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**The Effects of Welfare
and Employment Policies
on the Child Care Use of
Low-Income Young Mothers**

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The author welcomes comments and discussion.



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The Next Generation Project

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Introduction

Child care plays an important dual role in the lives of families: It both supports parents' work and, when of high quality, can support the cognitive and social development of children. With the passage of the 1996 welfare reform legislation, many low-income mothers were required to go to work. Child care is crucial to the success of these mothers as they seek employment. Child care's dual role is particularly important for low-income young mothers (who were under age 25 when they gave birth) who lack work experience, and teen mothers (who were teenagers when they gave birth) who have the additional barrier of early childbearing and whose children are at risk for poor developmental outcomes (Furstenberg, Brooks-Gunn & Chase-Lansdale, 1989). High quality child care could play an important role in improving the development of these children, as well as providing support for mothers' employment.

Welfare and employment programs that successfully increase low-income mothers' employment or participation in employment-related activities have been shown to also increase mothers' use of child care (Crosby, Gennetian, & Huston, 2001). As mothers' schedules change with employment or participation, their need for child care increases. Very little research, however, has examined the impacts of these programs on young mothers. When programs induce young mothers to work or participate in educational or training activities, what type of child care do mothers choose to use? Do they choose one type of child care over another?

Because of their needs for employment supports and the positive role that high quality care could play in their children's development this paper will examine the child care use of young mothers, the majority of whom gave birth as teens. It investigates what type of child care young mothers who enter the workforce choose to use. The strength of this study is that it examines the effects of experimentally manipulated increase in employment, rather than employment determined by prior family selection factors, on child care use. Analyses will focus on use of home-based and formal care, as well as Head Start and center care, where possible.

Teenage motherhood can have serious consequences for both mothers and their children. Compared to teens who have not had children, teenage mothers are less likely to finish high school, less likely to be consistently employed, and more likely to be on public assistance (Seitz, 1996). Beyond simply ever using public assistance, teenage mothers are the group most likely to be long-term welfare recipients (Ellwood, 1986; Maxfield & Rucci, 1986 as cited in Kisker & Sliverberg, 1991). Research also finds negative outcomes for the children of teenage mothers. Children of teenage mothers are more likely to have poorer cognitive functioning and school performance, compared to children of older mothers (Furstenberg, Brooks-Gunn & Chase-Lansdale, 1989). They are also more likely to exhibit problem behaviors, like fighting and truancy, when they themselves are adolescents (Levine, Pollack, & Comfort, 2001).

Because teenage motherhood has negative consequences for both the mothers and their children, policymakers have been concerned with this group. Therefore, many programs have been created to help teenage parents achieve positive life outcomes. Programs and policies for teenage parents have generally focused on increasing human capital as a means of increasing employment and self sufficiency. Three recent programs, begun in the late 1980s and studied using random assignment research designs, shared these goals. New Chance was a demonstration program for mothers aged 16 to 22 who had given birth as teens, were on welfare, were high school dropouts and did not have a high school diploma or GED. The program provided a comprehensive and intensive set of integrated services, including education and skills training, employment preparation, life skills instruction and family planning and health education. Child care was provided for mothers who were participating in the program, often on-site. The New Chance program increased participation in education and schooling programs and increased GED receipt. New Chance also increased the percentage of mothers using child care, especially center-based care (Granger & Cytron, 1999). This finding is not surprising given that the program provided participants with center care. Despite the fact that more mothers were using child care, many of them felt reluctant to place their children in the care of strangers. Nonetheless, child care was viewed as a critical service for improving skills and gaining and keeping employment (Quint & Musick, 1994).

The other two programs, Ohio's Learning, Earning, and Parenting (LEAP) Program and the Teenage Parent Demonstration (TPD) were both mandatory programs for teenage parents on welfare. Like New Chance, both LEAP and TPD increased participation in education or schooling programs and LEAP also increased the receipt of GED credentials (Bos & Fellerath, 1997; Granger & Cytron, 1999; Kisker, Rangarajan, & Boller, 1998; Kisker & Silverberg, 1991). Both LEAP and TPD increased employment for sample members who were enrolled in school at the beginning of the evaluations. TPD produced large increases in the use of child care, especially center-based care for very young children (less than age one) (Granger & Cytron, 1999; Kisker & Silverberg, 1991).

