# Chapter 4: Child Care

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## I. Introduction

Child care is a necessity for the many dual career and single parent families in the United States. The percentage of currently married women with a child under 6 years of age who are labor force participants nearly doubled between 1970 and 2005, from 30.3 percent to 59.8 percent. Participation rates for never-married mothers and widowed, divorced or separated mothers were even higher in 2005, at 68.4 and 73.6 percent respectively (Statistical Abstract, 2008). One obvious way that child care might contribute to the future success of a child is by making it less likely that he grows up in poverty and/or on public assistance since the mother can be a full labor market participant. In fact, as discussed more below, child care provision has been an important component of welfare reform. More directly, though, time spent in child care may have immediate effects on the child, and hence ultimately on their adult outcomes. Whether these effects are likely to be positive or negative is the main topic of this chapter.

It is important to note that the focus here is not on early childhood education programs (such as Head Start or Early Head Start), or even on child development programs more broadly defined. These types of programs are covered in another chapter. Rather, the focus here is simply on basic child care, which exists to care for children while their parents participate in the labor force. That said, there will be a focus on the evidence regarding different types of child care, which necessitates a discussion of what "quality child care" means in this context.

A minimum indicator of child care quality is meeting state licensing requirements. While each state sets its own requirements, they typically will cover a range of issues such as staff training and qualification levels, child-to-caregiver ratios, safety and sanitation procedures, etc. Child care providers wishing to signal a higher level of quality can apply to one of several professional organizations (e.g. National Association for Family Care, National Association of Child Care Professionals) for accreditation. In order to become an accredited child care provider, one needs to follow a series of steps, typically including a period of self-study and observational visits by an outside team of evaluators. Finally, note that being unlicensed is not necessarily the same thing as being illegal or unregulated. As an example, consider Virginia where there are a range of options beyond a licensed provider. First, there are unlicensed day care centers (e.g. one that is religiously exempt) that while not required to be licensed do meet certain guidelines and are monitored by the state. Similarly, family day care can be voluntarily registered with the state, while not formally licensed. Finally, there is unregulated family day care, which is not inspected or monitored, but which is not illegal unless more than five children beyond those resident in the home are cared for (or more than four total under the age of 2).[1]

Overall, then, while we may see evidence of beneficial effects of "quality" child care, it is clear that not all children are in such high quality care. Additionally, some aspects of high quality, especially in center-based care, are functions of the center providing extensive early education services. Any positive outcomes that are due to these

[1] See "A Guide for Choosing Quality Child Care," Virginia Department of Social Services, available at http://www.dss.virginia.gov/files/division/cc/publications/choosing_quality_childcare/guidelines_one_document/brochure-eng.pdf

types of services will be covered more fully in the child development chapter. This chapter proceeds by first reviewing the data on current child care utilization. It then reviews the observational literature on the effects of child care and discusses the drawbacks before moving on to the few non-observational studies available. While experimental studies focused purely on child care are rare, there were many random assignment welfare-to-work demonstrations which had an important child care component. We are likely to be able to learn something about the effect of child care investments in poor families from these studies, so they are discussed next. Implications and extensions are then presented, before concluding.

## II. Background

The high labor force participation rate among mothers of pre-school-aged children implies large numbers of children are spending time in child care. According to data from the Survey of Income and Program Participation (SIPP), for children of employed mothers we see 19 percent spending time in center-based care, 8 percent in family day care and another 9 percent in some other type of non-relative care.[2] Almost 21 percent are cared for by a grandparent, and another 7 percent are cared for by a sibling or other relative. It is worth pointing out that the type of care used varies tremendously by the education level of the mother, with center-based care being more common among the more educated and relative care more common among the less educated.

