members had such occupations, compared with 4 percent of program group members.

This raises the questions about the extent to which those who participated in CET training and those who received CET training certificates actually went to work in jobs for which they trained. Box 3.2 addresses this issue. Based on CET administrative data for a subset of participants at high-fidelity sites, the box shows that few participants worked in jobs for which they trained. Considering the most recent job — the job for which impacts are measured in Table 3.6 — it is estimated that just 17 percent of training participants and just 19 percent of certificate recipients were working in jobs for which they trained.

Impacts in High-Fidelity Sites, by Subgroup

Before making conclusions about CET's effects, it is valuable to examine whether the program might have at least benefited particular segments of the applicant pool. Therefore, as in Chapter 2, this section presents separate results for different demographic subgroups that are presented in the 30-month follow-up report: gender, age group, and education level. In continuing the focus on sites where there is a fair test of CET, the analyses again are limited to high-fidelity sites.[16] As a result, however, the sample sizes are small. High-fidelity sites make up just 30 percent of the full sample, and further dividing by demographic subgroup results in samples as small as a tenth of the original sample. Consequently, the precision of the estimates is reduced significantly.

Gender

Tables 3.7 and 3.8 present results separately for women and men at high-fidelity sites. As in the 30-month report,[17] CET appears to have had a positive effect on women's employment rates earlier in the follow-up period (Table 3.7). Among women, for example, there was an increase — from 80.3 percent to 91.8 percent — in having ever worked during the first 30 months of the follow-up. In Year 2, the employment rate among women who had access to CET exceeded the rate for women in the control group by 16.7 percentage points, or 19 percent. Earnings for the program group were also higher, but the differences are not statistically significant. For men, in contrast, CET led to a decrease in employment during the first follow-up period, from 99.4 percent to 93.3 percent, and a decrease in earnings in Year 3, from $16,264 to $12,859. The authors of the earlier report suggest that the results for women were related to a shift out of retail trade and toward other industries as well as a shift away from service occupations and toward clerical occupations. For men, the authors posit that those in the program group may have decided to hold out for higher-wage jobs or jobs with better prospects for advancement, or perhaps they received training for jobs that were not available in their local area.

[16] Appendix D presents the impacts for these subgroups at medium/low-fidelity sites.
[17] Miller et al. (2003).

Box 3.2

Comparison Between Training and Types of Jobs Held by CET Participants at High-Fidelity Sites

Did CET training participants and certificate recipients at high-fidelity sites work in jobs for which they trained?

The table below shows that a small percentage of participants in CET training activities at high-fidelity sites ended up in jobs for which they trained. Just 23 percent of training participants and 32 percent of certificate recipients worked in a "matching" job in their first job after CET.* Most left CET because they found these jobs, according to CET administrative records. By the end of the follow-up period, just 17 percent of all training participants and 19 percent of certificate holders were working in jobs for which they trained. Some found jobs in their field at some point during the follow-up period, even if it was not their first job; 34 percent of training participants and 40 percent of training certificate holders worked in their field for at least one job during the 54 month follow-up period.

Percentage of CET Participants with a Job in the Field for Which They Trained, by Job and Training Status, for High-Fidelity Sites

	Training/Occupation Match (%)	
Job in Field for Which Participant Trained	Participated in Training	Received Training Certificate by 30-Month Follow-Up
First job after training	22.7	31.9
Participant left training upon finding employment	20.5	30.6
Participant left training before finding employment	2.3	1.4
Held most recent job at 54-month follow-up	16.7	19.4
Held any job during follow-up period	34.1	40.3
Sample size	132	72

SOURCES: MDRC calculations from CET enrollment form and 30-month and 54-month follow-up survey data.

NOTE: The sample includes participants for whom Management Information System (MIS) data were available, and it excludes participants who dropped out of CET training within the first week.

*Appendix F presents the assumptions that were used to match jobs to training skills.

(continued)

Box 3.2 (continued)

Percentage of CET Participants with a First Job in the Field for Which They Trained, by Training Skill, for High-Fidelity Sites

Training Skill	Sample Size	Training/Occupation Match (%)	
		Participated in Training	Received Training Certificate by 30-Month Follow-Up
Accounting clerk/bookkeeper	13	0.0	0.0
Automated office skills	49	40.8	60.0
Building maintenance	19	0.0	0.0
Computer services	0	0.0	0.0
Electronic mechanics	3	0.0	0.0
Medical assistant	6	66.7	100.0
Medical clinical	3	0.0	0.0
Medical insurance billing	5	20.0	33.3
Metal trade/welding	22	22.7	45.5
Nurse technician	0	0.0	0.0
Shipping and receiving/warehouse operations	12	0.0	0.0
Total sample size		132	72

SOURCES: MDRC calculations from CET enrollment form and 30-month follow-up survey data.

NOTE: The sample includes participants for whom Management Information System (MIS) data were available, and it excludes participants who dropped out of CET training within the first week.

With a longer follow-up, the positive impact on women's employment faded; employment among women in the control group increased each year, while employment among women in the program group declined. From Year 2 to Year 4, for example, Table 3.7 shows that employment among the control group climbed from 67 percent to 83 percent, while employment among the program group dropped from 84 percent to 76 percent.[18] One hypothesis is that the program group's gradual decline in employment after Year 2 may be related to childbearing. Although both groups had children at similar rates (see Appendix Table E.7), perhaps

[18]Note that both groups' drops in employment from Year 4 to Year 5 reflect that Year 5 includes only five months of the year. An analysis of monthly employment rates shows that employment does decline around this time, but only slightly.

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Table 3.7

Impacts on Employment, Earnings, and Job Stability, by Gender: High-Fidelity Sites

Outcome	Women				Men				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Ever worked during 30-month follow-up (%)	91.8	80.3	11.5 **	0.045	93.3	99.4	-6.2 **	0.048	0.006 ***
Ever worked during 54-month follow-up (%)	93.5	92.9	0.6	0.883	97.6	100.1	-2.5	0.153	0.489
Working at 54-month follow-up survey (%)	54.1	61.1	-7.0	0.392	65.0	64.3	0.7	0.922	0.481
Ever worked (%)									
Year 1	55.4	46.0	9.4	0.254	58.8	55.7	3.2	0.691	0.587
Year 2	84.0	67.3	16.7 **	0.022	71.8	83.0	-11.2	0.104	0.005 ***
Year 3	76.9	72.9	4.1	0.578	84.7	96.4	-11.7 **	0.015	0.070 *
Year 4	76.1	82.5	-6.3	0.360	88.2	87.0	1.2	0.813	0.381
Year 5	69.0	68.0	1.0	0.899	84.3	79.7	4.5	0.458	0.719
Number of months worked									
Year 1	3.4	3.7	-0.4	0.617	3.9	4.6	-0.7	0.363	0.752
Year 2	6.6	5.6	1.0	0.222	6.6	7.7	-1.1	0.176	0.068 *
Year 3	8.0	7.1	0.9	0.289	8.4	9.8	-1.4 **	0.042	0.035 **
Year 4	7.8	8.2	-0.4	0.598	8.7	8.6	0.0	0.961	0.662
Year 5	7.3	7.5	-0.2	0.849	9.2	8.4	0.8	0.297	0.418
Earnings ($)									
Year 1	3,202	3,623	-420.3	0.594	4,636	5,492	-856.1	0.442	0.749
Year 2	7,482	6,615	866.9	0.471	9,520	10,724	-1,204.5	0.443	0.294
Year 3	9,511	9,131	380.7	0.791	12,859	16,264	-3,405.1 **	0.047	0.088 *
Year 4	12,474	12,326	147.6	0.933	19,183	18,322	860.6	0.734	0.817
Year 5	11,693	12,133	-440.0	0.813	20,725	16,839	3,885.9	0.146	0.182

(continued)

Table 3.7 (continued)

Outcome	Women				Men				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Went to work within first year and…[a] (%)	55.4	46.0	9.4	0.254	58.8	55.7	3.2	0.691	0.587
Worked 12 consecutive months or less	23.5	13.4	10.1	0.126	17.3	15.7	1.6	0.793	0.338
Worked 13-24 consecutive months	9.7	9.6	0.1	0.979	6.4	5.1	1.3	0.735	0.855
Worked 25-36 consecutive months	6.6	3.6	2.9	0.447	3.4	7.0	-3.5	0.320	0.216
Worked more than 36 consecutive months	15.6	19.4	-3.8	0.562	15.6	19.4	-3.8	0.562	0.435
Number of jobs held during 54-month follow-up (%)									
1	8.2	11.6	-3.4	0.499	7.1	6.0	1.2	0.765	0.472
2 or 3	51.2	44.2	7.0	0.406	56.4	44.7	11.7	0.130	0.679
4 or more	34.1	34.6	-0.4	0.955	34.1	49.4	-15.4 **	0.039	0.169
Sample size	163				167				

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

For consistency, dollar amounts and hours for Months 49 through 53, the first five months of Year 5, have been annualized.

[a]Number of consecutive months represents first employment spell after random assignment.

women who had access to CET were likely to enter the job market earlier in the follow-up period, to take advantage of training, but over time they may have made similar child care decisions as the women in the control group. Therefore, the program group's employment rates fell to the levels of the control group.

With a longer follow-up, the men who had access to CET in high-fidelity sites caught up to the control group in employment. For example, as Table 3.7 shows, the employment rate among program group men climbed from 72 percent in Year 2 to 88 percent in Year 4, closing the gap with the control group.[19] For men in the program group, earnings also increased each year and surpassed the earnings of men in the control group in Years 4 and 5, although these differences are not statistically significant. Table 3.8 shows no meaningful differences in job characteristics when comparing men in the program group with men in the control group. The main point to take away is that while there may have been some negative effects for men early on, longer follow-up shows that the men who were randomly assigned to CET in high-fidelity sites fared just as well as their peers in the control group — perhaps better, but the small sample size prevents knowing for sure. The findings may support the 30-month report's hypothesis that men who had access to CET held out for higher-paying jobs. The findings may also reflect delayed returns on earlier increases in training and certificate receipt, which helped men make up for the time they spent out of the labor market but did not necessarily make them any better off than they would have been otherwise.

Age Group

Tables 3.9 and 3.10 present impacts at high-fidelity sites for subgroups defined by age group: age 16-18 at program entry and age 19 and older. The tables show little difference in employment rates throughout the follow-up period. In Years 4 and 5, however, there were substantial and statistically significant effects on earnings for the younger subgroup; for example, CET increased earnings from $10,558 to $16,181 in Year 5. Not surprisingly, then, Table 3.10 shows that wages were also higher for the program group; for example, 55 percent of the younger program group earned a wage of at least $9.00 per hour, compared with 35 percent of the younger control group. The findings for the younger subgroup appear promising but should be interpreted with caution. First, redefining that subgroup as age 19 and younger produces very different results; there is no earnings effect for the expanded younger subgroup. Second, the

[19]Note that, for men, both groups' drop in employment from Year 4 to Year 5 reflects entirely that Year 5 includes only five months.

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Table 3.8

Impacts on Job Characteristics, by Gender: High-Fidelity Sites

Outcome	Women				Men				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Characteristics of most recent job									
Hourly wage (%)									
$9.00 or more	47.3	38.1	9.2	0.257	57.1	54.1	3.0	0.707	0.581
Average wage among workers ($)	*8.96*	*9.19*	*-0.2*	*NA*	*10.92*	*10.09*	*0.8*	*NA*	*NA*
Weekly hours worked (%)									
35 hours or more	88.3	72.0	16.3 **	0.023	90.9	82.9	8.0	0.148	0.352
Average hours worked among workers	*38.6*	*37.6*	*1.1*	*NA*	*41.3*	*40.1*	*1.2*	*NA*	*NA*
Benefits provided (%)									
Health insurance	32.9	42.4	-9.5	0.223	40.6	52.3	-11.6	0.130	0.845
Paid sick days	41.4	38.1	3.3	0.679	29.8	40.2	-10.5	0.168	0.209
Paid vacation days	44.7	50.1	-5.4	0.502	45.5	53.1	-7.6	0.336	0.845
Industry (%)									
Construction/manufacturing	14.7	16.0	-1.3	0.833	38.1	34.8	3.2	0.672	0.643
Retail trade	14.7	18.7	-4.0	0.520	14.4	16.9	-2.6	0.647	0.864
Eating/drinking establishments	5.1	4.7	0.5	0.895	1.7	4.4	-2.7	0.264	0.463
Professional services	25.3	32.7	-7.4	0.329	2.4	7.4	-5.0	0.142	0.770
Health services	14.6	18.7	-4.1	0.515	1.3	4.8	-3.5	0.196	0.934
Other services	17.3	18.4	-1.1	0.863	17.8	11.8	5.9	0.295	0.409
Other industry	21.5	5.9	15.6 ***	0.006	25.0	29.1	-4.1	0.551	0.026 **
Occupation (%)									
Sales	9.9	13.6	-3.7	0.498	4.8	4.8	0.0	0.989	0.568
Clerical	31.1	23.7	7.4	0.325	9.5	16.1	-6.6	0.198	0.123

(continued)

Table 3.8 (continued)

Outcome	Women				Men				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Services	12.3	20.0	-7.7	0.195	12.2	19.3	-7.1	0.208	0.935
Operatives/laborers	10.5	5.2	5.2	0.250	36.6	30.1	6.6	0.369	0.878
Other	29.8	29.1	0.7	0.932	34.6	29.9	4.7	0.514	0.701
Sample size	163				167				

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

Italics indicate comparisons that are nonexperimental.

The Evaluation of the CET Replication Sites

Table 3.9

Impacts on Employment, Earnings, and Job Stability, by Age: High-Fidelity Sites

Outcome	Age 16-18 at Program Entry				Age 19 and Older at Program Entry				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Ever worked during 30-month follow-up (%)	93.7	93.6	0.0	0.992	91.9	87.7	4.2	0.314	0.514
Ever worked during 54-month follow-up (%)	93.5	98.1	-4.6	0.243	96.9	95.6	1.3	0.616	0.209
Working at 54-month follow-up survey (%)	59.7	54.8	4.9	0.619	59.2	67.4	-8.1	0.219	0.271
Ever worked (%)									
Year 1	50.1	43.8	6.4	0.535	60.0	55.1	4.9	0.477	0.904
Year 2	78.6	78.7	-0.2	0.986	76.8	74.3	2.5	0.683	0.805
Year 3	79.2	85.9	-6.8	0.384	80.7	85.3	-4.6	0.386	0.814
Year 4	79.6	82.7	-3.1	0.666	82.7	87.0	-4.3	0.394	0.888
Year 5	75.6	62.5	13.1	0.163	77.0	80.3	-3.2	0.570	0.135
Number of months worked									
Year 1	2.8	3.2	-0.5	0.598	4.0	4.7	-0.6	0.328	0.869
Year 2	6.2	6.8	-0.6	0.563	6.6	6.8	-0.2	0.791	0.744
Year 3	8.1	8.3	-0.2	0.807	8.1	8.6	-0.6	0.386	0.787
Year 4	8.2	7.6	0.6	0.482	8.1	9.0	-0.9	0.140	0.148
Year 5	7.8	6.7	1.1	0.300	8.4	8.7	-0.3	0.681	0.271
Earnings ($)									
Year 1	2,859	3,248	-389.3	0.679	4,415	5,319	-903.7	0.320	0.694
Year 2	7,636	9,262	-1,625.5	0.343	8,567	8,785	-218.3	0.858	0.502
Year 3	10,927	12,058	-1,131.0	0.564	11,146	13,235	-2,089.6	0.121	0.686
Year 4	16,630	12,226	4,403.5 *	0.063	15,080	17,289	-2,208.9	0.252	0.029 **
Year 5	16,181	10,558	5,623.7 **	0.032	15,895	16,737	-841.6	0.680	0.049 **
Went to work within first year and…[a] (%)	50.1	43.8	6.4	0.535	60.0	55.1	4.9	0.477	0.904
Worked 12 consecutive months or less	17.5	11.0	6.5	0.370	22.5	15.6	6.8	0.222	0.967

(continued)

Table 3.9 (continued)

Outcome	Age 16-18 at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	Age 19 and Older at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Worked 13-24 consecutive months	4.5	5.1	-0.6	0.893	10.3	7.9	2.4	0.563	0.625
Worked 25-36 consecutive months	3.6	10.2	-6.6	0.217	4.9	3.7	1.3	0.655	0.192
Worked more than 36 consecutive months	24.5	17.4	7.1	0.410	22.4	28.0	-5.6	0.346	0.223
Number of jobs held during 54-month follow-up (%)									
1	9.3	6.2	3.2	0.559	7.6	9.2	-1.6	0.680	0.473
2 or 3	49.8	56.7	-6.8	0.497	54.9	39.1	15.8 **	0.024	0.064 *
4 or more	34.4	35.3	-0.9	0.923	34.3	45.3	-11.0	0.107	0.382
Sample size	115				215				

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

For consistency, dollar amounts and months worked for Months 49 through 53, the first five months of Year 5, have been annualized.

[a]The number of consecutive months represents the first employment spell after random assignment.