The previous programs for teenage mothers all recognized the importance of child care. Because giving birth as teenagers interrupts young women's life courses, more supports and services are needed in order to help them get off welfare and become self sufficient. Child care is clearly an important support for these mothers as they move in to employment. However, it is not only mothers who gave birth as teens who are in need of this support. All mothers who gave birth at a young age (regardless of whether they gave birth as teens) and are on welfare are likely to be in need of extra supports in order to leave welfare and begin working. Due to their age, these mothers have had less experience finding a job and being employed, making the move from welfare to work more challenging. Because of their need for extra supports, child care plays a particularly important role in the success of these young mothers. Despite the importance of child care for all mothers who gave birth at a young age, no previous research has

examined the child care use of young mothers. Rather than focusing on mothers who gave birth as teenagers, this research will examine the child care use of young mothers more generally.

Accessible and affordable child care can facilitate young mothers' employment and participation in education and/or training activities. Child care centers offer some advantages over other types of care as a support for stable employment. They support stable employment because they are more reliable sources of care than informal providers and do not often fail unpredictably because of caregiver illness or other problems that may force parents to miss or be late for work (Hofferth, 1999). Child care centers may not support stable employment, however, if mothers need care during non-standard work hours (nights and weekends) when centers are usually not open. In those cases, relative care and other forms of home-based care, which are more flexible with regards to hours, may support stable employment.

Not only does child care support maternal employment, but also non-experimental studies have found that child care may also be important in improving the social, cognitive, and behavioral development of children of young and teen mothers. For example, children who attend child care centers in the infant and preschool years perform better on cognitive and language tasks and show better school achievement than do those who spend time in home-based care of comparable quality (e.g. Clarke-Stewart et al., NICHD Early Child Care Research Network, 2000, Zaslow et al., 1998). In a large longitudinal sample, the more time children attended centers in the first three years of life, the better their language and cognitive development was, even with extensive controls for selection and for the quality and amount of child care they had received (NICHD Early Child care Research Network, 2000). Children in a sample of welfare families who attended center-based early childhood programs performed better on a measure of cognitive development than did those cared for by their mothers at home (Zaslow et al., 1998).

Not only do children in center care perform better than children in home-based care, but also some research has found that home-based care may have negative effects on children's cognitive development. The results of one study showed that non-relative home-based care was associated with negative effects on the cognitive development of children in the most disadvantaged families on welfare (Yoshikawa, 1999).

Because it is targeted specifically at low-income children, Head Start is a specific type of formal child care that should be considered for welfare populations. Head Start was designed exclusively for low-income children and is generally thought of as one of the few lasting successes of President Lyndon Johnson's "War on Poverty." The designers of the program hoped it would give poor children a boost so that when they started school they would be on the same level as their more affluent peers (Zigler & Berman, 1983). Research has shown Head Start to produce significant short-term cognitive improvements in children who participate in the program (Barnett, 1995; Lee, Brooks-Gunn, & Schnur, 1988; Zigler, Abelson, Trickett, & Seitz,

1982). Although some studies indicate that these effects fade out over time, many studies have shown that some gains were maintained over a longer follow up. Longer-term positive effects were found on cognitive development (Lee, Brooks-Gunn, Schnur, & Liaw, 1990), school achievement, grade retention, placement in special education, social adjustment (Barnett, 1995, 1998), and educational attainment and college attendance (Currie & Thomas, 2000).

Although research has shown that Head Start is beneficial for low-income children, it may or may not be helpful as a child care support for mothers' employment. Although full-day Head Start services have been growing recently, at the time the data for this study were collected, Head Start was a half-day program. This schedule might not be compatible with mothers' work schedules. Head Start also expects that parents participate in the program (Mallory & Goldsmith, 1991). Employment might change or constrain mothers' time, making it more difficult for them to participate in Head Start. When low-income young mothers go to work, does their use of Head Start increase or decrease? This study seeks to fill a gap in the literature by answering this question.