[2] All statistics based on SIPP come from the detailed tables of "Who's Minding the Kids? Child Care Arrangements: Spring 2005" available from the U.S. Census Bureau at http://www.census.gov/population/www/socdemo/child/ppl-2005.html

Another source of information on children's care arrangements is the 2005 Early Childhood Program Participation Survey (ECPP).[3] For weekly care arrangements for children through age 5 who are not in kindergarten, this survey reports that 20 percent were in only one type of relative care, 14 percent were in one type of nonrelative care, 45 percent were in one type of center-based care and 22 percent were in combinations of types of care. Note that center-based care here again includes Head Start and other early childhood education programs. Overall, children in the ECPP spend about 29 hours weekly in non-parental care, with average out-of-pocket costs ranging from about $60 to $105, and 19% receiving assistance in paying child care costs. The SIPP data provides similar information on child care costs, reporting average weekly child care costs of $128, implying that families spend about 9 percent of monthly income on child care. Note that this figure is only for those making child care payments - about half of families with children under age 5 and an employed mother have no child care payments. Making no payments can be due to either a relative (or possibly a close friend) volunteering their time or to receiving a child care subsidy that covers 100 percent of child care costs.

Overall, then, it is clear that child care is an important part of many children's lives, with the SIPP showing that about 15 million children under age 5 spend time in non-parental care that is not explicitly an early education facility. This number includes about 6.3 million in relative care, 4.5 million in non-relative care outside their home and another 700,000 in non-relative care in their own home. Additionally, over 3 million children are in multiple care arrangements. In addition to any effect having a gainfully

[3] All statistics based on ECPP come from the tables in "Initial Results from the 2005 NHES Early Childhood Program Participation Survey" available from the U.S. Department of Education at http://nces.ed.gov/pubs2006/earlychild/02.asp

employed mother might have on a child's future outcomes, investments in quality child care may help set the child on the path to adult success.

In evaluating whether increased investments in child care can be an efficient strategy for ameliorating later adult poverty, it is important to consider the counterfactual. Often, the child will typically be at home with a mother who is now not a participant in the labor market. This indirect effect of maternal labor market participation will be considered more fully below. Taking as given that the child will be in non-parental care while the mother works, though, for pre-school-age children a lack of day care options will very rarely imply that the child is in self care. Rather, the child is likely to be cared for by a patchwork of providers, including relatives and friends, but rarely an accredited day care center. Thus, we really should think of investments in day care as insuring that children will incur stability and quality of care throughout there pre-school years.

## III. Non-Experimental Studies on the Effects of Day Care

The majority of studies analyzing the impact of child care on pre-school-age children are observational. Table 1 summarizes the non-experimental studies. One common approach is to use an existing data set, such as the National Longitudinal Study of Youth 1979 Mother-Child Matched file (NLSY). Waldfogel (2000) reviews a range of these studies, which generally tend to find a negative relationship between early child care and later cognitive outcomes. Interestingly, these negative effects are not always found for minority children, perhaps due to differences in the non-child-care environments. It is important to realize, though, that because the NLSY data are observational, there is likely to be selection into child care. While a large amount of

background information is available that allows researchers to control for many observable differences across children, unobservable differences are not controlled for, and thus that the results may be biased. Therefore, none of these relationships can be considered causal. More importantly, the data on child care in the NLSY is relatively weak, in that one cannot really differentiate high-quality care from low-quality care. Thus, these studies tend to simply focus on the presence of any non-parental care in the early years of life.

In the early 1990s, a new data collection effort began to explicitly study children's experiences in day care, and to allow for the type, quality and quantity of care to be determined. The National Institute of Child Health and Development (NICHD) Study of Early Child Care and Youth Development (SECCYD), began in 1991 when mothers were approached in hospitals based on having given birth in a selected time interval. Families have since been followed longitudinally, with a voluminous literature produced that analyzes the data collected. Again, because the data is observational, there is still likely to be a problem of selection, not only in terms of being in any child care, but also in terms of the type, quality and quantity of care. Additionally, the NICHD study is not nationally representative. Nonetheless, it remains the "state of the art" in terms of observing correlations between children's day care experiences and their outcomes, having followed the children now past their primary schooling.

