

Executive Summary

USING INCENTIVES TO CHANGE HOW TEENAGERS SPEND THEIR TIME

The Effects of New York City's Conditional Cash Transfer Program

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Overview

This report presents the results of an innovative study designed to provide a more detailed understanding of how parents and their teenage children were affected by the Opportunity NYC-Family Rewards program, a comprehensive conditional cash transfer program. The three-year program, launched by the Center for Economic Opportunity in the Mayor's Office of the City of New York in 2007, offered cash assistance to low-income families to reduce economic hardship. The cash incentives were tied to activities and outcomes in children's education, family preventive health care, and parents' employment, in the hopes of increasing families' "human capital" and reducing their poverty in the long term.

An evaluation by MDRC of the first two years of the Family Rewards program, published in 2010, found that it had positive effects on families' economic well-being and mixed effects on children's education, family health care, and parents' employment. For example, while the program did not affect school outcomes for younger children, it substantially boosted the achievement of a subset of older children who were better prepared for high school when they entered the program in the ninth grade. How the program affected teenagers and their parents is the focus of this study, which has been embedded in MDRC's continuing core evaluation of the program. This report addresses key "pathways" that may underlie any effects of the program on teenagers (such as changes in the way teenagers spent their time) as well as outcomes that were not targeted but that the program may have affected (such as teenagers' mental health, aggressive behavior, or substance use.)

Key Findings

Findings show that the Family Rewards program:

- Changed how teenagers spent their time. For the subgroup of academically proficient teenagers, it increased the proportion of those who engaged primarily in academic activities and reduced the proportion who engaged primarily in social activities;
- Increased parents' spending on school-related and leisure expenses and increased the proportion of parents who saved for their children's future education;
- Had no effects on parents' monitoring of their teenage children's activities or behavior and did not increase parent-teenager conflict or teenagers' depression or anxiety;
- Had no effects on teenagers' sense of academic competence or their engagement in school but substantially reduced their problem behavior, such as aggression and substance use;
- Did not reduce teenagers' intrinsic motivation by paying them rewards for school attendance and academic achievement.

This study of families with teenage children who participated in Family Rewards adds important information that will enhance understanding of the results of the core evaluation of the program. The next report on Family Rewards will examine the results after three years of the program; a final report will include two years of postprogram follow-up.

Preface

What would happen if parents and their teenage children were offered cash incentives if the children went to school and passed their exams? Would teenagers spend more time on their schoolwork? Would offering incentives lead to tension and conflict between parents and children in an already challenging period in their lives? Would getting a reward for achievement in school reduce students' intrinsic motivation to learn?

Opportunity NYC-Family Rewards was a conditional cash transfer (CCT) program aimed to help families break the cycle of intergenerational poverty. CCT programs provide monetary incentives to families to take certain steps to invest in their own health, education, and economic potential. Inspired by similar initiatives in other countries, particularly Mexico's Oportunidades program, Family Rewards was sponsored by New York City's Center for Economic Opportunity in the Office of Mayor Michael R. Bloomberg and was delivered in six of New York City's highest-poverty communities from 2007 to 2010. MDRC is evaluating the program's effects using a randomized control trial research design. Our 2010 report on the program's early findings found that it increased families' economic well-being and had mixed effects — ranging from no effect to small positive effects — on children's education, family health care, and parents' work and training. Analysis of the longer-term impacts of the program is currently under way.

This particular study answers some intriguing questions about how the incentives played out in the daily lives of teenage children and their parents. The study surveyed a subset of families from the Family Rewards' core sample who had a teenage child and collected information both from parents and teenagers. It examines some key mechanisms that may underlie the program's effects on the targeted educational outcomes, such as whether there were changes in how teenagers spent their after-school and evening time. It also looks at how the program affected outcomes that were not targeted by the program, such as teenagers' aggression and use of drugs and alcohol, and whether the program produced unintended consequences, such as increasing parent-child conflict or teenagers' anxiety or depression.