Because the children of young mothers are at risk for poor developmental outcomes (Levine et al., 2001), the type of child care that they attend could make a difference for their development. For children already at risk, being in high quality child care that will promote their development is even more important.

Most programs for welfare recipients implemented in the 1990's did not target specific populations like teenage mothers (although teen mothers could be subject to different requirements than older mothers, depending upon whether they had graduated from high school). Rather, they served all welfare recipients. Many of these programs have been evaluated using experimental research designs, and a recent synthesis of welfare and employment program impacts on child care use found that as programs increased employment, use of child care increased. The programs also affected the type of child care mothers chose to use: programs that provided expanded child care assistance policies in addition to policies to promote employment increased the use of formal care over the use of home-based care. Programs that did not implement new child care assistance policies increased both types of care (Crosby et al., 2001).

Recent research on the effects of these same welfare and employment programs on mothers' use of Head Start indicates that the programs did not affect use of Head Start. Programs that increased maternal employment for mothers of all ages did not increase or decrease mothers' use of Head Start (Chang, Huston, Crosby, & Gennetian, 2002). Because young mothers are more disadvantaged than their older counterparts, this finding may not be replicated here. Young mothers might be more likely than older mothers to use Head Start because Head Start staff often target more disadvantaged families to receive available slots.

While research has examined the impacts of recent welfare and employment programs on all mothers' use of child care, no prior research has examined the impact of these policies on the child care use of young mothers specifically.

The Present Study

This research examines the use of child care among young mothers (age 24 and younger), in the context of eight different welfare and employment programs that operated in five states (Atlanta, GA; Grand Rapids, MI; Riverside, CA; Escambia County, FL; and three urban counties in Minnesota). In each site, at least three-fourths of sample members gave birth to their first children as teenagers. However, these programs did not specifically target teenage or young mothers. Rather, they were designed to serve the welfare populations in each site as a whole.

Although the programs in this study operated in the mid-1990s, before the welfare reform of 1996, they can still provide information that is relevant to current policy. Each program includes policies that have been incorporated, in different combinations, into most current welfare programs. Therefore, this study still makes an important contribution to understanding how policies affect young mothers' child care use.

First, because not much is known about the employment and child care use of this population, this paper will describe employment and child care use for control group members. This descriptive analysis will answer the question, what is the extent and pattern of child care use among young mothers on welfare?

Second, the research will examine the pattern of program effects on child care outcomes for young mothers and will seek to answer the following questions:

- Do welfare and employment policies that induce young mothers to enter the workforce or to participate in education or training activities affect the child care use of young mothers? Programs that increase employment or participation are expected to impact child care use. Programs that do not impact mothers' entrance into the workforce are not expected to affect use of child care.
- If so, do programs affect the type of child care that young mothers use? There are different reasons why programs might affect different types of care for this population. Some research shows that teenage mothers prefer to use home-based care arrangements (Quint, Bos, & Polit, 1997); however, more formal arrangements might better accommodate mothers' employment schedules.

Design and Samples

The Programs

This study utilizes data from 3 experimental evaluation studies that include 8 different welfare and employment programs. In each site, young mothers were randomly assigned to either a program group or to a control group, representing the existing AFDC policy context. Although each evaluation is described in detail below, summaries are presented in Table 1.

National Evaluation of Welfare-to-Work Strategies (NEWWS)

The NEWWS evaluation includes 11 programs in 7 sites across the country. In all of the sites, welfare recipients or those newly applying for welfare were randomly assigned to either a program group that received the services of the program but that was also subject to its mandate to participate in employment-related services, or to a control group that was not eligible for program services but that also had no participation requirements. In three of these sites, Atlanta, Georgia, Grand Rapids, Michigan, and Riverside, California, those assigned to the program group could be assigned either to a program that emphasized quick entry into the labor market (LFA programs) or a program that emphasized basic education (HCD programs). In Riverside, only those without a high school diploma or GED could be randomly assigned to the HCD program. Hence, those without a high school diploma or GED could be randomly assigned to either an HCD program, LFA program or control group; those who had a high school diploma or GED could only be randomly assigned to the LFA program or control group. For HCD programs, program services included basic education, GED preparation, ESL classes or other education or training programs. For LFA programs, program services included job search assistance. This study includes analyses of Atlanta LFA and HCD, Grand Rapids LFA and HCD, and Riverside HCD programs.