Results on the impact of child care from the NICHD have been somewhat mixed, depending on the outcome studied and the age of the child.[4] Negative effects of care tend to be found mainly for behavioral outcomes, while positive effects are often found for

[4] Discussion of the NICHD results is based on Belsky et. al. (2007) and Waldfogel (2000) which contain references to the full range of the past literature.

cognitive outcomes. An important aspect of the NICHD study is the ability to separately examine the type, quality and quantity of care, as well as its timing. Thus, based on NICHD data it can be said that spending more than 10 hours per week in care at a young age is correlated with less secure attachment for children whose mothers are not sensitive. Similarly, longer hours in care are related to more problem behaviors at age 2. However, time spent in *quality* care was related to fewer problem behaviors at ages 2 and 3. In fact, quality was positively related with both better behavioral outcomes and better cognitive outcomes. When quality is measured by language stimulation and caregiver interactions, children's language skills are observed to be higher at ages 15, 24 and 36 months. Similarly, when quality is measured mainly by child-staff ratio, group size, teacher training and teacher education, language comprehension and school readiness are higher for 2- and 3-year-old children. Interestingly, when focusing simply on type of care, center-based care was found to have a positive relationship to cognitive outcomes, but it was also related to poor behavioral outcomes.

These relationships between day care and child outcomes generally appear to be long lasting, especially for cognitive outcomes. Children in higher quality care were still scoring better on vocabulary tests in the fifth grade than were those in lower quality care. At the same time, those who had been in center-based care still exhibited more problem behaviors in sixth grade. By this age, however, there was no longer any relationship between behavior and having been in any care (versus parental care). Based on the NICHD studies, then, it appears possible that subsidizing high quality care has the potential to increase children's cognitive outcomes (and ultimately their adult labor

market outcomes). However, it is impossible to draw causal conclusions based on the non-representative NICHD sample with self-selection into types of care.

An alternate type of non-experimental study is one that uses existing data, but implements econometric techniques that are meant to allow the estimated effects to be interpreted causally. Recall that the NLSY and NICHD studies discussed above do nothing more than control for as many observable characteristics as possible, and admit that the results cannot be interpreted as causal impacts of child care. Bernal (2005) uses the same NLSY data as other studies, but estimates a structural model to allow for joint estimation of the employment and child care decisions. While fairly strong assumptions must be maintained to estimate the model, the results confirm the negative impacts of early child care on later cognitive outcomes that were found in most of the observational studies using the NLSY.

Two papers using Canadian data try to approximate an experimental study design by taking advantage of "natural experiments" in which a change in the environment exogenously changes a child's exposure to day care. Baker, Gruber and Milligan (2005) take advantage of a policy change in Quebec that provided government-sponsored child care for an out-of-pocket cost of just $5 per day. The effect of this policy was to increase the use of pre-school-age child care by 14 percentage points. This increase in child care, though, led to clear negative effects on child outcomes. In particular, increases in hyperactivity, anxiety and aggression were reported, with declines in motor and social development and health outcomes. Based on this natural experiment, one might conclude that there are clear negative effects of child care. However, one major drawback to this study is the inability to control for quality. There is some evidence that the rapid

expansion of child care slots necessary to implement this program resulted in most of the children who ended up in care due to the new program being in low quality care. Thus, it is not clear that we can draw conclusions from this quasi-experiment on what the impact of spending on high quality care would be.

Baker and Milligan (2008) study an expansion of maternity leave in Canada that resulted in mothers spending about 50 percent more time not working in the first year of a child's life. Thus, this natural experiment reduced the use of early child care. If such care were to cause negative (positive) child outcomes, then we would expect to observe positive (negative) outcomes in the wake of this change. However, at least over the first two years of the child's life, there appeared to be no developmental impacts, either positive or negative. While it is possible that effects will appear at older ages, or are already present in outcomes not able to be measured with the existing data, this study currently provides some of the best non-experimental data on child care impacts, and it implies that investing in either extended maternity leave or in more early child care is unlikely to have significant impacts on child developmental outcomes.