The Evaluation of the CET Replication Sites

Table 3.10

Impacts on Job Characteristics, by Age: High-Fidelity Sites

Outcome	Age 16-18 at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	Age 19 and Older at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Characteristics of most recent job									
Hourly wage (%)									
$9.00 or more	54.5	34.8	19.7 **	0.034	51.1	52.3	-1.2	0.857	0.067 *
Average wage among workers ($)	*10.53*	*8.84*	*1.7*	*NA*	*9.72*	*10.10*	*-0.4*	*NA*	*NA*
Weekly hours worked (%)									
35 hours or more	91.6	80.0	11.6	0.103	88.1	77.1	11.1 **	0.045	0.953
Average hours worked among workers	*40.5*	*39.0*	*1.5*	*NA*	*39.7*	*38.9*	*0.8*	*NA*	*NA*
Benefits provided (%)									
Health insurance	36.9	43.5	-6.6	0.485	36.5	49.8	-13.3 **	0.045	0.562
Paid sick days	31.8	34.4	-2.6	0.781	37.5	41.8	-4.3	0.526	0.879
Paid vacation days	48.0	49.5	-1.5	0.881	42.3	54.2	-11.9 *	0.087	0.382
Industry (%)									
Construction/manufacturing	31.7	32.8	-1.1	0.900	23.0	22.6	0.5	0.936	0.881
Retail trade	9.6	15.0	-5.4	0.387	16.6	19.8	-3.2	0.546	0.787
Eating/drinking establishments	2.7	6.2	-3.5	0.377	3.5	4.0	-0.5	0.839	0.520
Professional services	12.5	22.9	-10.4	0.145	14.4	18.3	-3.9	0.425	0.449
Health services	8.9	14.0	-5.2	0.398	7.4	10.5	-3.1	0.417	0.778
Other services	21.2	9.5	11.7	0.102	16.4	17.1	-0.7	0.886	0.157
Other industry	18.6	17.9	0.7	0.925	26.4	16.8	9.6 *	0.092	0.336
Occupation (%)									
Sales	6.0	11.7	-5.7	0.298	7.8	8.1	-0.3	0.938	0.414
Clerical	11.1	15.2	-4.1	0.536	24.5	22.9	1.6	0.791	0.522

(continued)

Table 3.10 (continued)

Outcome	Age 16-18 at Program Entry				Age 19 and Older at Program Entry				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Services	10.9	24.7	-13.8 *	0.063	13.2	16.7	-3.5	0.479	0.244
Operatives/laborers	28.7	19.5	9.1	0.268	21.4	16.5	4.8	0.349	0.656
Other	36.8	27.0	9.9	0.292	30.1	30.4	-0.4	0.954	0.363
Sample size	115				215				

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

Italics indicate comparisons that are nonexperimental.

sample size for the subgroup ages 16 to 18 is very small (just 115 of the 1,136 youth), making the estimates more uncertain.[20]

The impacts on earnings for the younger subgroup are similar in magnitude to those found for CET-San Jose in the JOBSTART evaluation, which showed an increase of about $6,500 in Years 3 and 4.[21] This comparison is relevant because the CET sample in JOBSTART was also fairly young. Although JOBSTART enrolled youth as old as age 21, 78 percent of the CET sample were age 19 or younger at program entry. However, that sample was also fairly small, with only 167 youth.

Meanwhile, for the older subgroup in this study, Tables 3.9 and 3.10 show few effects. One pattern to point out, however, is that, for those ages 19 and older, there appears to have been an effect on the types of jobs held. As Table 3.10 shows, there was an 11.1 percentage point impact in jobs with 35 hours or more per week. However, only 36.5 percent were in jobs that offered health insurance, and only 42.3 percent were in jobs that offered paid vacation days — lower rates than for their peers in the control group. This seems to indicate a negative effect on job quality, at least as measured by these indicators. The increase in jobs in "other industry" may be related to the increase in hours and the decrease in benefits.

Education Level

Finally, Tables 3.11 and 3.12 present results in high-fidelity sites for subgroups defined by education level at the time of entry into the CET study. Among those with a high school diploma or GED at random assignment, Table 3.11 shows negative effects on employment and earnings in the earlier part of the follow-up period. For example, the negative effects on earnings range from $2,611 in Year 1 to $4,620 in Year 3 (equivalent to impacts of approximately 42 percent and 29 percent), reflecting the decreases in months employed in these first few years. However, by the end of the follow-up period, the negative effects fade. The one difference for high school graduates that does stand out at the end of the follow-up, however, is shown in Table 3.12: a substantial and statistically significant increase in being employed as an operative or laborer. The proportion of high school graduates in this occupation is 29 percent among the program group, compared with 10 percent among the control group.

[20]To test whether the results held up with a larger sample size, medium-fidelity sites were added to an analysis; again, the results did not hold.

[21]Cave, Bos, Doolittle, and Toussaint (1993).

Table 3.11

Impacts on Employment, Earnings, and Job Stability, by Education Level: High-Fidelity Sites

Outcome	No High School or GED at Program Entry				High School or GED at Program Entry				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Ever worked during 30-month follow-up (%)	92.2	88.1	4.1	0.344	92.7	92.4	0.4	0.944	0.585
Ever worked during 54-month follow-up (%)	95.8	95.9	-0.2	0.949	96.3	95.7	0.6	0.871	0.867
Working at 54-month follow-up survey (%)	54.6	60.5	-5.9	0.412	66.2	67.2	-1.0	0.914	0.663
Ever worked (%)									
Year 1	51.3	40.0	11.3	0.130	63.5	68.5	-5.0	0.588	0.168
Year 2	78.9	71.0	7.9	0.224	75.9	84.1	-8.2	0.288	0.109
Year 3	75.9	80.3	-4.4	0.479	85.1	91.1	-6.0	0.339	0.856
Year 4	79.9	78.8	1.1	0.857	85.9	92.2	-6.2	0.303	0.390
Year 5	75.2	73.9	1.3	0.840	78.7	74.6	4.1	0.614	0.786
Number of months worked									
Year 1	3.4	3.3	0.1	0.877	3.7	5.7	-2.0 **	0.018	0.049 **
Year 2	6.4	5.8	0.6	0.413	6.7	8.6	-2.0 **	0.031	0.027 **
Year 3	7.7	7.6	0.0	0.947	8.5	9.8	-1.3	0.119	0.227
Year 4	7.7	7.8	-0.1	0.884	8.8	9.3	-0.5	0.544	0.718
Year 5	7.9	7.9	0.0	0.950	8.6	8.2	0.5	0.631	0.679
Earnings ($)									
Year 1	3,941	3,693	248.1	0.774	3,669	6,280	-2,611.2 **	0.021	0.042 **
Year 2	8,262	7,133	1,128.7	0.373	8,369	12,073	-3,703.8 **	0.023	0.018 **
Year 3	10,990	10,811	179.2	0.905	11,073	15,694	-4,620.0 ***	0.008	0.035 **
Year 4	15,016	13,767	1,249.1	0.499	16,776	18,374	-1,598.4	0.566	0.393
Year 5	15,273	13,898	1,375.3	0.497	16,911	16,552	358.2	0.898	0.768

(continued)

Table 3.11 (continued)

Outcome	No High School or GED at Program Entry				High School or GED at Program Entry				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Went to work within first year and…[a] (%)	51.3	40.0	11.3	0.130	63.5	68.5	-5.0	0.588	0.168
Worked 12 consecutive months or less	18.5	10.1	8.5	0.111	25.0	16.6	8.4	0.294	0.991
Worked 13-24 consecutive months	5.5	8.2	-2.8	0.466	12.1	7.1	5.0	0.385	0.258
Worked 25-36 consecutive months	6.1	6.3	-0.2	0.953	2.9	5.4	-2.5	0.506	0.662
Worked more than 36 consecutive months	21.2	15.4	5.8	0.323	23.6	39.4	-15.9 *	0.059	0.033 **
Number of jobs held during 54-month follow-up (%)									
1	9.1	9.8	-0.7	0.869	5.9	6.9	-1.0	0.825	0.958
2 or 3	50.8	46.9	3.9	0.597	59.8	42.1	17.7 *	0.063	0.248
4 or more	35.9	38.2	-2.3	0.733	30.7	46.7	-16.0 *	0.081	0.230
Sample size	192				126				

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

For consistency, dollar amounts and months worked for Months 49 through 53, the first five months of Year 5, have been annualized.

[a]The number of consecutive months represents the first employment spell after random assignment.

The Evaluation of the CET Replication Sites

Table 3.12

Impacts on Job Characteristics, by Education Level: High-Fidelity Sites

Outcome	No High School or GED at Program Entry				High School or GED at Program Entry				
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Characteristics of most recent job									
Hourly wage (%)									
$9.00 or more	49.4	45.1	4.3	0.549	56.2	49.7	6.5	0.490	0.857
Average wage among workers ($)	*9.9*	*9.5*	*0.4*	*NA*	*10.0*	*10.2*	*-0.1*	*NA*	*NA*
Weekly hours worked (%)									
35 hours or more	88.2	77.9	10.3 *	0.065	89.8	78.0	11.8 *	0.098	0.875
Average hours worked among workers	*39.9*	*39.6*	*0.3*	*NA*	*39.4*	*38.8*	*0.6*	*NA*	*NA*
Benefits provided (%)									
Health insurance	27.1	41.8	-14.7 **	0.033	52.5	55.7	-3.2	0.729	0.310
Paid sick days	31.1	34.8	-3.8	0.581	41.9	50.8	-8.9	0.343	0.655
Paid vacation days	40.1	46.8	-6.7	0.352	51.7	65.2	-13.6	0.145	0.559
Industry (%)									
Construction/manufacturing	26.2	25.9	0.2	0.970	27.8	26.1	1.6	0.844	0.891
Retail trade	15.3	20.5	-5.1	0.365	11.8	12.1	-0.3	0.957	0.565
Eating/drinking establishments	3.0	6.6	-3.6	0.235	4.5	1.6	2.9	0.372	0.143
Professional services	13.2	16.2	-3.0	0.530	14.5	24.3	-9.8	0.177	0.433
Health services	9.1	11.9	-2.8	0.511	5.9	10.3	-4.4	0.401	0.819
Other services	18.0	16.2	1.8	0.740	17.6	13.9	3.7	0.605	0.836
Other industry	23.0	17.2	5.9	0.307	24.7	19.3	5.4	0.493	0.958

(continued)

Table 3.12 (continued)

Outcome	No High School or GED at Program Entry				High School or GED at Program Entry				
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Occupation (%)									
Sales	8.8	10.0	-1.2	0.770	4.8	8.1	-3.3	0.481	0.743
Clerical	17.3	13.7	3.7	0.479	22.2	29.2	-7.0	0.401	0.276
Services	14.6	22.5	-7.9	0.161	9.9	14.3	-4.4	0.468	0.677
Operatives/laborers	21.0	22.9	-2.0	0.724	28.5	9.8	18.6 **	0.011	0.024 **
Other	34.1	26.8	7.2	0.284	31.0	34.3	-3.3	0.718	0.353
Sample size			192				126		

SOURCES: MDRC calculations from CET enrollment form and 54-Month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

Italics indicate comparisons that are nonexperimental.

Impacts Among the More Disadvantaged Subgroups

Although the CET model produced some positive and negative effects on employment and earnings in the early years for different demographic subgroups at high-fidelity sites, the effects did not persist. However, did CET have effects on subgroups defined by level of disadvantage — as being more disadvantaged or less disadvantaged? Was CET more successful in helping youth who needed its services more?

First, perhaps those youth who more closely resemble the youth in the JOBSTART Demonstration were more likely to have benefited from CET. In JOBSTART, evaluation participants at random assignment were age 17 to 21, economically disadvantaged, and without a high school diploma; most were also tested for literacy levels below the eighth grade. There are no reliable literacy-level data in the CET files, and creating a subgroup from the CET replication sample that otherwise resembles JOBSTART participants results, not surprisingly, in findings very similar to those for high school dropouts (shown in Table 3.11). On the one hand, this implies that the replication of the CET model had no effect, even for those who most resemble the population that CET has succeeded in helping in the past. On the other hand, not being able to account for low reading skills limits the ability to construct a fully comparable group. The low reading skills among JOBSTART youth likely had implications on their access to other education or training programs and to jobs.

Another way to identify a more disadvantaged subgroup of youth within the CET replication sample is to determine which youth were most at risk of not succeeding in the labor market on their own. Therefore, each sample member's propensity to have low earnings was predicted, based on a model examining a subset of control group members' likelihood of having low earnings several years after random assignment (Year 4). Then, dividing the remaining sample of the control group and the program group into those most at risk (the top 25 percent) for low earnings and those less at risk (the remaining 75 percent), employment and earnings outcomes were assessed. The analysis did not produce any statistically significant effects for either group. However, the resulting sample sizes are very small, which limits the conclusions that can be drawn.

Interpretation and Conclusions

Overall, the foregoing evidence shows that, on average, the CET model did not have effects. Even at high-fidelity sites — where CET led to increases in training and credential receipt that persisted throughout the 54-month follow-up period — there were few increases in employment and earnings outcomes. And some subgroups (men and high school graduates) experienced negative impacts earlier in the follow-up, although these effects eventually faded. In addition, some positive effects on earnings emerged later in the follow-up period for the

younger age subgroup in the high-fidelity sites. The small sample size for this subgroup suggests that these findings be interpreted with caution.

The findings raise many questions about why the training effects did not translate into improved experiences in the labor market. CET faced a high hurdle; many of the participants and holders of training certificates would have succeeded without the program. But the findings may also suggest that while CET was helpful for many participants, other options available to youth for job preparation were also helpful. Or they may suggest that, for youth who are motivated to find jobs, work experience may be just as valuable for better-paying jobs later on as are short-term training programs like CET. Chapter 4 explores these points in greater detail.

Chapter 4

Conclusions

This chapter summarizes the final report on the Evaluation of the Center for Employment Training (CET) Replication Sites. The findings presented in previous chapters cover 54 months of follow-up from the time youth entered the study and were assigned either to the CET program group or to a control group. During this time, program group members had access to CET services while control group members did not, but both groups sought out and received education and training, earned training credentials, and found employment. This final chapter describes the degree to which program and control group members had a different training experience, summarizes the program's effects on their employment outcomes, and draws conclusions to inform the development of employment training policies and programs for youth.

The Importance of Fidelity to the CET Model

This study focuses on the replication of an education and training program that was found to be very successful in prior research. Analysis of this replication effort serves to answer two questions: (1) Was the successful program's model replicated faithfully? and (2) If it was, did well-replicated programs have similarly positive outcomes as the original program? The answers to these two questions have important implications for the policy relevance of CET-San Jose's success with out-of-school youth. If the original program either proves not to be replicable or proves not to be successful when replicated well, then its effectiveness may not hold much promise for the development of policies and programs to address youth unemployment.

The question of whether the replication sites implemented the CET model with fidelity is addressed extensively in two prior reports.[1] Both reports describe the challenges of replicating key program features and identify the sites' different levels of fidelity to the CET model (see Table 1.1 in Chapter 1). In assessing program fidelity, Walsh et al. distinguish the following key characteristics of the original CET program model:[2]

- Employment and training services designed to mirror the workplace
- Intensive participation in such services
- Close involvement of industry in the design and operation of the program [including strong job development and job placement]

[1]See Walsh, Goldsmith, Abe, and Cann (2000); Miller et al. (2003).
[2]Walsh, Goldsmith, Abe, and Cann (2000, p. ii).

- Organizational capacity and stability

All these components were considered essential to the success of CET-San Jose in serving out-of-school youth. In analyzing the replication effort, the authors found that programs that did not replicate the CET model faithfully were most likely to experience difficulty with its job development component. These programs did not have the close relationships with local employers that CET-San Jose has, and they were sometimes unable to provide participants with a suitable job opportunity upon completion of training. Low intensity of participation was another frequent problem in low- and medium-fidelity sites. Many of the sites also experienced managerial and financial problems, and four of the twelve sites closed down before the replication study was completed.

In the end, only four replication sites were found to have implemented the CET model with high fidelity. These sites account for a total of 393 sample members, or 30 percent of the study sample, and all of them — El Centro, Oxnard, Riverside, and Santa Maria — are older established CET programs in mostly rural parts of California. They predominantly serve Hispanic clients, many of whom come from farm-worker backgrounds. With the exception of San Jose's booming economy and metropolitan setting, these four programs are very similar to CET-San Jose in having strong community ties and stable long-term leadership.

Another distinguishing feature of the high-fidelity sites is their relatively low levels of service receipt among the control group, compared with the medium- and low-fidelity sites. As reported in the 30-month follow-up report, only 18.8 percent of control group members in the high-fidelity sites received a training credential, compared with 29.3 percent in low-fidelity sites.[3] Combined with stronger participation among program group members, this results in a more pronounced treatment differential in the high-fidelity sites than in the study as a whole.