We found some particularly interesting results. The program increased the proportion of teenagers who spent their time in academically oriented ways, especially among the students who were better prepared for high school when they entered the study — the same group who had better overall academic outcomes as a result of Family Rewards. Unfortunately, there was no similar shift toward spending time on academic activities among less-proficient students. And overall, students did not report being more engaged in school or having a greater sense of efficacy about their academic competence.

In addition, parents were more likely to save for their child's future education and spend more on educational resources. The teens in the program group reported lower levels of aggression and substance use than their peers in the control group, which could bode well for their long-term outcomes. And concerns that the program would cause greater parent-child conflict and anxiety among teenagers or reduce their intrinsic motivation to do well in school were not borne out.

This study makes a valuable contribution to the evaluation by shedding light on the ways in which the program functioned to effect change and suggesting some promising design directions for the next generation of CCT tests.

Gordon L. Berlin
President

Acknowledgments

This report reflects contributions from many organizations and individuals. Most of all, we thank the teenagers and parents in the Opportunity NYC-Family Rewards program and those members of the control group who participated in the larger core study, as well as those who participated in this child and family embedded study. They have allowed us to learn first hand from their experiences. We hope that the lessons from this and future reports will help strengthen future poverty reduction efforts and inform the design and evaluation of future conditional cash transfer programs.

Many staff members at Seedco and the Neighborhood Partner Organizations spent countless hours operating the program and collecting the essential data on families' participation and experiences. At Decision Information Resources, Inc., the survey firm, we'd like to thank Sylvia Epps, who coordinated the survey effort, and the field research team. External support came from Leslyn Hall, who helped design the survey instrument.

We appreciate the support of all the funders of the study. These include the William T. Grant Foundation and the New York City Center for Economic Opportunity (CEO).

At MDRC, we'd like to thank the many individuals who worked on various aspects of the report. Nandita Verma managed the efforts at MDRC for this study. We would also like to thank Jim Riccio, David Greenberg, and Cynthia Miller, who provided valuable feedback at multiple points of the research and review process. Keri-Nicole Dillman, formerly at MDRC, played an instrumental role in sampling, data collection, and survey development. Jo Anna Hunter and Justin Preston helped manage the survey effort. Edith Yang led the processing of the data used in the analysis, with assistance from Zakia Barnes and Chris Rodrigues. Gilda Azurdia provided guidance on data management and analysis issues throughout the project. Richard Hendra and Sonya Williams provided feedback in determining the final sampling and study design. Diane Singer helped with the production of the exhibits, and Anastasia Korolkova helped with overall coordination efforts.

The Authors

Executive Summary

In 2007, the Center for Economic Opportunity (CEO) in the Mayor’s Office of the City of New York launched the Opportunity NYC-Family Rewards Demonstration (referred to as Family Rewards in this report), a conditional cash transfer (CCT) program. Family Rewards is based on the rationale of CCT programs such as Mexico’s well-known Oportunidades model, but has been adapted in specific ways to meet the needs of families in New York City. CCT programs offer cash assistance to reduce immediate poverty among low-income families, while conditioning that assistance on parents’ investment in their children’s human capital (for example, adherence to well-baby visits, immunizations, or school attendance) with the goal of breaking the intergenerational cycle of poverty. This report presents the results of an innovative study designed to provide a detailed understanding of the ways in which families and their teenage children were affected by Family Rewards, one of the first comprehensive CCT programs to be tested in a developed country.

Family Rewards offered cash rewards in three key areas thought to be critical to families’ short- and long-term success: education, health care, and parents’ employment. The program was offered to low-income families with children in the fourth, seventh, or ninth grades in six of the poorest neighborhoods of New York City. Two national, New York-based nonprofit organizations — MDRC, a social policy and education research firm, and Seedco, a workforce and economic development organization — worked in close partnership with CEO to design the demonstration. The three-year program began in September 2007 and ended in August 2010.