Finally, one other approach to estimating causal impacts using non-experimental data is based on rationing of government child care subsidies. Brooks (2002) is able to compare low-income Georgia mothers who received day care subsidies with those who remained on a waiting list. The fact that both sets of mothers wanted child care obviates the major source of selection in the observational studies. While the mothers receiving the subsidies were more likely to be employed, and their children were more likely to be in stable, center-based care, there were no significant differences in school readiness or socio-emotional development between these children and those remaining on the waiting

list. The main drawback to this study is an inability to measure quality. The Georgia subsidy level was fairly low, so even though the subsidized mothers were more likely to use center-based care, the children may still have been in relatively low quality care.

## IV. Experimental Studies Providing Evidence on the Effect of Day Care

Given the drawbacks of the non-experimental studies described above, it is unfortunate that there are no experimental studies in which children are randomly assigned into a treatment group that is placed into day care and into a control group which is not. However, there are a range of randomized control trials in which child care subsidies are part of a package of benefits given to a treatment group and withheld from a control group. These experimental studies are summarized in Table 2. These types of trials were carried out in the 1990s as part of states' experimentation with welfare reform, prior to the federal Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA). The goal of PRWORA and the demonstrations that preceded it were to transition women off of welfare by emphasizing "work first." The demonstrations experimented with different programs to investigate what types of welfare-to-work services worked best. These experimental services typically incorporated carrots (earnings supplements), sticks (mandatory employment services and welfare time limits) or both in order increase mothers' labor force participation. Given this emphasis on maternal employment, an important component to most of these experiments was expanded child care assistance, in the form of such things as subsidies and direct payments to provider, and increased access to information and help with bureaucratic hurdles. Typically, there was an emphasis on formal care, especially center-based care.

All of the demonstrations were successful in pulling mothers into the labor force and increasing their earnings[5]. However, not all programs increased family income, since in some cases earnings gains were matched by decreases in benefit payments. Only the programs that included earnings supplements uniformly increased income. Perhaps not surprisingly, given the uniform increases in maternal employment, the use of child care also increased. No serious negative impacts on children appear for the experimental group, although for some age groups in some demonstrations there are small increases in problem behavior. There also do not appear to be many important positive effects, although there are some indications of small increases in academic outcomes, especially for the children who were the youngest at the start of the demonstration. The biggest impacts on cognitive development appear in programs which increase family income. Given that the use of center-based care increases strongly with income, it is difficult to sort out how much of the observed positive effects are due to higher income versus more exposure to center-based care. Recall that observational studies based on the NICHD data found a positive correlation between cognitive development and high quality center-based care.

In thinking about whether it is possible that subsidizing child care might improve child outcomes purely by the increase in family income achieved via a working mother, it is important to consider the literature on the effect of family income on children. Poor outcomes observed for children living in poverty are often pointed to as an indication that higher family income can improve children's outcomes. However, a range of recent studies have cast doubt on the idea that there is a causal effect of income. For example,

[5] This discussion of the programs as a whole is based mainly on the summary study of Morris, Gennetian and Duncan (2005), but also draws from the individual program studies referenced in Table 2.

Blau (1999) concludes that the effect of current income on child development is very small, and that while changes in permanent income are larger, they are still not meaningful in a policy sense. That is, politically infeasible income transfers would be necessary to have any important effects on child development. Mayer (1997) comes to similar conclusions. Additionally, Dooley and Stewart (2004) use econometric methods similar to Mayer and to Blau (family fixed effects, including future income, instrumental variables, etc.) on Candian data and also discount the importance of family income as a causal mechanism for child development. Finally, and perhaps most convincingly, Sacerdote (2007) examines outcomes for Korean adoptees who were essentially randomly placed with families beginning in the 1950s. He found no significant effect of family income on any of the adult adoptees' outcomes (education levels, income, etc.). Note that for their non-adopted siblings, there was a significant effect of income. Thus, it does not appear that any significant returns to subsidized child care would come purely via the transmission of parental income to child income as an adult.[6]

## V. Discussion and Extensions

Despite the limited evidence on the causal impacts of child care on children's developmental outcomes, the Child Care and Development Fund (CCDF) made $5 billion in Federal funds available in fiscal year 2008 to States, Territories and Tribes.[7] As seen in Figure 1, Federal CCDF spending is only a part of total spending on child care, with

[6] Note that in Sacerdote (2007) the transmission coefficient from family income to child adult income is 0.246 and significant for biological children, but only 0.186 and insignificant for adopted children. At best then, we would expect a 10 percent increase in parental income to increase future adult income by only about 2 percent.