Random assignment in each of the three sites was as follows: between March 1992 and January 1994 in Atlanta; between March 1992 and January 1994 in Grand Rapids; and between September 1991 and May 1993 in Riverside. Two years after random assignment, sample members were surveyed. Survey retention rates were 80 percent in Riverside and 91 percent in Atlanta and Grand Rapids.

Florida's Family Transition Program (FTP)

Florida's program (FTP) was also evaluated using an experimental design. Those assigned to the program group were required to participate in FTP and were subject to its rules and mandates. The FTP program combined modest financial incentives to work with time limits on welfare. Financial incentives allowed welfare recipients to keep more of their welfare grant when working. For most recipients in the program group, welfare receipt was limited to 24

months or 36 months in any 60 month period, depending on family's level of disadvantage. In addition to modest financial incentives to work, FTP program group members also received intensive case management, a range of health and social services and enhanced employment-related services.

Random assignment occurred between August 1994 and July 1995. Four years after random assignment sample members were surveyed. The retention rates for the full child survey sample (including young mothers and older mothers) was about 78 percent. A previous report showed that although survey respondents and nonrespondents differed slightly in demographic characteristics, there was no systematic difference between survey respondents in the experimental and control groups. Thus, differences between respondents and nonrespondents do not bias the estimates of program impacts. For more information see Bloom et al. (2000).

Minnesota's Family Investment Program (MFIP)

In Minnesota, those randomly assigned to the program group could either be assigned to the Full MFIP program, which included both generous financial incentives to work and mandatory employment and training activities, or to the MFIP incentives only program, which only provided generous financial incentives to work. For both MFIP program groups (Full MFIP and MFIP Incentives only), welfare and food stamp payments were paid to the program group member in one check.

Sample members were randomly assigned between April 1994 and October 1994. They were surveyed three years after random assignment. The retention rates for the child survey sample was 80 percent. A previous report showed that although survey respondents and nonrespondents differed slightly in demographic characteristics, there was no systematic difference between survey respondents in the experimental and control groups. Thus, differences between respondents and nonrespondents do not bias the estimates of program impacts. For more information, see Gennetian and Miller (2000).

Sample

The sample members who were surveyed in each program were randomly drawn from larger samples of the full evaluations. The samples in this study include 307 young mothers (age 24 or younger) in Atlanta, 266 in Grand Rapids, 154 in Riverside, 422 in Florida and 267 in Minnesota. The samples for these studies included all local welfare recipients who came to the welfare office for a meeting during the study intake period.

In each study, one child in the family was selected at random to be the *focal child*, or the one child in the family about whom detailed information was collected. Focal children in Atlanta, Grand Rapids and Riverside were ages 3 to 5 at random assignment; focal children in

Florida were ages 1 to 8 at random assignment; and focal children in Minnesota were ages 2 to 8 at random assignment.

Table 2 shows baseline characteristics for this sample. As shown in the table, the majority of sample members were teenagers when they gave birth to their oldest child. Mean age for all sample members was around 22 years old. The percentage of sample members with a high school diploma or GED ranged considerably, from 67 percent in Minnesota to 17 percent in Riverside. Sample members also varied greatly on race/ethnicity. For example, in Atlanta almost all sample members were Black whereas in Florida the sample was about half Black and half White. Riverside is the only program with a substantial number of Hispanic sample members. Mean age for focal children in most sites was 4 years. In Florida, the mean age of focal children was 3 years.

Data Sources

All of the studies collected three different types of data: demographic and socioeconomic characteristics at study entry from baseline information forms, longitudinal information on employment and welfare receipt from state/county unemployment insurance records and public assistance records, and information about the characteristics of employment, child care and other household and personal circumstances (including child well-being) from follow-up surveys. In addition to providing other information, mothers answered questions about child care use during the follow-up period for the focal child.