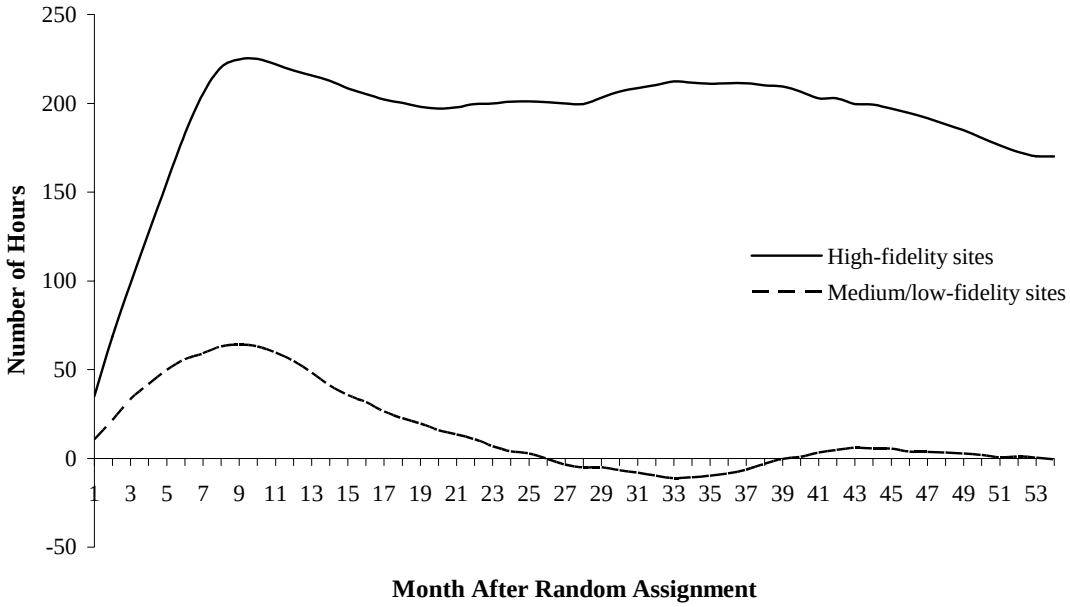
The analyses account for these variations in the effectiveness of replication by separately estimating program effects in high-fidelity sites and in medium/low-fidelity sites. The resulting impact estimates confirm the importance of fidelity of replication. Both positive and negative program effects were stronger in high-fidelity sites, especially for outcomes that are closely related to program services, such as early participation in training and receipt of training credentials. Figure 4.1 illustrates this finding by showing the percentage impact on cumulative hours of training at high-fidelity sites and at medium/low-fidelity sites over time. The figure shows that there was no program impact on participation in training at medium/low-fidelity sites, while program group members at high-fidelity sites received approximately 150 more hours of training than their control group counterparts through Month 54.

[3]Miller et al. (2003, p. 61).

The Evaluation of the CET Replication Sites

Figure 4.1

Impacts on Cumulative Hours of Training Over Time, by Site Fidelity



SOURCES: MDRC and BPA calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members.

Rounding may cause slight discrepancies in the calculations of sums and differences.

Given how difficult it was for the majority of the sites to replicate the CET model with fidelity, a major lesson of this study is that successful program models — even when they are very prescriptive and are centrally operated — are difficult to transfer from one context to another. Key concerns identified by Walsh et al. in this regard include lack of financial and management stability at the site level and the inability of some programs to maintain the degree of student commitment and participation that were found to be the norm at CET-San Jose in the

studies of that program that were conducted during the early 1990s.[4] Future efforts to replicate program models for youth should give careful consideration to these concerns.

On a more fundamental level, the implementation challenges faced by the CET replication sites may represent a key limitation of the replication process itself. On the one hand, for program replication to be "faithful," it has to adhere to the original model; on the other hand, the program has to fit its new context and be responsive to the different needs of its customers: its students and the employers they will seek out after graduation. In the implementation research, this tension manifested itself in a number of ways. Some sites found it difficult to sell CET's high-intensity program to potential students in their local area, for whom CET was in no way the established community institution that it is in San Jose. Other sites followed the CET model of working closely with local employers but only to prepare students for existing low-growth industries, such as textiles, in which even well-trained graduates cannot easily find steady employment.

The Education and Training Differential

A critical concern in the evaluation of any experimental program is the question of whether the experiment is a "fair test" of the treatment. Do program group members receive services that are sufficiently different from those received by the control group, so that there is a meaningful treatment contrast? In the case of this study, that seems to be true, especially in the high-fidelity sites. However, Chapter 2 and Figure 4.1 show that, even in the high-fidelity sites, the program-control difference in receipt of education and training diminished over time. Even in high-fidelity sites, the net difference in the total hours of skills training received had declined from 218 hours in Year 1 to 145 hours by the end of the follow-up period.

This decline in the treatment differential over time was not unexpected. Both the program group and the control group were motivated to participate in skills training when they applied for CET, and it was likely that control group members would seek out services on their own when they were turned away from the program. Also, CET training programs are relatively short term, so that even after program group members' initial participation in CET ended, there was ample opportunity for them to pursue other education and training activities during the follow-up period. And, as Chapter 2 shows, after four years of follow-up in the high-fidelity sites, 14.5 percent of the program group and 23.2 percent of the control group were still participating or were again participating in an education activity.

What remains is that (1) program group members received their skills training earlier than control group members; (2) the program group would have completed any initial training program more quickly; (3) there was a sustained impact on receipt of training credentials; and

[4]Walsh, Goldsmith, Abe, and Cann (2000, p. 5-2).

(4) the CET training program was expected to be more employment focused and to feature stronger links to actual job opportunities than alternative training programs attended by control group members. While there is little evidence of this last feature in the data collected for this project (which was unable to closely study any comparable training programs used by the control group), strong job development and connections with employers are a hallmark of CET's model, and these features were found to be well implemented in the high-fidelity sites.[5]

The Effects of CET on Employment and Earnings

The previous chapters (and the 30-month report in 2003) show essentially two separate impact stories for the high-fidelity sites and the medium/low-fidelity sites. In the medium/low-fidelity sites, there were very few statistically significant program impacts on employment and earnings, and the ones that were found are mostly small and negative. This is as expected, given the very small difference in service receipt by program and control group members in the medium/low-fidelity sites and the unremarkable quality of the CET programs in those sites.

In the high-fidelity sites, however, a more complex impact story emerged, as described in detail in Chapter 3. Women in these sites experienced significant positive impacts on employment in Year 2, and men experienced significant negative impacts on employment in Year 3. High school graduates experienced the most significant negative program effects during the first 30 months of follow-up. Control group members who were high school graduates had relatively strong employment outcomes, which may help explain this negative impact.[6] During the first years of follow-up, the labor market was relatively tight, and most sample members were able to find stable employment at wages higher than the minimum wage, even without skills training. Under such circumstances, one might expect to find that a training program like CET would have a negative effect on employment outcomes for those most likely to work, given that participation in a training program would substitute for working (and gaining experience) in a job.

[5]An interesting question would be what the *net* cost of the ultimate treatment contrast was. Because control group members received education and training at such high rates in this study, the net cost of the CET program (the difference between training resources spent on CET participants and similar resources spent on the control group) might be quite small. This question would be more compelling if modest but significant positive impacts on employment and earnings had been found, which is not the case. A formal benefit-cost analysis was not part of this evaluation. As a point of reference, the net cost of providing the JOBSTART program in San Jose was estimated at roughly $2,000 (Cave, Bos, Doolittle, and Toussaint, 1993, p. 208), which translates to $2,600 in 2004 dollars. In that case, however, the estimated net difference in training hours was much greater, at 335 hours.

[6]In the high-fidelity sites, for example, control group men earned $16,264 in Year 3, and high school graduates earned $15,694. In contrast, earnings for their program group counterparts were $12,859 and $11,073, respectively.

On the other hand, the 30-month study found that women in the program group in high-fidelity sites became employed in different fields of employment and earned higher wages than their counterparts in the control group. During the next two years (Months 31 to 54), no statistically significant impacts were found for either of these subgroups in the high-fidelity sites. As discussed in Chapter 3, during the final year of follow-up, a new impact on employment was found for sample members who were 18 or younger at random assignment (still in the high-fidelity sites), but this impact is highly sensitive to the definition of this subgroup, did not occur at 30 months, and was imprecisely estimated due to the small sample size. As a result, it is presented with great caution.

Explaining Program Impacts

The remainder of this chapter explores in greater detail why the CET program did not produce significant positive effects on employment and earnings even in the high-fidelity sites, where the program was well implemented and where significant effects on the receipt of training credentials were found. Given how successful the CET program was with the youth whom it served in both the JOBSTART and the Minority Female Single Parent (MFSP) Demonstration described in Chapter 1, what might explain these findings?

Hypothesis 1: The sample members in the replication sites did not need CET training credentials to obtain relatively well-paying jobs.

There are two major differences between the CET-San Jose program as evaluated in the JOBSTART Demonstration and the programs evaluated in this replication study. First, JOBSTART targeted and served a more disadvantaged sample of out-of-school youth. Recruitment for the JOBSTART Demonstration focused on youth whose reading skills were at or below the eighth-grade level, making it difficult for them to qualify for employment services funded by the Job Training Partnership Act (JTPA) and giving them little access to other education or training opportunities, such as General Educational Development (GED) classes and credit-bearing community college programs. The replication study did not restrict eligibility this way, and so participants were less disadvantaged educationally than their counterparts in JOBSTART, resulting in better employment outcomes and greater education opportunities for control group members. Second, the job markets in the high-fidelity replication sites were very different from those encountered by JOBSTART and MFSP participants in San Jose. On the one hand, the labor market had improved considerably since the mid-1980s, creating more employment opportunities for all sample members and possibly loosening employers' training requirements. On the other hand, the mostly rural high-fidelity replication sites did not have the high-tech industry and rapid job growth that CET-San Jose could offer to its graduates. One

result of these key differences is that the CET training credentials likely had a lower relative value in the replication study than in the JOBSTART and MFSP studies.

Hypothesis 2: Many participants who received CET training failed to take full advantage of it.

The replication study found evidence that, ultimately, many CET participants did not find jobs in the fields for which they were trained or received training certificates. A detailed analysis of CET administrative data for a subset of participants in high-fidelity sites shows that only 32 percent of those who completed training found jobs that matched their training. There is also evidence that CET participants did not always value their training. For example, when survey respondents were asked at 54 months after random assignment whether they had received a training certificate, about 40 percent of CET participants failed to report the credentials that they had earned when they first participated in the program. These findings represent a potential limitation of training when it is intensively focused on particular jobs and industries: Its relevance and potential value are lessened if participants decide to pursue a different career path. In contrast, although the more general and comprehensive postsecondary education that community colleges provide may have less immediate benefits in terms of links to specific jobs, it may be more useful when participants change their career trajectories, as many young people do. The lack of strong job development or strong connections to local employers worsens the potential drawbacks of highly focused, job-specific training.

Hypothesis 3: The CET program and its approach to training out-of-school youth are not as distinctive as they used to be.

After the successful CET programs of the 1980s were evaluated, the lessons learned were widely disseminated in the 1990s.[7] Partly because of the CET experience and partly in an attempt to be more responsive to employers' needs, many education and training programs have adopted similar promising practices, including flexible standards for admission, high-intensity short-term training, and strong links to local job opportunities. These practices can now be found in community college programs, in private for-profit training courses, and in other community-based training efforts. A consequence of these developments for the replication study is that participants' experiences — whether in the program group or the control group — were likely less distinctive than had been the case in the earlier JOBSTART and MFSP Demonstrations. Sample members would have been more likely to encounter a CET-like training experience in other schools and programs in their communities. As a result, there was less difference

[7]For JOBSTART, see Cave, Bos, Doolittle, and Toussaint (1993). For MFSP, see Burghardt, Rangarajan, Gordon, and Kisker (1992); Zambrowski, Gordon, and Berenson (1993).

in the nature of the training received by the program group and the control group in this replication study than there was in the JOBSTART and MFSP demonstrations. This, in turn, likely reduced the program's effects on employment and earnings in the replication sites.

Did the Training Make a Difference?

The net difference in the amount and the nature of training associated with access to the CET program was insufficient to produce a significant and lasting impact on sample members' earnings. Even so, it is still possible that the training itself had significant benefits. Unfortunately, the experimental design of the replication study does not capture such benefits directly. Instead, this issue was addressed through nonexperimental analysis of the relationships among training, training credentials, and earnings. Specifically, the analysis estimated the effects of any training, hours of training, and training credentials received during the first 12 months of the follow-up period on total earnings in Years 2, 3, and 4. By separating in time the training and the subsequent earnings, this method avoided any negative effects of substituting training for employment and produced a clean estimate of the earnings effects of these training variables.[8] The results of this analysis, presented in a separate working paper, do not find that training in Year 1 is associated with higher earnings for sample members in subsequent years. Only earning a training credential appears to have a significant positive effect.[9] This finding is consistent for a variety of subgroups and across both the high-fidelity and the medium/low-fidelity sites.[10]

Summary Conclusions

Implications for Replication

This study found that it was difficult to replicate the successful CET model for training out-of-school youth. Out of twelve replication sites, only four were found to have implemented the model with high fidelity, and — even in those four sites — service intensity was lower than in the original CET program in San Jose that was studied in the JOBSTART and MFSP evalua-

[8]The nonexperimental analysis also controlled for a range of individual background characteristics, including education at baseline, marital status, age, ethnic group, and site.

[9]This finding could signify a "signaling" effect, whereby youth who are inherently more motivated or more capable are able to earn a credential, which, in turn, signals these underlying traits to the labor market. The finding of no apparent benefit from the training per se suggests such a signaling effect.

[10]It is possible that negative selection into training caused bias in these estimates, which are nonexperimental. This would be the case if the less employable sample members spent more time in training during Year 1 than those who were able to find a job more quickly. The analysis attempted to mitigate this likely bias by estimating instrumental variables models, using a dummy variable indicating experimental status interacted with site variables as instruments for training. Doing so did not materially change the findings, but the instrumental variables estimates are very imprecise. For details, see Bos and Furgiuele (2005).

tions. The low- and medium-fidelity sites experienced significant difficulties implementing the CET model. Some sites were unable to implement the job development and job placement components; some sites experienced financial upheaval; and some sites even shut their doors before the demonstration period ended. All this happened even though the sites received funding from the U.S. Department of Labor for this replication project and even though CET in San Jose exercised some central control over the replication sites.

This finding illustrates the difficulty of taking a successful employment training model and transplanting it into a different organizational setting and context. Even in a deliberate and well-planned demonstration project like this one, the obstacles that local program operators face — often with limited or insufficient resources — are difficult to overcome, especially during a program's startup phase. The four programs that implemented the model with high fidelity in this study are all older, experienced, CET-operated programs in California.

Future replication efforts of successful employment training programs should provide special outside technical assistance to facilitate the replication process and should also ensure that local programs have the resources and wherewithal to implement the intervention with high fidelity. Successful replication may also require extensive upfront marketing research to establish that there will be motivated customers (both trainees and employers) for the services that the local programs provide and significant upfront recruiting to maximize the enrollment of motivated students and to identify job opportunities for them quickly when they graduate. Technical assistance in replication efforts should also focus on strengthening programs' organizational and financial stability.

Implications for Program Impacts

The CET replication effort did not produce significant effects on earnings and other employment outcomes for the sample as a whole. Both the program group and the control group benefited from mostly favorable labor market conditions. The majority of sample members were able to find steady employment at average wages that were significantly above the prevailing minimum wage. CET participation was unable to lift program group members' earnings significantly above the relatively high levels of control group members' earnings. Among subgroups, the 30-month finding of a positive impact on employment among women in the high-fidelity sites dissipated over time, whereas positive impacts for the younger age subgroup may have emerged during the longer, 54-month follow-up period.

The CET program's effect on training receipt was small compared with other employment training demonstration projects for youth. Many control group members found alternative training opportunities in the community. As a result, for the most part, the program's effect was to speed up and concentrate training in a shorter period of time at the beginning of the follow-up

period. Similar numbers of both program and control group members earned high school credentials (including GED certificates). Many sample members continued to participate in education and training throughout the follow-up period, which limited the overall treatment contrast for the study. As a result, it is likely that net program costs were low as well, but this cannot be verified with the available data.

Achieving sufficient duration and intensity of participation is an important concern for employment training programs like CET. Even though CET offers relatively short-term training, it is important that students complete a full course of study to reap the full benefits. Nonexperimental analyses tentatively confirm this by finding large and significant payoffs for earning a training credential. The level of CET participation in this study varied substantially among the low-, medium-, and high-fidelity sites, with the last group recording significantly stronger participation than the other sites.

Implications for the Quality of Training

Both the experimental analyses of program impacts and the nonexperimental analyses of the effects of training per se suggest that skills training has relatively little benefit for the sample targeted by this study. Although high levels of control group service receipt and relatively low fidelity to the model likely reduced the net effect of the CET program, this finding also suggests that the training provided did not have a significant immediate impact on earnings — especially in a tight labor market, in which employers may be willing to take on the cost of training unqualified new hires. Combined with the fact that many survey respondents failed to report the training that they did receive, this finding raises questions about the quality and meaningfulness of the training.[11] Possibly, such training is successful with very disadvantaged sample members in a relatively poor labor market but does little for more employable individuals during a period of low unemployment. The U.S. Department of Labor and other organizations that are concerned with training for low-income out-of-school youth should consider conducting supplemental research studies to identify the most effective skills training approaches and, especially, ways to keep youth engaged in them long enough to earn a credential.