[7] Information from the CCDF website at http://www.acf.hhs.gov/programs/ccb/ccdf/index.htm

over 50 percent of funding coming from State funds (Matching and Maintenance of Effort (MOE) for CCDF, excess State TANF MOE funds), and TANF funds (direct and transfer to CCDF). Figure 2 shows that government spending on child care has risen dramatically over time, more than tripling since 1996.

States are required to spend at least 4 percent of their CCDF allocation on "quality activities" meant to increase the provision and use of quality child care (CCDF Report to Congress). Among other things, quality activities can include such things as providing training to providers, increasing provider compensation, and providing consumer education. Quality activities can also involve programs that are better categorized as early learning programs that are discussed in the child development chapter.

As might be surmised from the large increase in child care spending since the beginning of welfare reform, a major governmental interest in child care is allowing single mothers to enter the work force, while still insuring that their children are cared for in a safe environment. Based on experimental evidence from welfare-to-work demonstrations, it seems safe to conclude that child care used in this manner does no harm to children, and those placed in center-based care may even see slight benefits. However, the small positive impacts on academic achievement seen in some demonstrations may not be due solely to increased use of center-based care, but rather to the combination of changes engendered by the move from welfare to work. Additionally, the positive aspects of center-based care may be less due to the type of care than the quality. That is, center-based care may be much more likely to implement early learning activities that are specifically designed to positively impact children's development.

Given that our main evidence on the impacts of child care come either from observational studies that are contaminated by self-selection into child care, or welfare-to-work demonstrations that confound child care effects with other program effects, it would be useful to implement randomized control trials geared specifically at child care. Within the context of TANF, for example, mothers could be randomly assigned to use center-based care or not to determine if it is type of care, per se, that matters. Since the observational studies provide evidence of the importance of quality measures, it would be worthwhile to implement randomization on this dimension. One possibility might be to experiment at child care centers with changes in child-staff ratios, group sizes, provision of additional caregiver training, etc. Randomization into treatment and control centers (or care groups within a center) would need to be carefully done to convincingly maintain comparability.

Based on current evidence, however, it does not seem that spending on child care itself can be considered a front-line approach to poverty fighting. Conditional on the fact that children will be in non-parental care, however, spending on quality may pay dividends. The unanswered question is whether quality improvements that do not reach the level of actually being child development programs would be worth the cost. It is here that carefully done experiments on the relatively straightforward aspects of quality highlighted in observational studies such as those from the NICHD would be quite useful.

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Table 1: Non-Experimental Studies of Child Care (Review Papers and Selected Studies)

| Study | Evaluation Design | Sample | Outcomes | Effects |
|---|---|---|---|---|
| Waldfogel (2002) - review of Desai et. al (1989); Baydar and Brooks-Gunn (1991); Belsky and Eggebeen (1991); Blau and Grossberg (1992); Vandell and Ramanan (1992); Parcel and Menaghan (1994); Greenstein (1995); Harvey (1999) ; Han et. al. (2001); Waldfogel et. al. (2000); Ruhm (2000) | Literature Review | NLSY several cross-sections of mainly preschoolers; one cross-section of 2nd graders, one cross-section of 12 yr-olds; several longitudinal studies of children up to age 8. | Cognitive outcomes including PPVT-R, PIAT-Reading, PIAT-Math test scores; behavioral outcomes measured by BPI. | Majority of studies find negative effects on cognitive outcomes, behavior. A small number of studies find insignificant effects on outcomes. Some evidence that negative effects are not significant for minority groups. |
| Waldfogel (2002) - review of NICHD Early Child Care Research Network (1996, 1997, 1998, 1999, 2000) | Literature Review | NICHD study children through age 3 | Language comprehension, school readiness, language skills, problem behaviors. | High quality care associated with better cognitive skills and school readiness, fewer problem behaviors |
| Bernal (2005) | Estimation structural model of employment and child care | NLSY children age 5, 6 and 7 | PPVT, PIAT-Reading, PIAT-Math | FT care over first 5 years leads to 10.4% reduction in test scores. |
| Baker, Gruber, Milligan (2005) | Natural experiment of Quebec providing $5 a day child care. | NLSCY children ages 0 to 4 and 6 to 11 years old. | Behavioral outcomes including hyperactivity, anxiety, aggression; developmental outcomes including motor & social development score, PPVT; health outcomes including overall, injuries, asthma | Positive impacts on problem behaviors; negative impact on motor and social development; negative impacts on good health; no significant effect on PPVT. |