MDRC is currently conducting an extensive evaluation of the Family Rewards program. To assess the effects, or “impacts” of the program, parents and their children were offered the opportunity to take advantage of the CCTs for three years as part of the program group, or to be part of a control group that was not offered the CCTs. The focus of the “core study” is on the program’s implementation as well as its impacts across a wide range of outcome measures likely to be affected by the program. As described in the first report on interim findings from the core study,¹ most families received reward payments for meeting the conditions the program established, and these payments amounted to a substantial sum. As a result, Family Rewards was found to reduce current poverty and material hardship and produced a range of effects on a variety of outcomes across all three program domains (children’s education, family health care, and parents’ work and training). While the program did not improve school outcomes overall

¹James Riccio, Nadine Dechausay, David Greenberg, Cynthia Miller, Zawadi Rucks, and Nandita Verma, *Toward Reduced Poverty Across Generations: Early Findings from New York City’s Conditional Cash Transfer Program* (New York: MDRC, 2010).

for elementary or middle school students, it did increase academic outcomes for children who were better prepared for high school when they entered the study in the ninth grade. The children who entered the program in the ninth grade and their parents are the focus of this particular report.

The findings reported in this special “embedded” study add information about families’ interactions with the CCT program in key areas by interviewing teenagers and their parents approximately two years after they enrolled in the program. More specifically, this report presents the impacts of the Family Rewards program on (1) the way teenagers spent their time; (2) the way teenagers and parents spent their money; (3) interactions between parents and teenagers; (4) teenagers’ academic engagement, motivation, and sense of competence in school; and (5) teenagers’ mental health and problem behaviors, such as aggression or substance use. As such, this report presents results on key “mechanisms of action” that may underlie any effects (or, indeed, lack of effects) of the program on targeted outcomes (such as test scores) as well as key outcomes that were not targeted but could be affected nonetheless by the program.

This study found that Family Rewards affected some of the channels by which the program is thought to operate. Most notably, Family Rewards changed how teenagers spent their time, increasing the proportion of teenagers who engaged primarily in academic activities. These impacts on the way teenagers allocated their time were concentrated among those who were more academically prepared for school at the start of the study. This same group of more proficient teenagers had experienced gains in academic outcomes as a result of the program.² Family Rewards also changed how teenagers and their parents spent their money. For example, parents enrolled in Family Rewards reported saving more for their children’s future education. However, other pathways by which the program was thought to operate — for families (parent-teenager interactions) and for teenagers themselves (school engagement and academic efficacy) — were not affected by the program.

With regard to outcomes not targeted directly by the program, the news was quite positive. First, Family Rewards did not increase parent-teenager conflict or cause anxiety or depression among teenagers — among the potential unintended consequences of the program that were of concern. Second, Family Rewards was found to *reduce* teenagers’ aggressive behavior and substance use.

The Family Rewards Program

Family Rewards provided cash payments to families who successfully carried out and documented a number of health, education, and work activities. The program offered a set of 22

²Riccio et al. (2010).

different incentives during its first two years and a smaller number in the third year, ranging in value from \$20 to \$600.³ These incentives are described in Table ES.1. The incentives encouraged families to meet conditions in three domains: health, education, and work.

- **Health-focused conditions** included maintaining health insurance coverage for parents and their children as well obtaining age-appropriate preventive medical and dental checkups for each family member.
- **Education-focused conditions** included meeting goals for children’s attendance in school, achievement levels on standardized tests, and other school progress markers, as well as parents’ engagement with their children’s education.
- **Workforce-focused conditions**, aimed at parents, included sustaining full-time work and participating in approved education or job training activities.

Every two months, the program verified that families had earned rewards by using a combination of automated data from city agencies and special forms, or “coupons,” which the participants completed and submitted directly to the program. Some rewards were offered to the oldest children themselves (rather than to their parents), meaning that these children were in principle more directly exposed to incentives than younger children.