Implications for Targeting Youth

This report's subgroup analyses do not uncover a clearly defined group of sample members for whom the CET replication sites achieved consistently positive impacts. This suggests that, at least within the study sample, the evaluation does not identify a distinct group to whom program services might be targeted more successfully. However, the relatively high em-

[11]Much larger percentages of participants were enrolled in and attended CET classes than reported doing so on the survey. For details about this problem, see Miller et al. (2003).

ployment rates and the availability of high-quality community college services for many participating sample members suggest that a program like CET would best be targeted to youth who are not very employable and are not interested in or qualified for enrollment in community college. Ideally, a short-term job-focused program like CET would target those youth for whom the link that it provides to particular job opportunities makes the difference between a good career and unemployment.

Appendix A

Conditional Impact Analysis

All the reports for the Evaluation of the Center for Employment and Training (CET) Replication Sites have highlighted the importance of fidelity to the CET model in assessing program effects. Four of the twelve replication sites were determined to have implemented the CET model with fidelity, and positive effects on training and employment and earnings were more pronounced at these sites. To ensure that the findings represent the implications of fidelity rather than other site characteristics, this appendix presents a conditional impact analysis. The analysis examines the role of observable baseline characteristics at different sites.

The observable baseline characteristics that are included in the analysis are gender, age group ("16 to 18" or "19 and older"), whether the participant is a high school dropout or a graduate, ethnicity ("Hispanic" or "other"), receipt of Aid to Families with Dependent Children (AFDC), and limited English proficiency (LEP) status. It is important to note that 93 percent of evaluation participants at the high-fidelity sites are Hispanic, compared with 18 percent of evaluation participants at medium/low-fidelity sites. Therefore, although "Hispanic" is included in the conditional impact model, it is not possible to disentangle the extent to which differences in the ethnic composition of the populations served versus differences in the fidelity to the CET model explain the differences in impacts across sites.

The model for the conditional impact analysis pools the sample across all replication sites and adds an interaction of the program group indicator variable with each of the covariate baseline characteristics, including an interaction of the program group indicator with the fidelity status. The coefficient on the interaction of fidelity status and program status gives an estimate of the difference in impacts between high-fidelity sites and medium/low-fidelity sites. Including other interactions accounts for the possibility that CET affected subgroups differently. If these baseline characteristics explain the fidelity differences in impacts, then the coefficient on the interaction of fidelity status with program status will diminish.

Appendix Table A.1 presents the results for three key outcomes for which impacts differed by fidelity status: hours in training activities in Year 1, receipt of a training certificate by Month 48, and earnings in Year 4. The table shows the difference in the impacts between high-fidelity and medium/low-fidelity sites (or the coefficients on the interaction term of fidelity status with program status). The first rows under each outcome present the values for these coefficients when no other interactions are included. For example, prior to accounting for demographic subgroup differences, the impact on hours in training activities in Year 1 was 166.7 hours greater in high-fidelity sites than in medium/low-fidelity sites. Similarly, the impact on whether participants received a training certificate by Month 48 was 13.8 percentage points greater at high-fidelity sites, and the impact on earnings in Year 4 was $844.68 greater at high-fidelity sites.

Once interactions of fidelity with different covariates are included, the difference in impacts between high-fidelity and medium/low-fidelity sites change to varying degrees. For ex-

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Appendix Table A.1

Differences in Impacts Between High-Fidelity and Medium/Low-Fidelity Sites

Outcome	Difference for High-Fidelity Sites		Percentage Explained
Hours in training activities in Year 1			
No other interactions	166.7	***	
Including interaction of program group with:			
Female	164.1	***	1.6
Age 16-18	170.6	***	-2.3
High school dropout	173.6	***	-4.1
Hispanic	87.4		47.6
AFDC	165.7	***	0.6
LEP	166.9	***	-0.1
All covariates	73.9		55.7
Received training certificate by Month 48 (%)			
No other interactions	13.8	**	
Including interaction of program group with:			
Female	13.6	**	1.4
Age 16-18	14.1	**	-2.2
High school dropout	14.8	**	-7.2
Hispanic	5.5		60.1
AFDC	13.7	**	0.7
LEP	13.8	**	0.0
All covariates	4.3		68.8
Earnings in Year 4 ($)			
No other interactions	844.68		
Including interaction of program group with:			
Female	884.49		-4.7
Age 16-18	827.04		2.1
High school dropout	751.74		11.0
Hispanic	-343.73		140.7
AFDC	1,022.52		-21.1
LEP	848.84		-0.5
All covariates	-174.68		120.7
Sample size	1,136		

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

ample, when the interaction of "fidelity" with "female" is added to the model, the difference in impacts on hours in training drops slightly, from 166.7 hours to 164.1 hours. This indicates that gender differences between high-fidelity and medium/low-fidelity sites explain just 1.6 percent of the differences in impacts.

As expected, due to the strong correlation between Hispanic ethnicity and high-fidelity sites, the covariate "Hispanic" explains a substantial portion of site differences. For example, when the interaction of "fidelity" with "Hispanic" is added to the model, the difference in impacts on hours of training drops from 166.7 hours to 87.4 hours. The differences in impacts on the other outcomes follow a similar pattern. Also, in Appendix Table A.1, the last row for each outcome shows the differences between high-fidelity and medium/low-fidelity sites when including *all* baseline covariates in the model. For example, including all covariates in the model reduces the difference in impacts on hours in training from 166.7 to 73.9 hours, which means that the differences in the observed baseline characteristics across sites account for 55.7 percent of the differences in impacts on hours of training in Year 1.

Appendix Table A.2 presents the results of a conditional impact analysis of two key outcomes among women for which there were impact differences between high-fidelity and medium/low-fidelity sites: having ever worked during the 30-month follow-up period and earnings in Year 3. It shows that "Hispanic" explains 17.6 percent of the difference in impacts on having worked during the 30-month follow-up period and that all covariates together explain 22.3 percent of the differences. The table also shows that "Hispanic" explains 81.3 percent of the difference in impacts on earnings in Year 3 and that all covariates together explain 65.6 percent of the differences.

In sum, in most cases, the role of baseline characteristics in explaining differences across sites is minimal. Most characteristics explain less than 10 percent of differences in impacts between high-fidelity and medium/low-fidelity sites. The one exception is ethnicity. Including "Hispanic" in the model indicates that the different ethnic compositions at the two groups of sites may explain a large proportion of the differences in impacts. However, because most participants at the high-fidelity sites are Hispanic, it is not possible to know this for sure.

The Evaluation of the CET Replication Sites

Appendix Table A.2

Differences in Impacts Between High-Fidelity and Medium/Low-Fidelity Sites, Among Women

Outcome	Difference for High-Fidelity Sites		Percentage Explained
Ever worked during 30-month follow-up (%)			
No other interactions	18.8	***	
Including interaction of program group with:			
Age 16-18	18.8	***	0.0
High school dropout	18.8	***	0.0
Hispanic	15.5	*	17.6
AFDC	16.3	*	13.3
Limited English proficiency (LEP)	18.8	***	0.0
All covariates	14.6	*	22.3
Earnings in Year 3 ($)			
No other interactions	1,150.08		
Including interaction of program group with:			
Age 16-18	1,145.04		0.4
High school dropout	1,150.36		0.0
Hispanic	214.66		81.3
AFDC	1,424.68		-23.9
LEP	1,158.09		-0.7
All covariates	395.25		65.6
Sample size	632		

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

[b]In order to have consistent categories, the five months that comprise Year 5 have been converted to the equivalent of a one year period.

Appendix B

Survey Nonresponse and Bias

Impacts for this report on the Evaluation of the Center for Employment and Training (CET) Replication Sites were estimated using the 54-month follow-up survey sample, which is a subset of the full baseline research sample. The baseline research sample for the CET evaluation consists of 1,484 youths.[1] The proportion of the full baseline research sample that responded to the 54-month survey is 77 percent, which is 1,136 youths.

The following analysis assesses the possible effects that nonresponse to the 54-month survey might have on the research findings. The concern is whether the survey sample is representative of the full research sample. If nonresponse to the survey is randomly distributed among members of both the treatment group and the control group and among certain characteristics (for example, gender), then the survey sample is representative of the full sample. But if nonresponse to the survey is not random, then the survey findings might be biased.

A high degree of mobility among disadvantaged youth and the long period of follow-up made it difficult for survey interviewers to locate all sample members 54 months after they enrolled in the study. However, the response rate of 77 percent is considered high, and so the survey sample is likely to be representative of the full sample. Appendix Table B.1 compares program group status and selected baseline characteristics of the full sample and of the survey sample. The rightmost column of the table indicates the statistical significance level of differences between respondents and nonrespondents.

First, the table shows that program group members were less likely to respond to the 54-month survey than control group members. In the full sample of study participants, 52.4 percent were randomly assigned to the program group, and 47.6 percent were randomly assigned to the control group. However, in the survey sample, 50.3 percent are in the program group, and 49.7 percent are in the control group. The difference between the expected proportions of each is 2.1 percentage points, which is small.

There are differences between the survey sample and the full sample with regard to several demographic characteristics as well. For example, the percentage of females in the survey sample is 2.7 percentage points less than the percentage in the full sample. Also, the survey sample is less likely to include high school graduates than the full sample. However, overall, the differences between respondents and the full sample are nominal. Therefore, the survey appears to be an accurate representation of the full sample, suggesting that the impacts in the report that use the survey sample are unlikely to be biased.

However, due to the slight differences in response rates between research groups, the following assesses whether the control group members in the survey sample serve as a valid

[1]Although the research sample consists of 1,485 youths, baseline data for one youth are missing; therefore, the baseline research sample consists of 1,484 youths.

The Evaluation of the CET Replication Sites

Appendix Table B.1

Comparison of the Characteristics of the Baseline Survey Sample

Characteristic (%)	Full Sample	Survey Sample	Difference
Treatment group			
Program group	52.4	50.3	2.1 ***
Control group	47.6	49.7	-2.1 ***
Age (years)	19.2	19.1	0.0 *
Gender			
Female	60.2	57.5	2.7 ***
Male	39.8	42.5	-2.7 ***
Ethnicity			
Hispanic	41.4	41.0	0.4
African-American	51.5	50.8	0.7 **
White	5.4	5.9	-0.6
Other	1.7	2.3	-0.6 **
Education			
Less than high school education	56.4	58.2	-1.8 **
High school graduate/GED	43.6	41.8	1.8 **
Highest grade level attained			
10th grade or less	34.9	35.2	-0.2
11th grade	32.7	34.3	-1.6 **
12th grade	31.3	29.3	2.0 ***
More than 12 years of schooling	1.1	1.3	-0.1
English language proficiency			
No limited English proficiency	87.6	87.5	0.1
Limited English proficiency	12.4	12.5	-0.1
Labor force status			
Employed	13.1	12.2	0.9 **
Unemployed	69.3	68.7	0.6
Not in the labor force	15.5	16.9	-1.4 **
Underemployed	2.1	2.2	-0.1

(continued)

Appendix Table B.1 (continued)

Characteristic (%)	Full Sample	Survey Sample	Difference
Family status			
Single head of household with dependent children	22.7	22.3	0.4
Single, nondependent	25.2	25.4	-0.2
Parent in two-parent family	8.3	7.3	1.0
Dependent	26.8	28.4	-1.6 **
Family member	15.8	15.4	0.4
Married without children	1.2	1.2	0.0
Marital status			
Single	93.9	94.0	-0.1
Married	4.4	4.4	0.0
Divorced	0.1	0.1	0.0
Separated	1.6	1.5	0.1
Barriers to employment			
Lacks transportation	32.6	33.4	-0.8
Lacks significant work history	67.4	67.7	-0.3
Youth parent	37.7	36.7	1.0
One-person head of household with dependent children	24.4	24.8	-0.4
Other barriers			
Economically disadvantaged	72.7	74.0	-1.3 *
Offender/ex-offender	8.0	8.9	-0.9 *
Job training			
Received prior job training	8.7	7.5	1.2 ***
Public assistance			
AFDC/TANF recipient	24.9	24.3	0.7
Food stamp recipient	24.6	24.2	0.4
Sample size	1,484	1,136	

SOURCES: MDRC calculations based on baseline and 54-month follow-up survey data.

NOTES: Sample sizes vary for individual measures because of missing values.
Two-tailed t-tests were applied to differences between the respondents and nonrespondents.
Statistical significance levels are indicated as: * = 10 percent; ** = 5 percent; and *** = 1 percent.

comparison for the program group members. If the discrepancy in response rate resulted in systematic differences between the characteristics of the two research groups, then, again, program impacts may be biased. However, if the two research groups are still similar, then bias should not be a problem.

Appendix Table B.2 compares the program group survey respondents with the control group survey respondents, with respect to the same characteristics as above. There are just a few significant differences, all of which are small. The average age of the control group is 19.3 years, compared with 19.1 years for the program group. The control group also has a 2.5 percentage point greater proportion of African-American youth, but the differences among other racial/ethnic categories are not statistically significant. Finally, the control group includes 3.7 percentage points fewer parents living in a two-parent family, but there are no other differences in family structure. Because the differences between the program and control groups in the survey sample are very minor, the control group is a valid comparison for the program group.

Because most of the analyses of impacts in this report focus on the high-fidelity sites, the same analysis was conducted for the high-fidelity survey sample. Appendix Table B.3 shows that the program and control groups are nearly identical. Again, there are more African-Americans in the control group than the program group, but the difference is just 0.9 percent. There are also fewer single youth in the control group than the program group, as well as more AFDC/TANF recipients. Again, because there are no large or systematic differences between the program and control groups at the high-fidelity sites, the control group does serve as a valid comparison group. Therefore, the effects presented in this report are unlikely to be biased.

The Evaluation of the CET Replication Sites

Appendix Table B.2

Comparison of the Characteristics of the Survey Sample, by Treatment Group

Characteristic (%)	Program Group	Control Group	Difference
Age (years)	19.1	19.3	-0.2 **
Gender			
Female	61.2	59.0	2.2
Male	38.8	41.0	-2.2
Ethnicity			
Hispanic	41.8	41.0	0.8
African-American	50.3	52.8	-2.5 **
White	6.1	4.6	1.5
Other	1.8	1.6	0.2
Education			
Less than high school education	55.0	58.0	-3.0
High school graduate/GED	45.0	42.0	3.0
Highest grade level attained			
10th grade or less	34.9	34.9	0.1
11th grade	31.3	34.3	-3.1
12th grade	32.4	30.0	2.4
More than 12 years of schooling	1.4	0.8	0.6
English language proficiency			
No limited English proficiency	86.7	88.6	-1.9
Limited English proficiency	13.3	11.4	1.9
Labor force status			
Employed	14.5	11.6	2.9
Unemployed	69.7	68.9	0.8
Not in the labor force	13.9	17.2	-3.3
Underemployed	1.9	2.3	-0.4

(continued)

Appendix Table B.2 (continued)

Characteristic (%)	Program Group	Control Group	Difference
Family status			
Single head of household with dependent children	22.5	23.0	-0.4
Single, nondependent	24.4	26.1	-1.7
Parent in two-parent family	10.0	6.3	3.7 **
Dependent	26.0	27.7	-1.7
Family member	16.0	15.5	0.4
Married without children	1.0	1.4	-0.3
Marital status			
Single	93.5	94.5	-1.0
Married	4.7	4.1	0.5
Divorced	0.2	0.0	0.2
Separated	1.7	1.4	0.2
Barriers to employment			
Lacks transportation	32.3	32.8	-0.4
Lacks significant work history	66.3	68.7	-2.4
Youth parent	36.7	38.7	-2.0
One-person head of household with dependent children	25.1	23.7	1.5
Other barriers			
Economically disadvantaged	74.0	71.2	2.7
Offender/ex-offender	7.8	8.2	-0.4
Job training			
Received prior job training	9.2	8.0	1.2
Public assistance			
AFDC/TANF recipient	23.8	26.2	-2.3
Food stamp recipient	24.2	24.9	-0.7
Sample size	595	541	

SOURCES: MDRC calculations based on baseline and 54-month follow-up survey data.

NOTES: Sample sizes vary for individual measures because of missing values.
Two-tailed t-tests were applied to differences between the respondents and nonrespondents.
Statistical significance levels are indicated as: * = 10 percent; ** = 5 percent; and *** = 1 percent.