Table 1 Continued: Non-Experimental Studies of Child Care (Review Papers and Selected Studies)

| Study | Evaluation Design | Sample | Outcomes | Effects |
|---|---|---|---|---|
| Baker and Milligan (2008) | Natural experiment of Canada extending maternity leave to 1 year | NLSCY children age 6 to 29 months old. | Child temperament (irritability, crying, etc.); security (response to new things, overall difficulty, etc.); development (motor/social score, age sat up, age took first step); | Little impact of increased maternal care found on children's outcomes. |
| Brooks (2002) | Comparison of low-income mothers in Georgia receiving child care subsidies with those left on a waiting list. | 52 families with subsidies and 50 demographically matched families on a waiting list. | School readiness, personal maturity scale, general health. | No significant differences between groups. |

Table 2: Experimental Studies with a Child Care Component

| Study | Intervention | Evaluation Design | Sample | Outcomes | Effects |
|---|---|---|---|---|---|
| Bloom et. al. (2000) | Florida's Family Transition Program (FTP) 1994 - 1999 | Random assignment into FTP versus standard AFDC | Four-year follow-up of 2800 single parents; children who were age 0 to 4 initially are split 331/325 for FTP/AFDC | Parental outcomes of employment, family income, welfare receipt; child outcomes of child care, academic functioning, social behavior and emotional well-being, health and safety | FTP increases employment and earnings, reduces welfare receipt. More child care, more hours and more stable arrangements. No impact on quality of care.<br><br>Few significant impacts on child development. |
| Gennetian, Miller and Smith (2005) | Minnesota Family Investment Program (MFIP) 1994 - 1999 | Random assignment into MFIP versus standard AFDC | Six-year follow-up of 3554/3848 (MFIP/AFDC) single parent and 1109/1147 two-parent households. Focus here on single parent effects, where increased child care was observed during program years. | Parental outcomes of employment, family income and welfare receipt; child outcomes of 3rd and 5th grade math and reading achievement | MFIP increased employment, earnings and welfare receipt through 4 years; No overall impacts, but .2 std. dev. increase in 3rd grade reading for long-term welfare recipients, .4 std. dev. for reading and .5 std. dev. for math in 5th grade for the most disadvantaged. |

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Table 2 Continued: Experimental Studies with a Child Care Component

| Study | Intervention | Evaluation Design | Sample | Outcomes | Effects |
|---|---|---|---|---|---|
| Miller et. al. (2008) | Milwaukee's New Hope Project 1994 - 1998 | Random assignment into New Hope versus standard AFDC | Eight-year follow-up of 366/379 (New Hope/AFDC) families with child age 1-10 at enrollment. | Parental outcomes of employment, family income, welfare receipt; child outcomes of child care, academic functioning, social behavior and emotional well-being, health and safety | New Hope increased employment and income, impacts fade at program end; more time in center-based care, care more stable; .12 std. dev. increase in reading scores; more positive parent-reported behavior, teachers report more problem behavior for girls; no health impacts. |
| Michalopoulos et. al. (2002) | Canada's Self-Sufficiency Project (SSP) 1992 - 2002 | Random assignment into SSP versus standard Income Assistance | 36-month and 54-month follow-ups of children from 9000 single parent Income Assistance recipients in British Columbia and New Brunswick. | Parental outcomes of employment, family income, welfare receipt; child outcomes of child care, academic functioning, social behavior and emotional well-being, health and safety | SSP increased FT employment and earnings through the 4$^{th}$ year; increased use of non-maternal care, increased instability for 3-4-yr-old care; no impact on outcomes for those 1-2-yrs old at intake, .1 increase in portion of math skills questions correct for those 3-4 yrs old. |