Study Design and Sample

The Family Rewards core evaluation involves approximately 4,800 families and 11,000 children who applied to the program. The program was targeted to families who lived in selected high-poverty community districts and who had incomes at or below 130 percent of the federal poverty level. Eligible families had to have at least one child in the fourth, seventh, or ninth grade. These grades were selected because they are at or near the start of critical transition points in children’s educational careers. Once a family volunteered for the study, *all* children in the family who were school age or younger were eligible for the program. Through a lottery-like process, half of the applicant families were selected for Family Rewards and offered the incentives discussed above, and half were assigned to a control group that was not offered the incentives.

This report focuses on a subset of the children in the oldest age cohort (ninth grade at baseline) from the Family Rewards core study sample who were interviewed as part of the core

³In Year 3 of the program, some rewards were eliminated in response to preliminary findings, verification difficulties, and the need to ensure that funding could continue for a third year. See Chapter 1 in Riccio et al. (2010), pages 17-27, for a more extensive discussion of the rewards structure and changes that were made to it.

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Table ES.1

Schedule of Rewards

| Activity | Reward Amount |
|--|---|
| <u>Education incentives</u> | |
| Elementary and middle school students | |
| Attends 95% of scheduled school days (<i>discontinued after Year 2</i>) | \$25 per month |
| Scores at proficiency level (or improves) on annual math and English Language Arts (ELA) tests | |
| Elementary school students | \$300 per math test; \$300 per ELA test |
| Middle school students | \$350 per math test; \$350 per ELA test |
| Parent reviews low-stakes interim tests (<i>discontinued after Year 1</i>) | \$25 for parents to download, print, and review results (up to 5 times per year) |
| Parent discusses annual math and ELA test results with teachers (<i>discontinued after Year 2</i>) | \$25 (up to 2 tests per year) |
| High school students | |
| Attends 95% of scheduled school days | \$50 per month |
| Accumulates 11 course credits per year | \$600 |
| Passes Regents exams | \$600 per exam passed (up to 5 exams) |
| Takes PSAT test | \$50 for taking the test (up to 2 times) |
| Graduates from high school | \$400 bonus |
| All grades | |
| Parent attends parent-teacher conferences | \$25 per conference (up to 2 times per year) |
| Child obtains library card (<i>discontinued after Year 2</i>) | \$50 once during program |
| <u>Health incentives</u> | |
| Maintaining public or private health insurance (<i>discontinued after Year 2</i>) | |
| For each parent covered | Per month: \$20 (public); \$50 (private) |
| If all children are covered | Per month: \$20 (public); \$50 (private) |
| Annual medical checkup | \$200 per family member (once per year) |
| Doctor-recommended follow-up visit (<i>discontinued after Year 2</i>) | \$100 per family member (once per year) |
| Early-intervention evaluation for child under 30 months old, if advised by pediatrician | \$200 per child (once per year) |
| Preventive dental care (cleaning/checkup) | \$100 per family member (once per year for children 1-5 years old; twice per year for family members 6 years of age or older) |
| <u>Workforce incentives</u> | |
| Sustained full-time employment | \$150 per month |
| Education and training while employed at least 10 hours per week (<i>employment requirement discontinued after Year 2</i>) | Amount varies by length of course, up to a maximum of \$3,000 over three years |

evaluation follow-up at the 18-month time point. A sample of 716 teenagers and their parents were selected from this group of families, and information was collected as part of this embedded study on 511 of the teenagers — those whose parents agreed to allow them to participate and who completed the survey.

A telephone survey was administered to the teenagers and their parents during the spring of their third year following random assignment (approximately 30 months after they entered the core study). The surveys collected information from teenagers on their spending and saving patterns, time use, level of conflict in discussions of various topics with their parents, various educational processes, mental health, and risky behaviors. The parent surveys collected information from parents on their spending and saving patterns, levels of monitoring their teenager, and level of conflict in discussions of various topics with their teenager.