Measures

Child Care

Survey respondents were asked about all child care arrangements that they had used regularly for the focal child. Regular use was defined as at least once a week during the month before the survey. Survey respondents who reported use of any type of nonparental care regularly were coded as having used any child care.

Formal care refers to licensed and regulated care that takes place in a group setting and includes programs that are designed to enrich or provide early education to young children (e.g., Head Start or preschool) as well as group settings that primarily provide child care to parents who are working (e.g., after school programs or summer camp). Home-based care refers to care by non-relatives in the child's home or in the care-giver's home. It includes licensed or certified child care homes as well as more informal arrangements. Where possible two types of formal care were examined separately: use of Head Start and use of center care.

All child care outcomes were measured during a two-year follow-up period and were not coded to be mutually exclusive. That is, children may have experienced only one type of care (for example, center care) or more than one type of care during the follow-up period (for example, both center care and home-based care). Even though the studies varied on the timing of the follow-up survey, measures were constructed comparably and with relatively comparable time periods (i.e., over a 24 month time period before follow-up interview) by using data from a child care calendar in MFIP and FTP. The follow-up period for NEWWS was 24 months after random assignment.

Employment

Average quarterly employment is defined as the average percentage of respondents who were employed, across the quarters of the follow-up period. If sample members worked for any amount of time during a quarter, they were considered to have been employed in that quarter. Average quarterly employment rates are derived from state unemployment insurance records and thus, exclude any self-employment or employment that is not reported to an unemployment insurance agency in that particular state. To be consistent with the time periods of the child care measures, average quarterly employment was measured over the two year follow up for the NEWWS programs, during years 2 and 3 of the follow up for the MFIP programs and during years 3 and 4 of follow up for FTP.

Participation

Impacts on participation were only assessed for the NEWWS programs.¹ Participation in education or training activities is defined as participation in any activities aimed at increasing human capital or skills during the follow-period. Participation was reported in the follow-up surveys. Participation could have occurred for any length of time from a few days to a number of months. Activities could include, but were not limited to, adult basic education, vocational training, ESL instruction and/or GED preparation courses.

Analysis Strategy

The random assignment method used in these studies provides the strongest possible basis for causal inferences regarding program impacts on child care. Because individuals were assigned at random, any differences in outcomes during the follow-up between individuals in the program and control groups - the “impacts” - can be attributed to the policy as implemented.

¹ Impacts on participation were only assessed for NEWWS programs because Full MFIP and FTP had already been found to increase employment. MFIP Incentives only was not a mandatory program and therefore would not be expected to increase participation in education or training activities.

This analysis has two parts. First, program impacts on child care were estimated for each program individually. All individual program impact estimates were regression-adjusted using Ordinary Least Squares, controlling for pre-random assignment characteristics such as ever married, number of children, race/ethnicity, and prior welfare and work history. Second, to determine whether patterns of impacts across programs were significant, meta-analytic techniques were utilized to determine an average impact across programs (Lipsey & Wilson, 1996).

All analyses will compare the impacts of programs that significantly increased average quarterly employment or participation in education or training activities with the impacts of those that did not increase employment or participation in education/training. Table 2 shows program impacts on employment and participation. Programs were considered to have increased employment if they produced a statistically significant impact on average quarterly employment. Four programs significantly increased average quarterly employment: Full MFIP, FTP, Atlanta LFA-NEWWS, and Riverside HCD-NEWWS. Programs were considered to have increased participation in education or training activities if they produced a statistically significant impact (two-tailed tests with an alpha of .10) on survey-reported participation in basic education, ESL, GED preparation courses, vocational training and/or postsecondary education. Atlanta's HCD program significantly increased participation in education or training activities. Thus, 5 programs (Full MFIP, FTP, Atlanta LFA-NEWWS, Atlanta HCD-NEWWS, and Riverside HCD-NEWWS) are considered to have increased either employment or participation and 3 programs (MFIP Incentives only, Grand Rapids LFA-NEWWS and Grand Rapids HCD-NEWWS) are considered not to have increased either employment or participation.