The Evaluation of the CET Replication Sites

Appendix Table B.3

Comparison of the Characteristics of the Survey Sample, by Treatment Group, in High-Fidelity Sites

Characteristic (%)	Program Group	Control Group	Difference
Age (years)	19.0	19.1	-0.2
Gender			
Female	52.3	46.2	6.1
Male	47.7	53.8	-6.1
Ethnicity			
Hispanic	92.5	94.2	-1.6
African-American	1.7	2.6	-0.9
White	4.0	2.6	1.4
Other	1.7	0.6	1.1
Education			
Less than high school education	57.3	63.9	-6.6
High school graduate/GED	42.7	36.1	6.6
Highest grade level attained			
10th grade or less	26.4	27.4	-1.0
11th grade	33.7	37.0	-3.3
12th grade	39.9	35.6	4.3
More than 12 years of schooling	0.0	0.0	0.0
English language proficiency			
No limited English proficiency	88.2	91.5	-3.3
Limited English proficiency	11.8	8.5	3.3
Labor force status			
Employed	15.5	14.6	0.9
Unemployed	73.2	72.2	1.0
Not in the labor force	10.1	11.1	-1.0
Underemployed	1.2	2.1	-0.9

(continued)

Appendix Table B.3 (continued)

Characteristic (%)	Program Group	Control Group	Difference
Family status			
Single head of household with dependent children	13.2	17.6	-4.4
Single, nondependent	24.6	26.8	-2.2
Parent in two-parent family	6.6	4.9	1.7
Dependent	38.3	36.6	1.7
Family member	15.0	11.3	3.7
Married without children	2.4	2.8	-0.4
Marital status			
Single	91.9	90.5	1.4
Married	6.9	7.5	-0.5
Divorced	0.0	0.0	0.0
Separated	1.2	2.0	-0.9
Barriers to employment			
Lacks transportation	34.4	28.8	5.6
Lacks significant work history	62.6	63.8	-1.2
Youth parent	18.5	27.3	-8.8 *
One-person head of household with dependent children	14.0	18.3	-4.3
Other barriers			
Economically disadvantaged	94.6	89.4	5.2 *
Offender/ex-offender	4.1	5.7	-1.6
Job training			
Received prior job training	3.7	1.1	2.6
Public assistance			
AFDC/TANF recipient	5.8	13.0	-7.2 **
Food stamp recipient	7.6	13.0	-5.5
Sample size	176	156	

SOURCES: MDRC calculations based on baseline and 54-month follow-up survey data.

NOTES: Sample sizes vary for individual measures because of missing values.
Two-tailed t-tests were applied to differences between the respondents and nonrespondents.
Statistical significance levels are indicated as: * = 10 percent; ** = 5 percent; and *** = 1 percent.

Appendix C

Impacts on Participation and Credential Receipt in Medium/Low-Fidelity Sites

The Evaluation of the CET Replication Sites

Appendix Table C.1

Impacts on Participation in Training and Education, by Gender: Medium/Low-Fidelity Sites

Outcome	Women				Men				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Participation in training activities (%)									
Year 1	16.3	14.3	2.0	0.562	19.0	11.9	7.1	0.132	0.375
Year 2	10.9	17.0	-6.1 *	0.059	7.3	12.8	-5.5	0.158	0.913
Year 3	10.6	16.1	-5.5 *	0.081	7.9	9.7	-1.8	0.620	0.450
Year 4	8.2	10.2	-2.0	0.454	9.4	8.1	1.4	0.714	0.461
Year 5	5.1	7.9	-2.8	0.217	10.4	10.3	0.1	0.979	0.522
Years 1-5	35.5	36.2	-0.7	0.883	35.9	30.0	6.0	0.331	0.381
Hours of training activities									
Year 1	101.2	84.2	17.0	0.563	143.4	81.6	61.8	0.217	0.440
Year 2	48.4	115.9	-67.6 **	0.014	55.0	86.2	-31.2	0.406	0.433
Year 3	43.6	69.0	-25.4	0.171	44.5	28.0	16.5	0.447	0.142
Year 4	43.7	36.4	7.3	0.638	67.6	57.9	9.7	0.811	0.956
Year 5	50.9	55.8	-4.9	0.836	76.4	90.9	-14.5	0.755	0.853
Years 1-5	287.9	361.3	-73.4	0.277	386.9	344.6	42.3	0.704	0.373
Participation in education activities (%)									
Year 1	14.7	18.8	-4.1	0.235	14.9	17.9	-3.0	0.534	0.847
Year 2	19.4	18.9	0.5	0.894	23.0	19.9	3.2	0.555	0.680
Year 3	26.4	25.2	1.2	0.775	29.7	21.8	7.8	0.172	0.345
Year 4	20.3	19.8	0.5	0.889	16.3	25.5	-9.3 *	0.080	0.130
Year 5	19.0	19.6	-0.5	0.883	15.9	24.3	-8.4	0.104	0.215
Years 1-5	49.5	55.2	-5.7	0.223	51.5	52.1	-0.7	0.919	0.528
Hours of education activities									
Year 1	63.4	66.8	-3.4	0.867	50.0	51.0	-1.0	0.964	0.939
Year 2	82.4	72.4	10.1	0.640	101.1	63.5	37.5	0.202	0.450
Year 3	124.1	108.1	15.9	0.550	102.9	77.9	25.0	0.377	0.815
Year 4	140.2	93.0	47.1	0.195	59.8	157.6	-97.7 ***	0.010	0.005 ***
Year 5	141.0	100.7	40.2	0.267	97.4	188.8	-91.4 *	0.071	0.034 **
Years 1-5	551.0	441.0	110.0	0.257	411.3	538.8	-127.6	0.278	0.118

(continued)

Appendix Table C.1 (continued)

	Women				Men				
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Hours of training, education, and other activities									
Year 1	168.8	159.1	9.8	0.787	200.9	133.3	67.6	0.252	0.403
Year 2	137.8	196.2	-58.4	0.114	164.8	156.3	8.4	0.870	0.293
Year 3	187.8	206.2	-18.4	0.621	150.6	124.9	25.7	0.510	0.412
Year 4	207.3	151.8	55.4	0.203	138.2	228.0	-89.8	0.120	0.044 **
Year 5	222.3	178.4	44.0	0.342	195.9	282.6	-86.7	0.286	0.161
Years 1-5	924.0	891.7	32.3	0.802	850.3	925.1	-74.8	0.671	0.623
Sample size	469				251				

SOURCES: MDRC and BPA calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

For consistency, dollar amounts and hours for Months 49 through 53, the first five months of Year 5, have been annualized.

The Evaluation of the CET Replication Sites

Appendix Table C.2

Impacts on Participation in Training and Education, by Age: Medium/Low-Fidelity Sites

Outcome	Age 16-18 at Program Entry				Age 19 and Older at Program Entry				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Participation in training activities (%)									
Year 1	17.1	13.0	3.8	0.455	17.8	13.0	4.8	0.138	0.863
Year 2	9.7	17.0	-7.8	0.110	10.1	14.0	-4.1	0.162	0.512
Year 3	11.8	11.0	0.5	0.921	9.3	14.0	-4.9 *	0.087	0.329
Year 4	7.6	11.0	-3.5	0.405	9.1	9.0	0.3	0.899	0.437
Year 5	8.4	9.0	-0.8	0.853	6.5	8.0	-1.8	0.443	0.824
Years 1-5	39.9	36.0	4.1	0.566	34.8	32.0	2.9	0.500	0.884
Hours of training activities									
Year 1	90.6	68.6	22.0	0.546	133.1	82.4	50.7	0.129	0.562
Year 2	21.9	130.4	-108.5 **	0.016	63.0	94.5	-31.6	0.213	0.134
Year 3	29.9	38.3	-8.4	0.675	53.4	57.8	-4.4	0.813	0.884
Year 4	45.1	47.8	-2.7	0.922	52.7	44.5	8.2	0.702	0.756
Year 5	67.7	89.3	-21.6	0.645	54.2	61.1	-6.9	0.780	0.781
Years 1-5	255.3	374.4	-119.1	0.242	356.3	340.3	16.0	0.823	0.276
Participation in education activities (%)									
Year 1	13.7	28.0	-13.9 **	0.016	15.7	14.0	1.8	0.563	0.016 **
Year 2	22.5	26.0	-3.3	0.598	19.7	17.0	3.2	0.358	0.364
Year 3	32.6	32.0	0.4	0.957	25.4	20.0	5.1	0.179	0.544
Year 4	16.8	25.0	-8.4	0.151	19.7	20.0	-0.7	0.844	0.261
Year 5	25.1	26.0	-0.8	0.893	15.2	19.0	-3.5	0.304	0.709
Years 1-5	56.8	70.0	-12.7 *	0.067	47.7	47.0	0.8	0.860	0.099 *
Hours of education activities									
Year 1	67.3	108.9	-41.6	0.256	56.8	38.8	18.0	0.258	0.134
Year 2	89.7	96.0	-6.3	0.863	86.7	59.6	27.1	0.161	0.418
Year 3	136.0	117.2	18.8	0.644	107.4	89.8	17.5	0.438	0.979
Year 4	115.6	109.6	6.0	0.914	111.5	116.7	-5.2	0.868	0.861
Year 5	159.1	135.4	23.7	0.692	112.2	128.4	-16.2	0.635	0.561
Years 1-5	567.9	567.2	0.7	0.997	474.6	433.4	41.2	0.624	0.823

(continued)

Appendix Table C.2 (continued)

	Age 16-18 at Program Entry				Age 19 and Older at Program Entry				
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Hours of training, education, and other activities									
Year 1	158.0	180.0	-22.0	0.673	197.7	127.9	69.9 *	0.073	0.157
Year 2	117.6	244.8	-127.2 *	0.054	157.4	157.5	-0.1	0.997	0.084 *
Year 3	191.0	178.1	12.9	0.804	171.0	173.7	-2.7	0.935	0.800
Year 4	193.2	177.7	15.6	0.817	179.4	177.4	2.1	0.960	0.863
Year 5	267.9	232.8	35.1	0.690	188.6	207.2	-18.6	0.686	0.588
Years 1-5	927.7	1,013.3	-85.6	0.684	894.1	843.6	50.5	0.673	0.573
Sample size			216				505		

SOURCES: MDRC and BPA calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

For consistency, dollar amounts and hours for Months 49 through 53, the first five months of Year 5, have been annualized.

The Evaluation of the CET Replication Sites

Appendix Table C.3

Impacts on Participation in Training and Education, by Education Status: Medium/Low-Fidelity Sites

	High School or GED at Program Entry				No High School or GED at Program Entry				
Outcome	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Participation in training activities (%)									
Year 1	18.9	15.1	3.8	0.376	16.4	11.8	4.6	0.213	0.899
Year 2	6.7	18.2	-11.6 ***	0.002	12.1	12.5	-0.3	0.920	0.027 **
Year 3	9.2	16.2	-6.9 *	0.071	9.8	10.1	-0.2	0.939	0.175
Year 4	9.6	11.9	-2.4	0.507	8.1	7.1	1.0	0.709	0.451
Year 5	5.8	9.5	-3.7	0.221	8.6	7.1	1.4	0.617	0.215
Years 1-5	36.0	36.6	-0.6	0.910	36.8	29.0	7.8	0.108	0.254
Hours of training activities									
Year 1	140.4	71.1	69.3 *	0.094	108.9	86.3	22.6	0.523	0.389
Year 2	40.4	145.3	-104.9 ***	0.006	59.4	70.8	-11.4	0.668	0.043 **
Year 3	48.9	67.3	-18.4	0.466	38.9	38.7	0.2	0.992	0.538
Year 4	47.7	63.6	-15.9	0.579	42.8	32.2	10.6	0.553	0.432
Year 5	51.2	71.7	-20.4	0.520	60.3	65.1	-4.8	0.876	0.723
Years 1-5	328.7	419.0	-90.3	0.320	310.3	293.1	17.2	0.820	0.362
Participation in education activities (%)									
Year 1	13.1	13.4	-0.2	0.956	16.6	21.3	-4.7	0.250	0.426
Year 2	18.5	17.4	1.1	0.796	21.8	21.1	0.8	0.862	0.950
Year 3	22.7	20.8	1.9	0.677	30.6	26.9	3.8	0.422	0.778
Year 4	16.3	21.0	-4.7	0.287	21.2	23.4	-2.2	0.610	0.682
Year 5	16.3	19.2	-2.8	0.518	19.7	24.0	-4.3	0.310	0.804
Years 1-5	41.1	42.2	-1.1	0.839	57.7	63.9	-6.2	0.217	0.495
Hours of education activities									
Year 1	72.4	41.9	30.5	0.219	47.1	75.7	-28.7	0.158	0.064 *
Year 2	84.3	78.5	5.8	0.829	87.5	67.3	20.2	0.385	0.686
Year 3	108.4	119.8	-11.4	0.725	116.8	89.9	26.9	0.302	0.356
Year 4	99.0	129.1	-30.2	0.411	118.5	116.0	2.4	0.953	0.554
Year 5	109.2	131.9	-22.7	0.567	138.6	140.8	-2.2	0.962	0.732
Years 1-5	473.4	501.3	-27.9	0.797	508.4	489.8	18.7	0.862	0.761

(continued)

Appendix Table C.3 (continued)

	High School or GED at Program Entry				No High School or GED at Program Entry				
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Hours of training, education, and other activities									
Year 1	217.2	115.6	101.6 **	0.037	163.3	169.1	-5.8	0.894	0.099 *
Year 2	131.2	231.1	-99.9 **	0.048	155.8	145.6	10.1	0.785	0.079 *
Year 3	171.0	211.7	-40.7	0.357	171.4	151.6	19.8	0.585	0.289
Year 4	159.8	193.7	-33.8	0.481	187.8	178.0	9.7	0.846	0.529
Year 5	173.8	213.7	-39.8	0.437	234.1	226.8	7.3	0.909	0.564
Years 1-5	853.1	965.7	-112.6	0.454	912.3	871.3	41.1	0.777	0.462
Sample size	317				382				

SOURCES: MDRC and BPA calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

For consistency, dollar amounts and hours for Months 49 through 53, the first five months of Year 5, have been annualized.

The Evaluation of the CET Replication Sites

Appendix Table C.4

Impacts on Receipt of Education and Training Credentials, by Gender: Medium/Low-Fidelity Sites

	Women				Men				
Outcome	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Received high school diploma by									
Month 1	48.0	48.4	-0.4	0.846	43.1	48.8	-5.7 ***	0.003	0.041 **
Month 12	49.6	50.6	-1.0	0.653	43.1	48.8	-5.7 ***	0.003	0.096 *
Month 24	50.1	51.0	-0.9	0.699	43.8	48.8	-5.0 **	0.016	0.173
Month 36	50.9	51.0	-0.1	0.963	43.8	49.7	-5.9 ***	0.008	0.067 *
Month 48	51.7	52.8	-1.2	0.639	43.7	50.5	-6.8 ***	0.004	0.094 *
Received GED by									
Month 1	10.7	13.3	-2.7	0.363	13.9	7.3	6.6 *	0.091	0.057 *
Month 12	14.5	18.2	-3.7	0.274	18.0	16.5	1.5	0.755	0.377
Month 24	17.0	20.5	-3.5	0.325	23.3	21.0	2.3	0.667	0.363
Month 36	19.5	26.4	-6.9 *	0.079	26.5	24.5	1.9	0.729	0.197
Month 48	23.6	29.7	-6.1	0.141	31.3	29.5	1.8	0.765	0.278
Received training certificate by									
Month 1	12.2	7.9	4.3	0.136	12.3	6.8	5.5	0.167	0.808
Month 12	33.0	20.9	12.1 ***	0.003	38.3	12.6	25.7 ***	0.000	0.055 *
Month 24	41.8	35.2	6.6	0.147	42.6	27.0	15.7 **	0.015	0.247
Month 36	45.3	41.3	4.0	0.391	45.1	31.6	13.5 **	0.040	0.233
Month 48	50.8	48.0	2.8	0.544	48.5	35.3	13.2 **	0.048	0.200
Received GED or high school diploma by									
Month 1	50.5	52.8	-2.4	0.324	46.6	49.6	-3.0	0.212	0.849
Month 12	55.1	58.0	-2.9	0.312	49.8	56.9	-7.0 **	0.039	0.356
Month 24	57.7	59.7	-2.0	0.512	55.0	60.3	-5.3	0.189	0.513
Month 36	60.6	64.5	-4.0	0.229	56.4	63.9	-7.4 *	0.081	0.516

(continued)

Appendix Table C.4 (continued)

	Women				Men				
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Month 48	64.3	68.1	-3.8	0.266	61.1	68.7	-7.6	0.101	0.509
Sample size	469				251				

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

The Evaluation of the CET Replication Sites

Appendix Table C.5

Impacts on Receipt of Education and Training Credentials, by Age: Medium/Low-Fidelity Sites

	Age 16-18 at Program Entry				Age 19 and Older at Program Entry				
Outcome	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Received high school diploma by									
Month 1	31.1	31.0	0.1	0.967	53.0	56.1	-3.1 *	0.071	0.221
Month 12	32.6	34.1	-1.5	0.579	53.8	56.8	-3.1 *	0.099	0.618
Month 24	32.6	34.1	-1.5	0.579	54.6	57.2	-2.7	0.174	0.715
Month 36	33.4	34.2	-0.8	0.776	55.0	57.6	-2.7	0.191	0.587
Month 48	35.1	36.2	-1.1	0.743	55.0	58.8	-3.9 *	0.067	0.471
Received GED by									
Month 1	6.5	9.6	-3.1	0.404	14.1	11.9	2.2	0.455	0.263
Month 12	11.9	14.7	-2.8	0.554	17.6	19.1	-1.5	0.661	0.827
Month 24	17.9	21.8	-3.9	0.490	19.9	20.3	-0.4	0.912	0.601
Month 36	20.4	29.0	-8.6	0.153	22.9	24.3	-1.5	0.696	0.316
Month 48	25.9	34.8	-9.0	0.168	26.6	27.5	-1.0	0.808	0.293
Received training certificate by									
Month 1	6.9	3.7	3.2	0.313	14.3	9.5	4.8	0.112	0.724
Month 12	31.1	13.2	17.9 ***	0.001	36.5	20.5	16.0 ***	0.000	0.778
Month 24	36.8	31.3	5.6	0.389	44.1	33.6	10.5 **	0.019	0.527
Month 36	39.5	34.5	4.9	0.462	47.6	40.0	7.5 *	0.099	0.746
Month 48	44.8	40.9	3.8	0.578	52.2	45.3	6.9	0.132	0.712
Received GED or high school diploma by									
Month 1	32.6	34.1	-1.5	0.585	56.3	59.2	-2.9	0.188	0.701
Month 12	37.7	41.1	-3.5	0.400	60.0	64.7	-4.7 *	0.082	0.806
Month 24	43.0	46.0	-3.0	0.533	62.8	65.9	-3.0	0.278	1.000
Month 36	45.3	52.1	-6.8	0.200	65.3	69.3	-4.0	0.177	0.645
Month 48	50.2	58.5	-8.3	0.145	69.0	72.4	-3.5	0.262	0.455
Sample size		216				505			