Analyses presented in the current report focus on the differences between parents and teenagers assigned to the program group and those assigned to the control group in each of the areas of interest discussed above, controlling for a small set of pre-random-assignment characteristics to increase precision.⁴

Impacts of the Family Rewards Program

The evidence emerging from this embedded study is encouraging and shows that some behaviors of parents and children can be changed for the good by the CCT incentives offered by the Family Rewards program. And in cases where concerns were raised that the program might harm families (for example, increase parent-teenager conflict and anxiety on the part of the teenagers or decrease teenagers' intrinsic motivation), there was no evidence that Family Rewards had “unintended consequences.” At the same time, a number of plausible processes that could be activated as a result of the program were not affected, highlighting areas that might be directly targeted in future interventions that include CCTs.

Five main conclusions emerge from this study of the Family Rewards program:

- **Family Rewards increased the proportion of teenagers who spent their time predominantly in academic activities.**

⁴A range of baseline covariates were included in all analyses. Covariates included average class size for grade level, ELA pretest score, math pretest score, school district, child gender, child race, special education status, the number of children in the household, whether English was spoken in the home, whether the family was a single-parent or two-parent family, parents' education, parents' employment status, an indicator for if there was no mother in the home, and an indicator for whether random assignment occurred after September 2007.

At the outset of Family Rewards, it was hoped that teenagers would spend more time in school-related activities (such as completing homework assignments and studying) and in achievement-oriented after-school activities (such as tutoring), because the outcomes of such behaviors (that is, test scores) were directly incentivized by the program.

Based on an analysis of teenagers' reported afternoon and evening activities, teenagers were divided into four groups: (1) those who spent their time predominantly in academically oriented activities (such as homework, after-school activities); (2) those who spent their time predominantly in socially oriented activities (such as hanging out with friends or family, talking or texting on the phone); (3) those who spent a large proportion of time watching TV and on the computer; and (4) those who spent the most time in maintenance activities (eating, napping, grooming, commuting) as well as had the highest level of work (chores or work for pay) of all the groups.

As shown in Figure ES.1, Family Rewards did indeed lead to a shift in the way teenagers allocated their time. More specifically, Family Rewards reduced the proportion of teenagers who spent their time predominantly in social activities (from 21 percent in the control group to 15 percent in the program group) and increased the proportion of teenagers who spent their time predominantly in academic activities (from 16 percent in the control group to 24 percent in the program group).⁵ Separate analyses not shown here indicate that this finding was especially true for the teenagers who were better prepared for school based on their standardized test scores before random assignment; notably, it is these same teenagers who were found in the core study to demonstrate gains in test scores as a result of the Family Rewards program.

- **Family Rewards increased parents' spending on their teenagers and saving for their teenagers' future education, indicating positive effects on parents' investment in children's human capital.**