Table 2 Continued: Experimental Studies with a Child Care Component

| Study | Intervention | Evaluation Design | Sample | Outcomes | Effects |
|---|---|---|---|---|---|
| Bloom et. al. (2002) | Connecticut's Jobs First 1996 - 1999 | Random assignment into Jobs First versus standard AFDC | Three-year follow-up of 2381/2392 (Jobs First/AFDC) welfare applicants and recipients | Parental outcomes of employment, family income, welfare receipt; child outcomes of child care, academic functioning, social behavior and emotional well-being, health and safety | Jobs First increased employment and earnings; increased use of child care; positive effects on children's behavior; no effect on academic outcomes. |
| Freedman et. al. (2000) | Los Angeles Jobs-First GAIN (LA GAIN) 1995 – 1998 | Random assignment into LA GAIN versus standard AFDC | Two-year follow-up of 15,683 single parent and 5,048 two-parent families. | Parental outcomes of employment, family income, welfare receipt; child outcomes of child care, academic functioning, social behavior and emotional well-being, health and safety | LA GAIN increased employment and earnings; increased use of child care (formal and informal) and problems with child care; no systematic effects on child outcomes, but some evidence of increased grade repetition for the youngest children. |

(continued . . . )

Table 2 Continued: Experimental Studies with a Child Care Component

| Study | Intervention | Evaluation Design | Sample | Outcomes | Effects |
|---|---|---|---|---|---|
| Hamilton et. al. (2001) | National Evaluation of Welfare-to-Work Strategies (NEWWS) 1991 - 1999 | Evaluation of 11 different programs, all with random assignment into program versus standard AFDC. | Five-year follow-up of 40,000 single parents and their children across 7 locations. | Parental outcomes of employment, family income, welfare receipt; child outcomes of child care, academic functioning, social behavior and emotional well-being, health and safety | Increases in employment and earnings, smaller for education-focused programs, mandate enforcement necessary for impacts; increases in child care use fade over time as employment effects fade; few impacts on academic outcomes, some gains in social skills and behavior; impacts vary greatly across programs |
| Quint, Bos and Polit (1997) | New Chance 1989 – 1992 | Random assignment of mothers age 16-22 into New Chance versus standard AFDC | Three-year follow-up of 1401/678 (treatment./control) mothers. | Parental outcomes of employment, family income, welfare receipt; child outcomes of child care, academic functioning, social behavior and emotional well-being, health and safety | Short-term increase in employment, no increase in earnings; more use of center care in first 1.5 years, few care differences in second 1.5 years; no impact on cognitive development; some evidence of more behavioral problems |

(continued . . .)

Table 2 Continued: Experimental Studies with a Child Care Component

| Study | Intervention | Evaluation Design | Sample | Outcomes | Effects |
|---|---|---|---|---|---|
| Morris, Gennetian and Duncan (2005) | Next Generation Project | Meta-Analysis of 7 random assignment studies (FTP, MFIP, New Hope, SSP, CT Jobs First, LA GAIN, NEWWS) | 27,180 observations from 15,779 children age 2 – 9 years old at random assignment from 11, 502 families. | Cognitive outcomes and school achievement | Positive improvements in school achievement (.05 std. dev. if age 2-3 at start, .07 if 4-5) appear due to increased income (since mainly seen in programs with an earnings supplement component); some possibility that increased center-based care can impact school achievement |