(continued)

Appendix Table C.5 (continued)

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

The Evaluation of the CET Replication Sites

Appendix Table C.6

Impacts on Receipt of Education and Training Credentials, by Education Level: Medium/Low-Fidelity Sites

	High School or GED at Program Entry				No High School or GED at Program Entry				
Outcome (%)	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Received high school diploma by									
Month 1	NA	NA	NA	NA	4.8	5.1	-0.3	0.879	
Month 12	NA	NA	NA	NA	6.9	7.3	-0.4	0.887	
Month 24	NA	NA	NA	NA	7.9	7.8	0.1	0.965	
Month 36	NA	NA	NA	NA	8.9	8.3	0.6	0.826	
Month 48	NA	NA	NA	NA	9.9	11.0	-1.1	0.729	
Received GED by									
Month 1	NA	NA	NA	NA	5.3	5.7	-0.5	0.8	NA
Month 12	NA	NA	NA	NA	11.1	15.7	-4.6	0.2	NA
Month 24	NA	NA	NA	NA	16.0	19.7	-3.7	0.4	NA
Month 36	NA	NA	NA	NA	19.6	27.7	-8.1 *	0.1	NA
Month 48	NA	NA	NA	NA	26.8	34.1	-7.4	0.1	NA
Received training certificate by									
Month 1	16.3	11.0	5.2	0.189	8.7	4.5	4.2	0.115	0.835
Month 12	46.0	24.7	21.2 ***	0.000	23.9	12.8	11.2 ***	0.008	0.140
Month 24	51.0	40.3	10.7 *	0.061	33.4	26.5	7.0	0.163	0.621
Month 36	54.1	45.0	9.1	0.111	36.3	32.4	4.0	0.441	0.504
Month 48	60.4	49.8	10.7 *	0.060	40.0	38.5	1.5	0.776	0.238
Received GED or high school diploma by									
Month 1	NA	NA	NA	NA	9.6	10.9	-1.3	0.677	
Month 12	NA	NA	NA	NA	16.9	21.4	-4.6	0.257	

(continued)

Appendix Table C.6 (continued)

	High School or GED at Program Entry				No High School or GED at Program Entry				
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Month 24	NA	NA	NA	NA	22.8	26.0	-3.2	0.475	
Month 36	NA	NA	NA	NA	27.4	34.0	-6.5	0.168	
Month 48	NA	NA	NA	NA	35.0	41.6	-6.5	0.191	
Sample size	317				382				

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

Appendix D

Impacts on Employment, Earnings, and Job Stability and Impacts on Job Characteristics in Medium/Low-Fidelity Sites

The Evaluation of the CET Replication Sites

Appendix Table D.1

Impacts on Employment, Earnings, and Job Stability, by Gender: Medium/Low-Fidelity Sites

	Women				Men				
Outcome	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Ever worked during 30-month follow-up (%)	82.6	89.4	-6.8 **	0.039	85.7	88.8	-3.1	0.499	0.508
Ever worked during 54-month follow-up (%)	94.7	96.0	-1.3	0.512	93.6	87.1	6.5 *	0.087	0.068 *
Working at 54-month follow-up survey (%)	55.6	59.7	-4.1	0.372	52.7	50.4	2.4	0.713	0.413
Ever worked (%)									
Year 1	41.2	46.1	-4.9	0.295	55.5	44.5	11.0 *	0.091	0.047 **
Year 2	63.4	66.0	-2.6	0.560	69.7	62.8	6.9	0.269	0.215
Year 3	80.0	87.6	-7.6 **	0.029	82.9	77.0	5.9	0.262	0.032 **
Year 4	79.9	79.4	0.5	0.889	76.6	75.5	1.1	0.849	0.936
Year 5	68.6	71.1	-2.5	0.613	73.1	65.6	7.4	0.246	0.218
Number of months worked									
Year 1	2.8	3.1	-0.3	0.426	3.8	3.5	0.3	0.612	0.388
Year 2	5.1	5.4	-0.3	0.506	5.8	5.4	0.4	0.533	0.371
Year 3	6.8	7.4	-0.5	0.220	7.0	7.0	0.0	0.938	0.448
Year 4	7.3	7.4	-0.1	0.838	7.2	7.3	-0.1	0.934	0.963
Year 5	7.2	7.3	-0.1	0.799	7.7	7.1	0.6	0.448	0.448
Earnings ($)									
Year 1	2,661	2,763	-102.5	0.823	4,323	4,582	-259.4	0.782	0.880
Year 2	5,752	5,889	-137.0	0.851	6,826	7,213	-386.1	0.720	0.848
Year 3	8,322	8,841	-519.6	0.514	10,267	9,966	300.7	0.815	0.586
Year 4	10,474	10,837	-363.0	0.720	12,544	14,158	-1,614.5	0.363	0.540
Year 5	10,753	11,500	-747.1	0.554	11,934	13,757	-1,823.2	0.347	0.641
Went to work within first year and…[a] (%)	41.2	46.1	-4.9	0.295	55.5	44.5	11.0 *	0.091	0.047 **
Worked 12 consecutive months or less	19.2	24.8	-5.6	0.154	25.4	18.3	7.1	0.191	0.058 *
Worked 13-24 consecutive months	4.7	6.1	-1.4	0.524	8.4	6.5	1.9	0.583	0.421
Worked 25-36 consecutive months	5.0	5.8	-0.8	0.709	6.5	4.2	2.3	0.438	0.397
Worked more than 36 consecutive months	12.3	9.5	2.9	0.332	15.2	15.5	-0.3	0.947	0.565

(continued)

Appendix Table D.1 (continued)

Outcome	Women				Men				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Number of jobs held during 54-month follow-up									
1	15.3	6.1	9.2 ***	0.001	9.9	9.2	0.7	0.854	0.071 *
2 or 3	42.5	52.6	-10.1 **	0.029	43.2	37.9	5.3	0.396	0.047 **
4 or more	36.9	37.3	-0.4	0.921	40.5	40.0	0.5	0.937	0.903
Sample size	469				251				

SOURCES: MDRC calculations from CET enrollment form and 30-month and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

For consistency, dollar amounts and months worked for Months 49 through 53, the first five months of Year 5, have been annualized.

[a]The number of consecutive months represents the first employment spell after random assignment.

The Evaluation of the CET Replication Sites

Appendix Table D.2

Impacts on Employment, Earnings, and Job Stability, by Age: Medium/Low-Fidelity Sites

	Age 16-18 at Program Entry				Age 19 and Older at Program Entry				
Outcome	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Ever worked during 30-month follow-up (%)	84.5	88.6	-4.2	0.374	83.3	89.4	-6.1 *	0.054	0.727
Ever worked during 54-month follow-up (%)	95.0	94.8	0.2	0.959	94.0	92.1	2.0	0.385	0.629
Working at 54-month follow-up survey (%)	46.5	54.2	-7.7	0.274	58.5	56.7	1.7	0.695	0.255
Ever worked (%)									
Year 1	38.9	46.5	-7.6	0.277	49.2	45.1	4.1	0.372	0.161
Year 2	57.7	66.5	-8.8	0.183	68.8	64.2	4.6	0.280	0.087 *
Year 3	83.7	86.2	-2.5	0.617	79.9	83.0	-3.1	0.394	0.923
Year 4	77.4	81.8	-4.4	0.438	79.6	76.4	3.2	0.401	0.264
Year 5	71.1	71.9	-0.8	0.906	70.0	67.2	2.8	0.543	0.661
Number of months worked									
Year 1	2.7	3.6	-0.9	0.136	3.4	3.1	0.2	0.531	0.110
Year 2	4.4	5.9	-1.5 **	0.021	5.8	5.2	0.6	0.191	0.008 ***
Year 3	6.9	7.4	-0.5	0.417	6.9	7.2	-0.2	0.605	0.712
Year 4	6.8	7.6	-0.9	0.183	7.5	7.2	0.3	0.485	0.135
Year 5	7.2	7.4	-0.2	0.837	7.5	7.1	0.4	0.465	0.563
Earnings ($)									
Year 1	2,588	3,441	-853.1	0.237	3,498	3,430	68.0	0.902	0.309
Year 2	4,824	7,037	-2,213.2 **	0.035	6,630	6,093	537.6	0.461	0.031 **
Year 3	8,548	9,711	-1,163.2	0.336	9,184	9,081	102.9	0.899	0.384
Year 4	10,158	12,935	-2,777.0 *	0.058	11,629	11,674	-45.6	0.967	0.135
Year 5	10,919	13,004	-2,085.8	0.243	11,322	11,978	-656.7	0.615	0.517
Went to work within first year and…[a] (%)	38.9	46.5	-7.6	0.277	49.2	45.1	4.1	0.372	0.161
Worked 12 consecutive months or less	18.7	20.6	-1.9	0.732	22.6	23.1	-0.5	0.897	0.833
Worked 13-24 consecutive months	3.5	3.2	0.4	0.889	7.0	7.5	-0.5	0.832	0.804
Worked 25-36 consecutive months	4.8	8.8	-4.0	0.254	5.8	3.7	2.1	0.281	0.127
Worked more than 36 consecutive months	12.0	13.9	-1.9	0.679	13.7	10.7	3.0	0.321	0.377

(continued)

Appendix Table D.2 (continued)

Outcome	Age 16-18 at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	Age 19 and Older at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Number of jobs held during 54-month follow-up									
1	12.1	4.3	7.8 **	0.042	13.9	8.5	5.4 *	0.057	0.620
2 or 3	45.6	56.6	-11.0	0.111	41.1	44.2	-3.1	0.483	0.333
4 or more	37.3	33.9	3.4	0.612	39.0	39.4	-0.4	0.935	0.639
Sample size			216				505		

SOURCES: MDRC calculations from CET enrollment form and 30-month and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

For consistency, dollar amounts and months worked for Months 49 through 53, the first five months of Year 5, have been annualized.

[a]The number of consecutive months represents the first employment spell after random assignment.

The Evaluation of the CET Replication Sites

Appendix Table D.3

Impacts on Employment, Earnings, and Job Stability, by Education Level: Medium/Low-Fidelity Sites

	No High School or GED at Program Entry				High School or GED at Program Entry				
Outcome	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Ever worked during 30-month follow-up (%)	79.7	89.4	-9.8 **	0.012	87.1	88.6	-1.4	0.713	0.124
Ever worked during 54-month follow-up (%)	90.6	92.7	-2.1	0.469	98.1	92.9	5.2 **	0.027	0.049 **
Working at 54-month follow-up survey (%)	45.4	51.9	-6.5	0.207	63.7	61.8	1.9	0.728	0.263
Ever worked (%)									
Year 1	37.6	41.2	-3.6	0.483	56.2	49.3	6.9	0.239	0.177
Year 2	58.0	58.4	-0.4	0.937	73.8	73.2	0.6	0.900	0.885
Year 3	73.3	82.5	-9.2 **	0.036	88.5	85.1	3.4	0.389	0.032 **
Year 4	72.9	76.0	-3.1	0.504	84.8	79.5	5.2	0.246	0.198
Year 5	65.7	64.3	1.4	0.793	75.6	72.1	3.5	0.534	0.794
Number of months worked									
Year 1	2.4	2.8	-0.4	0.332	4.0	3.7	0.3	0.577	0.298
Year 2	4.3	4.8	-0.5	0.353	6.6	6.2	0.4	0.464	0.245
Year 3	5.8	6.6	-0.7	0.135	8.0	7.9	0.2	0.744	0.204
Year 4	6.5	6.8	-0.2	0.646	8.2	7.9	0.3	0.618	0.498
Year 5	6.7	6.6	0.1	0.915	8.2	7.7	0.5	0.476	0.653
Earnings ($)									
Year 1	2,539	2,846	-306.9	0.563	4,195	3,889	305.7	0.685	0.506
Year 2	4,708	5,702	-994.3	0.197	8,055	7,017	1,037.6	0.293	0.104
Year 3	7,374	8,229	-854.8	0.344	10,945	10,340	605.4	0.573	0.297
Year 4	9,838	10,352	-513.7	0.669	12,925	13,772	-846.5	0.550	0.858
Year 5	10,095	10,865	-770.6	0.590	12,367	13,519	-1,152.2	0.478	0.860
Went to work within first year and…[a] (%)	37.6	41.2	-3.6	0.483	56.2	49.3	6.9	0.239	0.177
Worked 12 consecutive months or less	21.6	22.2	-0.6	0.888	21.8	21.8	0.0	0.993	0.929
Worked 13-24 consecutive months	4.3	3.4	0.9	0.655	7.8	9.4	-1.7	0.609	0.502
Worked 25-36 consecutive months	5.3	5.7	-0.4	0.872	6.2	5.0	1.1	0.669	0.670
Worked more than 36 consecutive months	6.5	10.0	-3.5	0.221	20.5	13.0	7.4 *	0.085	0.034 **

(continued)

Appendix Table D.3 (continued)

Outcome	No High School or GED at Program Entry				High School or GED at Program Entry				
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Number of jobs held during 54-month follow-up									
1	15.1	6.7	8.4 ***	0.009	11.8	8.4	3.4	0.321	0.283
2 or 3	40.1	47.6	-7.5	0.141	44.5	48.3	-3.8	0.497	0.627
4 or more	35.4	38.5	-3.0	0.546	41.8	36.3	5.6	0.315	0.249
Sample size	382				317				

SOURCES: MDRC calculations from CET enrollment form and 30-month and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

For consistency, dollar amounts and months worked for Months 49 through 53, the first five months of Year 5, have been annualized.

[a]The number of consecutive months represents the first employment spell after random assignment.

The Evaluation of the CET Replication Sites

Appendix Table D.4

Impacts on Job Characteristics, by Gender: Medium/Low-Fidelity Sites

	Women				Men				
Outcome	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Characteristics of most recent job									
Hourly wage (%)									
$9.00 or more	41.7	38.8	2.9	0.518	45.7	45.1	0.7	0.918	0.770
Average wage among workers ($)	*9.30*	*9.12*	*0.2*	*NA*	*9.37*	*10.04*	*-0.7*	*NA*	*NA*
Weekly hours worked (%)									
35 hours or more	73.5	67.5	6.0	0.188	74.3	74.0	0.3	0.956	0.466
Average hours worked among workers	*36.8*	*35.2*	*1.6*	*NA*	*38.9*	*36.8*	*2.2*	*NA*	*NA*
Benefits provided (%)									
Health insurance	43.9	37.3	6.6	0.145	37.8	36.3	1.5	0.804	0.500
Paid sick days	40.6	38.2	2.5	0.585	34.2	35.2	-0.9	0.873	0.647
Paid vacation days	45.3	39.8	5.5	0.226	41.1	37.6	3.5	0.566	0.792
Industry (%)									
Construction/manufacturing	3.7	4.4	-0.7	0.714	15.2	12.6	2.7	0.548	0.486
Retail trade	22.5	28.1	-5.6	0.163	24.1	17.9	6.2	0.226	0.069 *
Eating/drinking establishments	7.6	8.2	-0.6	0.822	10.9	8.9	2.0	0.605	0.578
Professional services	25.7	26.4	-0.7	0.865	9.1	10.0	-0.9	0.802	0.965
Health services	13.6	19.0	-5.3	0.117	2.2	4.2	-2.0	0.379	0.409
Other services	22.7	20.7	2.0	0.605	20.0	19.0	1.0	0.844	0.878
Other industry	20.1	16.4	3.7	0.308	25.1	27.6	-2.5	0.661	0.359
Occupation (%)									
Sales	15.7	20.7	-5.0	0.161	5.2	6.0	-0.7	0.805	0.354
Clerical	24.1	21.9	2.2	0.569	11.9	13.7	-1.8	0.675	0.488
Services	27.0	29.4	-2.5	0.557	28.9	17.7	11.2 **	0.040	0.046 **

(continued)

Appendix Table D.4 (continued)

	Women				Men				
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Operatives/laborers	3.9	7.7	-3.8 *	0.077	23.1	27.3	-4.3	0.447	0.936
Other	24.0	16.2	7.7 **	0.038	24.5	22.5	2.0	0.715	0.388
Sample size			469				251		

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

Italics indicate comparisons that are nonexperimental.