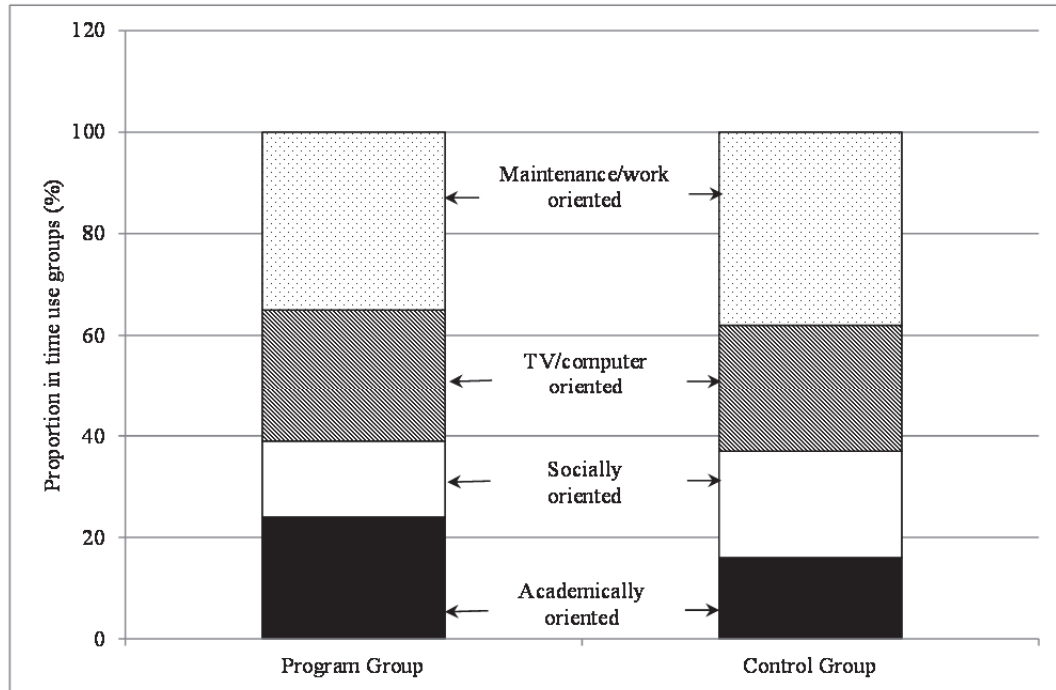
By providing cash transfers to families, Family Rewards should have resulted in greater spending and, perhaps, saving within families. However, whether or not those increased resources would be spent in ways that would benefit children's long-term human capital was an open question. Thus, the embedded study was intended to examine the impacts of the Family Rewards program on parents' and teenagers' spending and savings. Results are shown in Table ES.2. Parents in the program group had higher levels of monthly spending on academic activities and supplies (of \$31) and on leisure and entertainment (of \$27). Notably, Family Rewards also had a positive impact on parents' indicating that they were currently saving for their

⁵As discussed in the report, while Family Rewards did increase the proportion of teens in an academically oriented group, there were no impacts on the average amount of time spent in academic activities across all teenagers.

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Figure ES.1

Impacts on Teenagers' Membership in Time Use Groups



SOURCE: MDRC calculations from the Family Rewards 30-Month Embedded Study Survey.

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

teenager's future education, a sizeable 12.6 percentage point increase. Teens in the Family Rewards group spent somewhat less on necessities and leisure activities than control group teens, perhaps because parents were spending more. Notably, these findings should be considered in relation to the timing of the embedded study survey, which was fielded in the late winter and spring, before the large rewards that teenagers could earn were available that year.

- **Family Rewards did not affect interactions between parents and teenagers, for better or for worse.**

Family Rewards was expected to change parent-teenager interactions in a number of ways. On the one hand, rewards might shape families' norms and expectations about children's participation in school and after-school activities, and, as a result, parents might spend more

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Table ES.2

Impacts on Spending and Saving and Parent-Teenager Interactions

| Outcome | Program Group | Control Group | Difference (Impact) | P-Value |
|--|---------------|---------------|---------------------|---------|
| <u>Spending and saving</u> | | | | |
| Total parent spending in 1 month ^a (\$) | | | | |
| Total spending | 695 | 624 | 71 * | 0.056 |
| Productive spending | 156 | 125 | 31 *** | 0.007 |
| Maintenance spending | 434 | 418 | 16 | 0.552 |
| Leisure spending | 109 | 82 | 27 *** | 0.008 |
| Total teenager spending in 1 month ^b (\$) | | | | |
| Total spending | 230 | 301 | -72 ** | 0.019 |
| Productive spending | 34 | 38 | -4 | 0.600 |
| Maintenance spending | 162 | 213 | -51 ** | 0.020 |
| Leisure spending | 35 | 51 | -16 * | 0.070 |
| Save for child's future education (%) | 54.1 | 41.5 | 12.6 *** | 0.005 |
| <u>Parent-teenager interactions</u> | | | | |
| Intensity level of family conflict (5 = angry, 1 = calm) | | | | |
| Parent report | 2.0 | 2.1 | 0.0 | 0.832 |
| Teenager report | 2.0 | 2.0 | -0.1 | 0.296 |
| Monitoring/disclosure | | | | |
| Parental monitoring (5 = high monitoring) | 4.3 | 4.3 | 0.0 | 0.928 |
| Teenager disclosure to parent (5 = high disclosure) | 3.9 | 3.8 | 0.1 | 0.495 |
| Sample size (total = 511) | 262 | 249 | | |

SOURCE: MDRC calculations from the Family Rewards 30-Month Embedded Study Survey.