The meta-analytic strategy is described below. An average effect size across programs was calculated for each child care outcome. Average effect sizes were calculated separately for programs that increased employment and programs that did not increase employment. As shown in equation 1, the effect size of each program's impact (d_i) is equal to the average program group outcome minus the average control group outcome, divided by the control group standard deviation.

$$(1) \quad d_i = \frac{(x_i^e - x_i^c)}{\sigma_i^c}$$

Following standard meta-analytic procedures, an inverse variance weight was created for each program's effect size, as shown in equation 2.

$$(2) \quad w_i = \frac{1}{v_i}$$

(Where v_i is the variance of the effect size.)

The overall average effect size (ES) was calculated by multiplying each effect size by its weight, summing the weighted effect sizes, and dividing this sum by the sum of the weights, as shown in equation 3.

$$(3) \quad ES = \frac{\sum_i w_i(d_i)}{\sum_i w_i}$$

The overall average effect size thus represents the best estimate of the effect across studies.

In order to present the meta-analytic findings in their original metric, the overall average effect sizes were converted back to percentage point impacts. The overall average effect size was multiplied by the pooled standard deviation for the control group to derive the percentage point impact. The pooled program group mean was computed by adding the impact to the pooled control group mean.

Although meta-analysis of dichotomous outcomes is typically conducted using odds ratios as a measure of effect size, when cell sizes are equal, results of this method and methods employing odds ratios will yield the same results (Haddock, Rindskopf, & Shadish, 1998). Additionally, compared to methods employing odds ratios, this method underestimates effects. Hence, any effect found here would also be found using odds ratio (Haddock, Rindskopf, & Shadish, 1998).

Results

Descriptive Analysis

To understand the contexts in which these programs operated and the natural variation in child care use across these studies and sites, Table 3 and Table 4 present control group means and impacts – or program effects – on average employment rates, rates of participation, rates of child care use and rates of use of formal care, and home-based care (and center care, Head Start, where available). The descriptive analysis focuses on the means for control group members only.

Average quarterly employment rates for control group members were around 40 percent or slightly more in all sites except Riverside. For control group members in Riverside, the average quarterly employment rate was 13 percent. This is likely due to the fact that all sample

members in Riverside lacked a high school diploma or basic skills at random assignment. Therefore, they were a less job-ready group than sample members in the other programs.

Child care use across the sites showed more variation, with overall rates of use especially high in Atlanta and Grand Rapids. Between 59 percent (in FTP) and 93 percent (in Grand Rapids) of control group members used any child care during the follow up. Rates of use of formal care varied greatly, ranging from 23 percent (in FTP) to 77 percent (in Atlanta and Grand Rapids). About half of control group members used home-based care in all sites except Grand Rapids. In Grand Rapids, 81 percent of control group members used home-based care.

In MFIP and FTP, control group usage of home-based care was higher than usage of formal care. In Atlanta use of formal care exceeded use of home-based care. In Grand Rapids and Riverside, about equal percentages of controls used formal and home-based child care.

In the sites where it was possible to differentiate use of center care and use of Head Start, about 40 percent of controls used Head Start in Atlanta, Grand Rapids and Riverside. A much lower percentage (12 percent) used Head Start in MFIP. It is unclear why rates of use of Head Start were so much lower in MFIP than in the other sites. It could be due to Head Start availability, personal preference or some other reason. Rates of use of center care varied more: between 20 percent (in Riverside) and 50 percent (in Atlanta) of controls used center care.

Program Impacts

The main findings are presented in Table 4 and in Figures 1-3. In these figures, each bar represents the difference between the average outcome for individuals in the program group and the average of the same outcome for individuals in the control group, or the impact of the program. That is, each graph shows how much the programs increased or decreased use of child care.

In the figures, programs are grouped by effects on employment and participation, comparing programs that significantly increased average quarterly employment or participation in education or training activities with those that did not increase employment or participation in education/training.