The Evaluation of the CET Replication Sites

Appendix Table D.5

Impacts on Job Characteristics, by Age: Medium/Low-Fidelity Sites

Outcome	Age 16-18 at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	Age 19 and Older at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Characteristics of most recent job									
Hourly wage (%)									
$9.00 or more	33.3	46.8	-13.5 **	0.042	46.5	39.6	7.0	0.111	0.010 ***
Average wage among workers ($)	*8.82*	*9.55*	*-0.7*	*NA*	*9.53*	*9.42*	*0.1*	*NA*	*NA*
Weekly hours worked (%)									
35 hours or more	72.4	76.2	-3.8	0.559	74.2	67.2	7.0	0.113	0.169
Average hours worked among workers	*37.7*	*37.2*	*0.5*	*NA*	*37.4*	*35.2*	*2.2*	*NA*	*NA*
Benefits provided (%)									
Health insurance	39.9	40.7	-0.8	0.898	42.1	36.1	6.0	0.161	0.382
Paid sick days	31.2	35.6	-4.4	0.485	41.6	37.5	4.0	0.349	0.268
Paid vacation days	38.2	37.7	0.5	0.934	46.3	39.4	7.0	0.111	0.413
Industry (%)									
Construction/manufacturing	7.6	8.2	-0.6	0.873	7.5	7.6	-0.1	0.976	0.906
Retail trade	26.2	24.6	1.6	0.794	22.1	24.0	-1.9	0.613	0.625
Eating/drinking establishments	9.7	9.8	-0.1	0.978	8.7	7.5	1.2	0.618	0.779
Professional services	18.0	25.8	-7.8	0.169	20.7	18.4	2.3	0.500	0.126
Health services	8.4	19.7	-11.3 **	0.017	10.2	11.2	-1.0	0.722	0.057 *
Other services	19.9	18.9	1.0	0.853	22.5	20.6	1.8	0.620	0.904
Other industry	23.2	17.3	5.9	0.291	21.3	21.5	-0.2	0.955	0.358
Occupation (%)									
Sales	9.0	16.2	-7.2	0.113	13.3	15.3	-2.0	0.511	0.346
Clerical	17.2	18.0	-0.8	0.874	20.8	19.5	1.3	0.710	0.735
Services	29.5	26.9	2.6	0.678	27.2	24.2	3.1	0.432	0.947

(continued)

Appendix Table D.5 (continued)

Outcome	Age 16-18 at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	Age 19 and Older at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Operatives/laborers	11.0	14.1	-3.1	0.488	10.3	14.8	-4.5	0.107	0.797
Other	28.3	19.6	8.7	0.145	22.4	18.3	4.1	0.258	0.508
Sample size			216				505		

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

Italics indicate comparisons that are nonexperimental.

The Evaluation of the CET Replication Sites

Appendix Table D.6

Impacts on Job Characteristics, by Education Level: Medium/Low-Fidelity Sites

	No High School or GED at Program Entry				High School or GED at Program Entry				
Outcome	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Characteristics of most recent job									
Hourly wage (%)									
$9.00 or more	33.2	37.6	-4.4	0.369	55.8	46.2	9.5 *	0.091	0.062 *
Average wage among workers ($)	*8.85*	*8.87*	*0.0*	*NA*	*9.99*	*10.10*	*-0.1*	*NA*	*NA*
Weekly hours worked (%)									
35 hours or more	71.7	69.6	2.1	0.690	75.9	71.0	4.9	0.354	0.705
Average hours worked among workers	*38.0*	*36.1*	*1.9*	*NA*	*37.2*	*35.5*	*1.7*	*NA*	*NA*
Benefits provided (%)									
Health insurance	33.5	27.6	5.8	0.220	49.7	50.7	-1.0	0.862	0.355
Paid sick days	28.9	29.8	-0.9	0.852	48.4	46.8	1.5	0.786	0.742
Paid vacation days	36.2	30.7	5.5	0.255	52.8	48.7	4.1	0.471	0.857
Industry (%)									
Construction/manufacturing	7.2	8.0	-0.7	0.788	8.2	7.6	0.6	0.853	0.750
Retail trade	27.0	26.9	0.1	0.985	17.1	20.2	-3.1	0.484	0.617
Eating/drinking establishments	9.9	11.1	-1.2	0.703	8.6	4.6	4.0	0.154	0.216
Professional services	15.0	16.5	-1.5	0.688	26.1	24.3	1.8	0.714	0.592
Health services	6.2	10.2	-4.0	0.147	14.2	17.4	-3.2	0.430	0.867
Other services	20.9	22.1	-1.2	0.778	23.0	17.9	5.1	0.265	0.311
Other industry	20.5	19.2	1.3	0.758	23.7	22.9	0.8	0.870	0.940
Occupation (%)									
Sales	12.8	17.2	-4.4	0.220	10.2	13.2	-2.9	0.420	0.772
Clerical	17.3	16.2	1.2	0.759	23.4	24.0	-0.6	0.896	0.770
Services	25.7	26.7	-1.1	0.813	30.8	22.7	8.1	0.109	0.175

(continued)

Appendix Table D.6 (continued)

Outcome	No High School or GED at Program Entry				High School or GED at Program Entry				
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Operatives/laborers	11.3	15.5	-4.3	0.211	9.4	12.8	-3.4	0.321	0.850
Other	23.6	17.1	6.5	0.117	24.3	20.4	4.0	0.405	0.686
Sample size			382				317		

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

Italics indicate comparisons that are nonexperimental.

Appendix E

Impacts on Benefit Receipt and Total Family Income; Impacts on Marital Status, Household Structure, Alcohol and Marijuana Use, and Arrests

The Evaluation of the CET Replication Sites

Appendix Table E.1

Impacts on Benefit Receipt and Total Family Income: Full Sample

Outcome	Program Group	Control Group	Difference	P-Value for Difference	Impact (%)
Benefit receipt					
Ever received welfare (%)					
Year 1	17.7	16.6	1.0	0.608	6.2
Year 2	16.4	16.0	0.3	0.871	2.1
Year 3	19.2	16.5	2.7	0.189	16.4
Year 4	13.6	11.8	1.8	0.329	15.7
Year 5	11.7	9.3	2.4	0.176	25.6
Ever received food stamps (%)					
Year 1	23.5	24.3	-0.9	0.708	-3.5
Year 2	25.9	26.8	-1.0	0.688	-3.6
Year 3	31.1	28.3	2.8	0.244	10.0
Year 4	25.1	22.1	3.0	0.201	13.7
Year 5	21.6	17.2	4.4 *	0.053	25.5
Ever received other benefits (%)					
Year 1	5.1	3.0	2.1 *	0.077	69.3
Year 2	6.0	5.2	0.8	0.568	15.1
Year 3	8.0	5.1	3.0 **	0.046	58.6
Year 4	8.9	9.3	-0.4	0.821	-4.2
Year 5	8.3	9.7	-1.4	0.415	-14.3
Income					
Total family income in year before survey ($)	15,902	15,858	43.4	0.952	0.3
Total family income (%)					
Less than $5,000	31.4	29.7	1.7	0.561	5.8
$5,000-$10,000	9.4	8.4	1.0	0.601	11.5
$10,000-$15,000	15.0	16.6	-1.7	0.480	-10.0
$15,000-$25,000	17.9	20.2	-2.2	0.378	-11.1
More than $25,000	26.3	25.1	1.2	0.655	4.9
Sample size	595	541			

(continued)

Appendix Table E.1 (continued)

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

The Evaluation of the CET Replication Sites

Appendix Table E.2

Impacts on Benefit Receipt and Total Family Income, by Site Fidelity

Outcome (%)	High-Fidelity Sites				Medium/Low-Fidelity Sites				
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Benefit receipt									
Ever received welfare (%)									
Year 1	9.5	9.2	0.3	0.911	20.8	20.0	0.8	0.741	0.895
Year 2	5.9	10.6	-4.7	0.113	20.5	18.5	2.0	0.448	0.091 *
Year 3	6.3	10.1	-3.8	0.198	24.3	19.2	5.1 *	0.053	0.024 **
Year 4	9.3	8.7	0.6	0.846	15.6	12.9	2.7	0.256	0.591
Year 5	7.1	7.4	-0.3	0.918	13.7	10.0	3.6	0.101	0.275
Ever received food stamps (%)									
Year 1	11.5	11.4	0.1	0.988	28.1	30.0	-1.9	0.512	0.662
Year 2	10.3	13.9	-3.6	0.315	32.1	32.3	-0.2	0.957	0.466
Year 3	12.9	8.0	4.8	0.156	38.6	36.7	1.8	0.560	0.510
Year 4	16.1	13.3	2.8	0.476	28.9	25.6	3.3	0.264	0.913
Year 5	18.4	12.7	5.7	0.153	23.0	19.1	3.9	0.154	0.714
Ever received other benefits (%)									
Year 1	5.5	4.1	1.4	0.548	5.0	2.6	2.5 *	0.069	0.710
Year 2	9.0	5.3	3.6	0.215	4.8	5.1	-0.3	0.858	0.237
Year 3	8.8	4.9	4.0	0.164	7.7	5.1	2.7	0.127	0.695
Year 4	12.6	11.5	1.0	0.776	7.4	8.3	-1.0	0.613	0.626
Year 5	14.4	10.7	3.6	0.330	5.8	9.3	-3.5 *	0.061	0.087 *
Income									
Total family income in year before survey ($)	18,226	20,672	-2,446.1 *	0.094	14,916	13,972	943.9	0.256	0.043 **

(continued)

Appendix Table E.2 (continued)

Outcome (%)	High-Fidelity Sites				Medium/Low-Fidelity Sites				
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Total family income (%)									
Less than $5,000	26.8	18.3	8.4 *	0.097	33.3	34.2	-0.9	0.804	0.133
$5,000-$10,000	1.7	6.4	-4.7 *	0.051	12.4	9.3	3.1	0.201	0.022 **
$10,000-$15,000	17.5	11.1	6.4	0.143	14.1	18.7	-4.6	0.105	0.034 **
$15,000-$25,000	20.0	23.5	-3.6	0.488	17.1	18.8	-1.7	0.556	0.758
More than $25,000	34.1	40.6	-6.6	0.270	23.1	18.9	4.2	0.177	0.109
Sample size			332				804		

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

The Evaluation of the CET Replication Sites

Appendix Table E.3

Impacts on Benefit Receipt and Total Family Income, by Gender: High-Fidelity Sites

	Women				Men				
Outcome	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Benefit receipt									
Ever received welfare (%)									
Year 1	20.5	14.7	5.8	0.306	0.9	1.6	-0.7	0.694	0.273
Year 2	10.5	16.9	-6.5	0.240	2.3	3.8	-1.4	0.597	0.410
Year 3	11.2	13.5	-2.3	0.655	2.4	6.2	-3.7	0.240	0.813
Year 4	16.5	12.8	3.7	0.506	3.5	3.7	-0.1	0.969	0.545
Year 5	14.1	11.5	2.6	0.626	1.3	2.3	-1.0	0.624	0.525
Ever received food stamps (%)									
Year 1	22.4	17.8	4.6	0.489	1.5	4.7	-3.3	0.220	0.270
Year 2	16.0	19.8	-3.7	0.556	5.3	8.0	-2.6	0.499	0.884
Year 3	18.6	10.4	8.2	0.159	7.6	5.5	2.1	0.598	0.378
Year 4	22.2	19.4	2.8	0.668	10.6	7.1	3.5	0.433	0.932
Year 5	24.1	18.6	5.5	0.403	12.1	6.7	5.4	0.241	0.990
Ever received other benefits (%)									
Year 1	5.7	4.1	1.6	0.649	5.3	4.3	1.0	0.765	0.897
Year 2	9.1	5.4	3.7	0.384	8.5	5.8	2.7	0.506	0.865
Year 3	1.9	3.1	-1.1	0.665	14.4	6.8	7.6	0.122	0.115
Year 4	9.8	11.1	-1.3	0.795	13.9	12.3	1.6	0.757	0.687
Year 5	12.8	10.4	2.4	0.652	15.9	11.4	4.5	0.397	0.782
Income									
Total family income in year before survey ($)	18,429	19,859	-1429.8	0.487	18,305	21,718	-3412.5	0.110	0.501
Total family income (%)									
Less than $5,000	26.8	21.5	5.3	0.480	24.7	14.8	9.9	0.163	0.655
$5,000-$10,000	1.9	6.9	-5.0	0.170	1.9	5.8	-3.9	0.242	0.818
$10,000-$15,000	16.4	5.9	10.5 *	0.069	20.1	15.1	5.0	0.464	0.535

(continued)

Appendix Table E.3 (continued)

	Women				Men				
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
$15,000-$25,000	21.8	28.5	-6.7	0.392	17.9	19.3	-1.4	0.840	0.611
More than $25,000	33.1	37.2	-4.1	0.629	35.5	45.1	-9.6	0.267	0.652
Sample size	163				167				

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

The Evaluation of the CET Replication Sites

Appendix Table E.4

Impacts on Benefit Receipt and Total Family Income, by Age: High-Fidelity Sites

Outcome	Age 16-18 at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	Age 19 and Older at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Benefit receipt									
Ever received welfare (%)									
Year 1	12.4	13.8	-1.4	0.822	7.8	7.0	0.8	0.806	0.753
Year 2	5.6	10.4	-4.8	0.358	6.0	11.0	-4.9	0.188	0.981
Year 3	2.6	11.8	-9.2 *	0.062	8.0	9.8	-1.8	0.629	0.230
Year 4	8.1	11.2	-3.1	0.579	9.9	7.6	2.3	0.544	0.423
Year 5	8.5	10.7	-2.2	0.696	6.2	5.9	0.4	0.907	0.689
Ever received food stamps (%)									
Year 1	12.8	15.2	-2.4	0.712	10.4	10.1	0.3	0.945	0.724
Year 2	5.3	12.5	-7.2	0.188	12.8	15.3	-2.5	0.598	0.515
Year 3	5.6	6.7	-1.1	0.816	16.3	9.3	7.0	0.125	0.220
Year 4	11.8	12.6	-0.7	0.903	18.8	13.4	5.4	0.283	0.431
Year 5	14.6	13.2	1.4	0.837	19.3	13.0	6.3	0.203	0.547
Ever received other benefits (%)									
Year 1	2.3	-0.7	2.9	0.100	7.5	6.5	1.0	0.781	0.629
Year 2	3.5	1.7	1.8	0.575	12.0	7.3	4.8	0.248	0.569
Year 3	9.1	4.5	4.6	0.375	7.7	5.2	2.5	0.460	0.733
Year 4	11.4	14.9	-3.4	0.610	12.2	10.0	2.1	0.629	0.489
Year 5	15.3	10.6	4.7	0.487	14.4	10.5	3.9	0.397	0.923
Income									
Total family income in year before survey ($)	18,884	19,032	-148.0	0.954	18,134	21,678	-3,543.5 **	0.048	0.276
Total family income (%)									
Less than $5,000	29.8	20.7	9.2	0.313	23.8	16.5	7.3	0.233	0.861
$5,000-$10,000	-1.4	8.0	-9.4 **	0.012	3.3	5.9	-2.6	0.421	0.158
$10,000-$15,000	13.4	17.5	-4.1	0.613	19.7	7.9	11.8 **	0.028	0.099 *

(continued)

Appendix Table E.4 (continued)

Outcome	Age 16-18 at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	Age 19 and Older at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
$15,000-$25,000	23.6	21.2	2.3	0.798	19.3	23.9	-4.6	0.468	0.532
More than $25,000	34.6	32.6	2.0	0.846	33.9	45.8	-11.9	0.114	0.272
Sample size			115				215		

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

The Evaluation of the CET Replication Sites

Appendix Table E.5

Impacts on Benefit Receipt and Total Family Income, by Education Level: High-Fidelity Sites

	No High School or GED at Program Entry				High School or GED at Program Entry				
Outcome	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Benefit receipt									
Ever received welfare (%)									
Year 1	11.4	11.6	-0.2	0.955	6.9	4.0	3.0	0.493	0.589
Year 2	6.2	10.8	-4.7	0.228	5.4	9.2	-3.8	0.435	0.892
Year 3	6.5	10.5	-4.0	0.280	6.8	7.5	-0.7	0.884	0.575
Year 4	10.4	9.3	1.2	0.781	8.3	5.8	2.5	0.594	0.828
Year 5	9.3	7.2	2.0	0.601	4.1	9.0	-5.0	0.270	0.238
Ever received food stamps (%)									
Year 1	11.7	11.2	0.5	0.915	12.0	10.1	1.8	0.754	0.852
Year 2	10.5	16.0	-5.5	0.251	10.9	9.7	1.2	0.827	0.361
Year 3	12.8	8.8	4.0	0.366	14.6	3.7	10.9 **	0.044	0.320
Year 4	19.5	13.4	6.1	0.253	13.3	12.0	1.3	0.827	0.541
Year 5	22.5	13.2	9.3 *	0.098	12.5	12.9	-0.4	0.943	0.232
Ever received other benefits (%)									
Year 1	4.2	4.1	0.1	0.967	7.4	3.4	4.0	0.360	0.458
Year 2	6.3	6.2	0.2	0.961	13.5	3.2	10.3 *	0.051	0.108
Year 3	8.2	6.3	1.9	0.609	9.6	-0.9	10.5 ***	0.009	0.117
Year 4	13.1	12.9	0.2	0.971	12.0	6.6	5.4	0.340	0.487
Year 5	14.5	15.9	-1.4	0.789	15.9	2.2	13.7 **	0.014	0.046 **
Income									
Total family income in year before survey ($)	18,093	19,846	-1752.7	0.370	18,906	22,279	-3372.6	0.155	0.596
Total family income (%)									
Less than $5,000	27.5	18.7	8.7	0.205	23.6	15.0	8.6	0.276	0.990
$5,000-$10,000	1.1	9.6	-8.5 **	0.015	3.1	2.5	0.6	0.848	0.055 *
$10,000-$15,000	16.7	12.1	4.6	0.428	18.5	10.8	7.7	0.304	0.744