NOTES: Statistical significance levels indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

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

Rounding may cause slight discrepancies in calculating sums and differences.

Sample sizes may vary because of missing values.

A two-tailed t-test was applied to the differences between outcomes for the program and control groups.

The p-value indicates the likelihood that the difference between the program and control group arose by chance.

^aSpending on different items was reported for varying time periods ranging from 1 to 6 months. All numbers reported in this table are scaled to a 1-month interval. Productive spending = educational and other structured activities and materials; maintenance spending = basic necessities; leisure spending = "fun" money.

^bSpending on different items was specifically asked about "in the past 4 weeks."

time being involved in and monitoring their children's activities in and out of school. At the same time, designers expressed concern that Family Rewards, by introducing incentives to families, might increase parent-teenager conflict during an already tumultuous period in families' lives. As shown in the bottom panel of Table ES.2, however, neither the expected benefits nor the concerns about the program were borne out. That is, parents were not found to

engage in greater monitoring of their teenager's behavior, as might be expected if Family Rewards was making large changes in how families interacted with their children. Neither was there any indication that Family Rewards increased parent-child conflict.

- **Family Reward did not affect teenagers' approaches to schooling, measures thought to mediate any benefits to teenagers' academic outcomes.**

A central premise of the Family Rewards program was that by offering educational incentives for attendance and achievement outcomes, children's interest in school and their sense of competence in academics would increase. At the same time, designers worried that by providing external rewards for academic achievement, the program could undermine intrinsic motivation. As shown in Table ES.3, students did not report greater engagement in school or a greater sense of efficacy about schoolwork. On the positive side, the provision of rewards did not appear to undermine intrinsic motivation, a central concern about this program at the outset.

- **Family Rewards reduced teenagers' problem behaviors, key outcomes not directly targeted by the intervention. No increases were found in teenagers' depression or anxiety.**

In addition to effects on the key targets of the program, this study was intended to address the possible effects of Family Rewards on teenagers' mental health and problem behaviors. The effects on these nontargeted outcomes are critical to understanding the broader effects of the program. As shown in the bottom panel of Table ES.3, teenagers in the program group reported lower levels of aggression (a 10 percentage point reduction) and lower levels of substance use (an overall reduction of 15 percentage points). They also reported reductions in alcohol and marijuana use of 14 and 7 percentage points, respectively (shown in Chapter 3 of the full report in Table 3.2), compared with their peers in the control group. Unlike the findings on academic outcomes and time use, these findings on substance use do not differ for children who were more or less academically proficient when they entered the study. These findings bode well for teenagers' longer-term outcomes. And as shown in the middle panel of Table ES.3, there are no statistically significant impacts on teenagers' depression and anxiety. Given concerns that parents would put undue pressure on their children and cause increased anxiety, this "null" finding should be seen as good news for the program.