In order to test whether the pattern of impacts described above was statistically significant, a meta-analysis was conducted. Table 5 summarizes the average impacts of programs that did and did not increase employment on use of child care. This information is also presented graphically as bolded bars in the figures. *T*-tests were used to determine whether the average impacts were statistically significant.

Figure 1 presents impacts on use of any type of child care, comparing programs that increased employment or participation in education/training with those who did not. Six of the eight programs increased the use of child care. Increases ranged from 2.6 percentage points (in

the Grand Rapids LFA program) to 14.8 percentage points (in Riverside HCD). Two programs, FTP and Riverside HCD produced the largest increases (12.5 and 14.8 percentage points, respectively). Both of these programs increased employment or participation in education/training.

Results of the meta-analysis indicate that the programs that increased employment or participation significantly increased use of any type of child care ($t(4) = 3.08, p < .001$). Programs that did not increase employment had no effect on use of any type of care.

Figure 2 shows the impacts on formal and home-based care for all 8 programs, comparing programs that increased employment or participation in education/training with those that did not. Impacts on both types of care varied greatly in both magnitude and direction. Impacts on formal care ranged from a 9.2 percentage point decrease (in Grand Rapids HCD) to a 10.2 percentage point increase (in FTP). Impacts on home-based care ranged from a 2.2 percentage point decrease (in MFIP Incentives only) to a 13.6 percentage point increase (in Riverside HCD). Results from the meta-analysis indicate that, on average, the programs that increased employment or participation significantly increased use of formal care ($t(4) = 1.89, p < .10$) but had no effect on use of home-based care. On average, the programs that did not increase employment did not effect use of formal or home-based care. The difference in average impacts on use of formal care is also statistically significant ($t(8) = -2.08, p < .05$).

Figure 3 presents, for the programs where these data are available, impacts on two types of formal care: center care and Head Start, comparing programs that increased employment or participation in education/training with those who did not. Impacts on employment and participation seem to explain the pattern. When looking at the impacts on center care and Head Start for the programs that increased employment or participation, a clear pattern emerges: all 4 programs decreased use of Head Start and increased use of center care. Decreases in Head Start ranged from 10.9 percentage points (Atlanta LFA) to 3.5 percentage points (Riverside HCD). Increase in center care ranged from 4.4 percentage points (Full MFIP) to 9.5 percentage points (Atlanta HCD). None of the programs that did not increase employment or participation decreased use of Head Start. However, surprisingly, all of them decreased use of center care (declines ranged from 6.5 percentage points in MFIP Incentives only to 25.1 percentage points in Grand Rapids LFA).

Results of the meta-analysis reveal that the pattern of impacts across programs is significant. On average, the programs that increased employment significantly increased use of center care ($t(4) = 2.16, p < .05$) and significantly decreased use of Head Start ($t(4) = -1.93, p < .10$). The programs that did not increase employment significantly decreased use of center care, on average ($t(2) = -3.64, p < .001$). The differences in average impacts on both center care and

Head Start were significant ($t(7) = -4.17, p < .001$ for the former comparison; $t(7) = 1.76, p < .10$ for the latter comparison).

Discussion

Because they are more likely than older mothers to be dependent on welfare long term, policymakers have been concerned about teenage mothers. In the past, demonstration programs for teenage mothers such as New Chance and the Teen Parent Demonstration provided comprehensive services aimed to increase mothers' education and skills. As new welfare systems have been put into place over the last decade, it is unlikely that they have provided the same breadth of support services tailored to teens as these earlier demonstrations. This study focused on one important support for young mothers as they transition from welfare to work: child care.

Child care is an important support for all parents but especially for young mothers and women who gave birth as teenagers. Child care can help facilitate parents' work and participation in education or training activities. Women who are dependent on welfare are particularly in need of this type of support. This study shows that welfare programs that increase employment can affect the child care use of young mothers.

The results of this study show that all of the programs that increased employment or participation also increased use of nonmaternal child care. The two programs with the largest increases in child care use were FTP and Riverside HCD, both programs that also increased employment. It is likely that larger effects on child care use were not found in Atlanta LFA or Atlanta HCD (both of which increased employment or participation) because nearly 90 percent of control group members were using child care in that site. Results of a meta-analysis showed that this pattern of impacts was significant.