(continued)

Table E.5 (continued)

Outcome	No High School or GED at Program Entry				High School or GED at Program Entry				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
$15,000-$25,000	22.1	20.9	1.1	0.866	18.0	29.6	-11.6	0.181	0.244
More than $25,000	32.7	38.7	-6.0	0.437	36.8	42.1	-5.3	0.610	0.955
Sample Size			192				126		

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

The Evaluation of the CET Replication Sites

Appendix Table E.6

Impacts on Marital Status and Household Structure, Alcohol and Marijuana Use, and Arrests, by Site Fidelity

	High-Fidelity Sites				Medium/Low-Fidelity Sites				
Outcome (%)	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Marital status									
Currently married and living with spouse	29.0	31.3	-2.3	0.654	10.8	9.8	1.1	0.621	0.546
Divorced	1.2	0.6	0.5	0.614	1.2	1.3	-0.1	0.860	0.609
Never married	61.3	62.2	-0.9	0.863	82.6	82.8	-0.3	0.912	0.915
Household structure									
Living with parent(s) or other adult relative[a]	49.1	44.0	5.1	0.376	34.9	32.7	2.2	0.509	0.662
Living with spouse or partner[a]	48.6	44.6	4.0	0.475	31.4	31.6	-0.2	0.957	0.521
Living alone[a]	6.3	8.3	-2.0	0.479	13.0	10.1	2.9	0.199	0.175
Average number of persons in household (not %)	4.4	4.3	0.1	0.722	3.5	3.6	0.0	0.726	0.629
Lived in public housing since random assignment	7.3	6.5	0.7	0.797	28.3	24.7	3.6	0.234	0.488
Received housing assistance since random assignment	7.0	6.2	0.8	0.787	21.3	16.6	4.7 *	0.079	0.307
Alchohol and marijuana use									
Reported alcohol consumption in month before 54-month follow-up	45.6	38.4	7.1	0.187	35.3	38.8	-3.5	0.299	0.095 *
Reported marijuana use in month before 54-month follow-up	5.4	4.2	1.2	0.612	9.0	9.0	0.0	0.999	0.697
Receiving treatment or counseling for use of alcohol or drugs in month before 54-month follow-up	4.6	1.9	2.8	0.172	0.7	3.4	-2.7 ***	0.006	0.014 **

(continued)

Appendix Table E.6 (continued)

Outcome (%)	High-Fidelity Sites				Medium/Low-Fidelity Sites				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Arrests									
Arrested since random assignment	14.6	16.4	-1.9	0.617	20.2	19.7	0.4	0.869	0.614
Arrested since 30-month follow-up	8.6	8.8	-0.2	0.940	9.1	10.7	-1.6	0.465	0.723
In jail or prison at 54-month follow-up	3.3	5.9	-2.6	0.263	4.9	4.3	0.6	0.672	0.241
Sample size	332				804				

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

[a]The column for this outcome may sum to over 100 percent because respondents may have lived with both parent/adult relative and spouse/partner.

The Evaluation of the CET Replication Sites

Appendix Table E.7

Impacts on Marital Status and Household Structure, Alcohol and Marijuana Use, and Arrests, by Gender: High-Fidelity Sites

	Women				Men				
Outcome (%)	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Marital status									
Currently married and living with spouse	33.8	41.5	-7.7	0.343	25.5	21.0	4.5	0.500	0.244
Divorced	1.3	-0.1	1.4	0.286	1.4	1.0	0.3	0.848	0.628
Never married	53.2	50.9	2.3	0.781	67.2	74.6	-7.4	0.303	0.377
Childbearing and children									
Had child since 30-month follow-up	30.7	34.9	-4.2	0.589	30.5	15.6	14.9 **	0.037	0.068 *
Had child since random assignment	56.7	57.1	-0.3	0.966	48.1	33.3	14.8 *	0.073	0.186
Had *first* child since 30-month follow-up	8.7	10.2	-1.5	0.749	15.1	7.9	7.2	0.190	0.229
Had *first* child since random assignment	35.8	30.1	5.7	0.464	38.5	29.9	8.5	0.283	0.799
Living with all own children at 54-month follow-up	69.1	72.3	-3.2	0.673	31.8	33.1	-1.3	0.867	0.866
Household structure									
Living with parent(s) or other adult relative[a]	47.0	34.8	12.2	0.142	51.9	52.7	-0.8	0.919	0.266
Living with spouse or partner[a]	53.9	51.5	2.5	0.768	44.3	38.0	6.2	0.420	0.740
Living alone[a]	1.1	1.4	-0.3	0.869	11.2	15.4	-4.3	0.413	0.472
Average number of persons in household (not %)	4.9	4.5	0.4	0.192	3.9	4.1	-0.2	0.588	0.201

(continued)

Appendix Table E.7 (continued)

Outcome (%)	Women				Men				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Lived in public housing since random assignment	6.5	7.1	-0.6	0.885	8.6	5.6	3.0	0.461	0.535
Received housing assistance since random assignment	6.9	7.8	-0.9	0.831	7.2	4.7	2.5	0.512	0.553
Alchohol and marijuana use									
Reported alcohol consumption in month before 54-month follow-up	34.6	26.3	8.3	0.270	56.6	49.6	7.1	0.368	0.913
Reported marijuana use in month before 54-month follow-up	1.9	0.5	1.4	0.381	9.1	7.8	1.4	0.756	0.996
Receiving treatment or counseling for use of alcohol or drugs in month before 54-month follow-up	5.7	1.4	4.4	0.160	3.6	2.3	1.3	0.638	0.446
Arrests									
Arrested since random assignment	5.6	-1.0	6.5 ***	0.007	24.0	33.4	-9.4	0.180	0.031 **
Arrested since 30-month follow-up	2.7	-0.4	3.2 *	0.087	14.6	18.5	-3.8	0.522	0.263
In jail or prison at 54-month follow-up	-0.2	2.8	-3.0	0.107	6.3	9.6	-3.3	0.436	0.945
Sample size	163				167				

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

[a]The column for this outcome may sum to over 100 percent because respondents may have lived with both parent/adult relative and spouse/partner.

The Evaluation of the CET Replication Sites

Appendix Table E.8

Impacts on Marital Status and Household Structure, Alcohol and Marijuana Use, and Arrests, by Age: High-Fidelity Sites

	Age 16-18 at Program Entry				Age 19 and Older at Program Entry				
Outcome (%)	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Marital status									
Currently married and living with spouse	28.8	21.2	7.7	0.377	30.0	36.4	-6.4	0.327	0.193
Divorced	0.0	0.0	0.0 ***	NA	1.7	1.0	0.7	0.650	NA
Never married	61.1	77.2	-16.1 *	0.080	60.3	54.7	5.7	0.408	0.056 *
Childbearing and children									
Had child since 30-month follow-up	31.5	31.9	-0.5	0.962	29.6	23.3	6.3	0.309	0.556
Had child since random assignment	61.5	41.3	20.2 **	0.046	47.6	48.1	-0.5	0.946	0.088 *
Had *first* child since 30-month follow-up	15.3	6.0	9.3	0.171	10.4	10.3	0.1	0.983	0.252
Had *first* child since random assignment	50.6	20.8	29.8 ***	0.003	30.5	34.5	-4.0	0.539	0.004 ***
Living with all own children at 54-month follow-up	56.2	41.1	15.1	0.105	47.3	60.6	-13.3 **	0.043	0.012 **
Household structure									
Living with parent(s) or other adult relative[a]	43.0	55.8	-12.8	0.230	51.9	38.3	13.6 *	0.054	0.038 **
Living with spouse or partner[a]	50.3	26.7	23.7 **	0.014	48.9	53.7	-4.8	0.486	0.015 **
Living alone[a]	14.8	12.9	1.9	0.764	2.4	5.1	-2.7	0.304	0.504
Average number of persons in household (not %)	4.1	4.4	-0.3	0.455	4.5	4.3	0.2	0.513	0.326
Lived in public housing since random assignment	3.9	10.4	-6.5	0.198	9.1	4.6	4.5	0.203	0.073 *
Received housing assistance since random assignment	5.7	13.9	-8.2	0.158	7.7	2.2	5.6 *	0.072	0.035 **

(continued)

Appendix Table E.8 (continued)

Outcome (%)	Age 16-18 at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	Age 19 and Older at Program Entry: Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Alchohol and marijuana use									
Reported alcohol consumption in month before 54-month follow-up	47.1	37.6	9.5	0.315	44.2	39.3	4.9	0.471	0.687
Reported marijuana use in month before 54-month follow-up	2.4	8.3	-5.9	0.174	6.6	2.5	4.1	0.143	0.051 *
Receiving treatment or counseling for use of alcohol or drugs in month before 54-month follow-up	4.1	2.8	1.3	0.722	5.0	1.3	3.6	0.140	0.583
Arrests									
Arrested since random assignment	17.9	24.5	-6.6	0.360	13.2	11.9	1.4	0.756	0.343
Arrested since 30-month follow-up	13.8	15.3	-1.5	0.823	6.5	4.8	1.7	0.593	0.664
In jail or prison at 54-month follow-up	5.9	11.9	-6.0	0.273	2.1	2.6	-0.6	0.795	0.351
Sample size	115				215				

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

[a]The column for this outcome may sum to over 100 percent because respondents may have lived with both parent/adult relative and spouse/partner.

The Evaluation of the CET Replication Sites

Appendix Table E.9

Impacts on Marital Status and Household Structure, Alcohol and Marijuana Use, and Arrests, by Education Status: High-Fidelity Sites

	No High School or GED at Program Entry				High School or GED at Program Entry				
Outcome (%)	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	P-Value for Subgroup Difference
Marital status									
Currently married and living with spouse	30.2	27.9	2.3	0.721	29.1	36.6	-7.5	0.383	0.360
Divorced	1.1	1.0	0.1	0.936	1.5	0.0	1.5	0.363	0.533
Never married	58.6	64.8	-6.2	0.363	62.9	57.3	5.6	0.540	0.300
Childbearing and children									
Had child since 30-month follow-up	36.1	25.6	10.5	0.130	20.3	29.6	-9.3	0.277	0.071 *
Had child since random assignment	54.6	48.9	5.7	0.445	48.3	40.3	8.0	0.398	0.845
Had *first* child since 30-month follow-up	11.3	5.3	6.0	0.153	10.2	15.6	-5.4	0.413	0.143
Had *first* child since random assignment	38.7	27.5	11.2	0.119	33.7	34.1	-0.4	0.966	0.318
Living with all own children at 54-month follow-up	49.4	52.5	-3.0	0.648	51.9	55.8	-3.9	0.676	0.942
Household structure									
Living with parent(s) or other adult relative[a]	48.0	46.9	1.1	0.880	51.3	41.4	9.8	0.300	0.473
Living with spouse or partner[a]	49.4	41.7	7.8	0.264	50.0	46.5	3.5	0.709	0.711
Living alone[a]	8.1	10.9	-2.8	0.500	4.7	4.9	-0.2	0.950	0.641
Average number of persons in household (not %)	4.5	4.6	-0.1	0.780	4.3	3.7	0.6 *	0.097	0.157
Lived in public housing since random assignment	8.5	8.2	0.3	0.938	6.7	2.5	4.2	0.295	0.492
Received housing assistance since random assignment	9.0	6.4	2.6	0.509	5.7	3.7	2.0	0.616	0.909
Alchohol and marijuana use									
Reported alcohol consumption in month before 54-month follow-up	47.1	39.8	7.3	0.289	42.6	36.3	6.3	0.493	0.927

(continued)

Appendix Table E.9 (continued)

Outcome (%)	No High School or GED at Program Entry				High School or GED at Program Entry				P-Value for Subgroup Difference
	Program Group	Control Group	Difference	P-Value for Difference	Program Group	Control Group	Difference	P-Value for Difference	
Reported marijuana use in month before 54-month follow-up	5.8	4.5	1.3	0.678	3.2	3.2	0.0	0.988	0.778
Receiving treatment or counseling for use of alcohol or drugs in month before 54-month follow-up	5.1	2.0	3.1	0.264	4.3	1.8	2.5	0.458	0.896
Arrests									
Arrested since random assignment	17.7	18.9	-1.2	0.817	7.8	15.4	-7.6	0.133	0.379
Arrested since 30-month follow-up	10.8	10.5	0.3	0.937	4.9	8.6	-3.8	0.390	0.502
In jail or prison at 54-month follow-up	4.9	7.8	-3.0	0.395	1.4	3.6	-2.2	0.350	0.863
Sample size	192				126				

SOURCES: MDRC calculations from CET enrollment form and 54-month follow-up survey data.

NOTES: Calculations used data for all sample members for whom there were follow-up survey data, including those with values of zero for outcomes and those who were assigned to CET but did not participate.

Estimates were regression-adjusted using ordinary least squares, controlling for pre-random assignment characteristics of sample members. Rounding may cause slight discrepancies in the calculations of sums and differences.

For some outcomes, the sample size may be smaller than the full sample size due to some missing observations.

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

[a]The column for this outcome may sum to over 100 percent because respondents may have lived with both parent/adult relative and spouse/partner.

Appendix F

Matching Jobs to Training Skills

This appendix describes the assumptions that the researchers made in order to determine whether participants who received CET training certificates found jobs in the industries for which they trained, as discussed in Chapter 3. The analysis reported in this appendix used data from the Center for Employment Training Management Information Systems (CET MIS) and from the 30-month and 54-month follow-up surveys. The researchers compared the training skills program that participants pursued at CET (according to the MIS data) with the job occupations that they reported in the follow-up surveys, in order to identify "matches" between training type and job type. For this analysis, everyone in the sample was an experimental group member who participated at a CET-operated replication site that was classified as high fidelity. The sample includes 132 participants and excludes participants who withdrew from training within a week of starting.

In order to conduct this analysis, the researchers had to make assumptions about which combinations of training skill types and job occupation types qualified as a match. Appendix Table F.1 identifies each CET training skill area and its matching job occupations and industry. The comparison of a training type and a job type resulted in a match when the reported occupation was in or close to the sector for which the participant trained. Some matches were obvious. For example, a participant who trained in electronic mechanics and whose first job was as an electrical technician was considered a match. If the occupation was definitely not or likely not in the job for which the participant had trained, then the relationship was not considered a match. Often, however, it was questionable whether a job occupation and training skill qualified as a match, and the researchers had to make a debatable decision. To further validate a job occupation that might be considered a match, the researchers looked at participants' employment industries in addition to their job occupations. For example, a participant who trained in electronic mechanics and found a job as a laborer in a computer equipment industry was also considered a match. Box 3.2 in Chapter 3 discusses the training skill areas in which participants most often worked in jobs that matched their training.

The Evaluation of the CET Replication Sites

Appendix Table F.1

Matching Matrix for CET Training Skills and Job Occupation Types, for CET Participants[a] in High-Fidelity Sites

CET Training Skill Area	Job Occupation Matching Training Skill Area, Any Job During Follow-Up	Employment Industry
Accounting clerk/bookkeeper	No matching job occupations among participants	Any
Automated office skills	Administrative support, data entry, secretaries	Any
	Information clerks and receptionists	Any
	Bookkeepers, audit clerks, billing	Any
	Order and distribution clerks	Any
	Investigators, adjusters, and bill collectors	Any
	Office clerks	Any
	Accountants and auditors	Any
	Bank tellers	Any
	Sales representatives: advertising, financial, insurance, and real estate	Any
	Managers, management-related occupations	Any
Medical insurance billing	Health-record technicians	Any
	Information clerks and receptionists	Optometry office
	Office clerks	Physician's office
Medical assistant	Lab and health technicians	Any
	Health and nurses aides, dental assistants	Any
Medical clinical	No matching job occupations among participants	
Electronic mechanics	Electrical engineers and technicians	Any
	Construction laborers and handlers	Computers and related equipment
Metal trade and welding	Machine and hand fabrication	Any
	Construction laborers and handlers	Any
	Other technicians	Any
	Other mechanics and repairers	Any
	Precision production and crafts	Any
	Metal trade and welding	Any
Building maintenance	No matching job occupations among participants	
Shipping and receiving and warehouse operations	Truck, vehicle, and public transportation drivers	Any

(continued)

Appendix Table F.1 (continued)

SOURCES: MDRC calculations from CET MIS data and 30-month and 54-month follow-up survey data.

NOTES: This table only lists training skill areas that participants from high-fidelity sites trained in. Likewise, the matching job occupations listed here are the jobs that participants actually held and do not include all possible job occupations that researchers could consider to be matches.

[a]The sample includes participants in high-fidelity sites for whom Management Information System (MIS) data were available and excludes participants who dropped out of CET training within the first week (N = 132).

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

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- Improving Public Education
- Promoting Successful Transitions to Adulthood
- Supporting Low-Wage Workers and Communities
- Overcoming Barriers to Employment

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