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Table ES.3

**Impacts on Teenagers' Approaches to Schooling,
Mental Health, and Problem Behaviors**

| Outcome | Program Group | Control Group | Difference (Impact) | P-Value |
|---|---------------|---------------|---------------------|---------|
| <u>Approaches to schooling</u> | | | | |
| Think will finish college | 85.8 | 84.3 | 1.6 | 0.608 |
| School behavioral engagement | 4.3 | 4.3 | 0.0 | 0.557 |
| Academic efficacy | 2.9 | 2.9 | 0.1 | 0.252 |
| Motivation to learn (- 7 = extrinsic, 7 = intrinsic) | 0.7 | 0.5 | 0.2 | 0.421 |
| <u>Mental health outcomes</u> | | | | |
| Depression (0 to 13 scale) | 1.6 | 1.5 | 0.1 | 0.557 |
| Anxiety (0 to 13 scale) | 3.6 | 4.0 | -0.4 | 0.148 |
| <u>Problem behaviors</u> | | | | |
| Delinquent behaviors (%) | 46.1 | 52.7 | -6.6 | 0.141 |
| Aggressive behaviors (%) | 14.1 | 24.1 | -9.9 *** | 0.004 |
| Any substance use in past month (%) | 17.5 | 32.6 | -15.2 *** | 0.000 |
| Number of friends using substances in past month (1 = none, 2 = a few, 3 = some, 4 = most) | 1.81 | 1.99 | -0.19 *** | 0.004 |
| Sample size (total = 511) | | 262 | 249 | |

SOURCE: MDRC calculations from the Family Rewards 30-Month Embedded Study Survey.

NOTES: Statistical significance levels indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

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

Rounding may cause slight discrepancies in calculating sums and differences.

Sample sizes may vary because of missing values.

A two-tailed t-test was applied to the differences between outcomes for the program and control groups.

The p-value indicates the likelihood that the difference between the program and control group arose by chance.

Conclusion

Family Rewards can be viewed as “CCT 1.0” in the United States. CCTs in Latin America and elsewhere in the global South have often been based on pilot studies meant to identify obstacles to take-up of health, nutrition and education services and to estimate the size and timing of incentives that would most efficiently and effectively improve use of these services. Because

Family Rewards was designed and implemented under a tight timeline, no such pilot studies were conducted in New York. Hence, the results of the evaluations of Family Rewards, both the core evaluation and this embedded study, can be used to design “CCT 2.0.” For these reasons, this study is more of a theory-building and hypothesis-generating study than a theory-confirming, hypothesis-testing study.

As discussed in detail in Riccio et al. (2010), the Family Rewards program had modest impacts on high school students’ academic achievement, but only for a portion of the sample (those children who scored at proficiency levels on baseline test scores). The results of this embedded study shed light on some hypotheses to explain why this occurred. There were small changes in the amount of time students spent on academic activities in place of social activities, but only for the academically proficient teenagers. There were also changes in the way families allocated their increased financial resources. However, there are no statistically significant impacts on key hypothesized mediators among families, such as parental monitoring. Moreover, key student-level academic processes, such as perceived academic efficacy as well as academic expectations, were unchanged by the program.

These results lead to some suggestions for future work. First, more attention needs to be paid to redesigning incentives that would be effective for nonproficient teenagers. Second, future CCT initiatives in the United States also might consider redesigning incentives to directly target pathways of influence in order to produce larger and more sustained impacts on outcomes. For example, rather than incentivizing academic achievement as measured by standardized tests, rewards could offer students incentives for grade point averages or homework. Or they could encourage students to attend academic tutoring programs or to join academic clubs, which have been shown to improve academic achievement and might change the way students approach schooling more effectively.⁶

It will be critical to examine the effects of the Family Rewards program in the long term. The effects on proficient students’ activity participation and on parents’ savings for their children’s future education, combined with the reductions in teenagers’ aggression and substance use, point to potential long-term benefits of the program for teenagers as they move into adulthood. Future reports on this study will present findings on the program’s impacts at later points in time — one will examine impacts three years after random assignment, around the time that the program itself was ending, and the final report will examine results over a five-year follow-up period, including two years after the program ended. The postprogram follow-up period will allow the evaluation to determine the long-term implications of the findings from this embedded study.

⁶J. D. Coie and G. Krehbiel, “Effects of Academic Tutoring on the Social Status of Low-Achieving, Socially Rejected Children,” (*Child Development* 55:1465-1478 [1984]).

EARLIER PUBLICATIONS ON OPPORTUNITY NYC-FAMILY REWARDS

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- Promoting Family Well-Being and Children's Development
- Improving Public Education
- Raising Academic Achievement and Persistence in College
- Supporting Low-Wage Workers and Communities
- Overcoming Barriers to Employment

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