When comparing impacts on type of child care (formal vs. home-based), the results of this study indicate that overall, programs that increased employment increased use of formal care and had no effect on use of home-based care. The lack of impacts on home-based care is interesting because findings from the New Chance demonstration indicated that most teenage mothers would prefer to use home-based child care arrangements (Quint et al., 1997). Programs that did not increase employment did not impact use of either type of child care.

When examining the individual program impacts, it is interesting to note that the two programs that significantly increased use of any child care showed opposite patterns of use of formal and home-based care. FTP increased the use of formal care more than the use of home-based care; in Riverside HCD, the pattern was the opposite. This finding may be linked to the programs' child care policies: FTP provided some supports for formal child care, including stationing child care resource and referral workers in the welfare offices, while Riverside HCD

provided no supports for formal child care and, in fact, promoted informal child care arrangements (for more information, see Gennetian, et al., 2001).

When considering two types of formal care, center care and Head Start, a clear pattern emerges. All 4 programs that increased employment or participation in education or training increased use of center care and decreased use of Head Start. The 4 programs that increased employment used different programs components to do so (providing financial incentives to work, making participation in employment-related services mandatory). Regardless of program approach, if a program significantly increased employment or participation in education or training, it produced the same pattern of increasing use of center care and decreasing use of Head Start. Results of the meta-analysis confirm that this pattern of impacts is statistically significant.

It appears that as the young mothers in these four programs moved from welfare to work they were trading use of Head Start for center care. This is not surprising, given that most Head Start programs only operate half the day. Head Start's hours of operation could be an obstacle to employment, especially full time employment or to participation in all day education or training activities. It is likely that these young mothers who are decreasing their use of Head Start are doing so because of conflicts between their work hours and Head Start's hours of operation. This finding, however, is in contrast to Chang et al.'s (2002) finding for a broader age range of mothers that welfare and employment programs had no effect on families' use of Head Start.

None of the programs that did not increase employment or participation decreased use of Head Start. Surprisingly, all of them decreased use of center care. This is a puzzling finding; there are no clear reasons for the decrease in center care. The reasons may differ in different studies. For example, the Grand Rapids LFA program decreased total income in the first year after follow up --perhaps this decrease in income contributed to a reduction in use of center care for that program. In contrast, the MFIP Incentives Only program led some parents who were already working to decrease their work hours; this could also have led to a switch in the type of child care used.

As previously mentioned, research has shown Head Start to produce significant short-term cognitive improvements in children who participate in the program, compared to children in no preschool and in other preschool programs (Lee, Brooks-Gunn, and Schnur, 1988). Some of these gains were maintained over a longer follow up (Lee, et al, 1990). Not only are there differences between Head Start and other center care in terms of increasing cognitive skills but Head Start also differs from other center care in terms of quality. Although quality in Head Start programs varies, Head Start centers are, on average, of higher quality than other child care centers (Zill et al., 1998).

Based on the results of this study, it appears that some children of welfare recipients may have lost the opportunity to benefit from Head Start because when their mothers began

working. These results indicate that policymakers and program directors should strongly consider adding wrap-around services to Head Start or extending funding to make Head Start a full-day program. Many Head Start programs have already moved in this direction. By expanding the hours that Head Start is available, young mothers who leave welfare for work will continue to be able to place their children in Head Start.

Unfortunately, Head Start is only available to preschool-aged children. Therefore, mothers of older children will not be able to use this high-quality program. Similarly, Head Start does not serve all eligible children. Because the results of this study show that when young mothers enter employment, they increase their use of child care, effort should be made to improve child care quality. This is particularly important because studies have shown that low-income children have less access to high-quality care (Fuller & Strath, 2001) and tend to be cared for in lower-quality settings (Galinsky, Howes, Kontos, & Shinn, 1994; NICHD, 1997). High-quality child care has been found to have positive effects on children's development. If more children enter child care as a result of their mothers' employment, they will be better off if steps are taken to improve the quality of that care.

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