

**High Labor Force Attachment, but Few Social Ties? Life-Course Predictors of Women's  
Receipt of Childcare Subsidies**

**by**

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## Abstract

The U.S. federal Child Care and Development Fund (CCDF) childcare subsidy represents the largest source of means-tested assistance for U.S. families with low incomes. The CCDF subsidy aims to help mothers with low incomes gain employment and education, with implications for women's labor force participation, and the wellbeing of their children. Because recipients of the CCDF subsidy are either already employed, or seek the subsidy with the goal of gaining employment or schooling, this group may represent the public assistance recipients who are best able to succeed in the low-wage labor market. However, existing research on the CCDF observes recipients only after they begin receiving the subsidy, thus giving an incomplete picture of whether recipients may select into subsidy receipt, and how subsidy receipt is situated in women's broader work and family trajectories. My study links administrative records from the CCDF to the American Community Survey (ACS) to construct a longitudinal data set from 38 states that observes CCDF recipients in the 1-2 years before they first received the subsidy. I compare women who subsequently received the CCDF subsidy to other women with low incomes in the ACS who did not go on to receive the subsidy, with a total of roughly 641,000 individuals. I find that CCDF recipients are generally positively-selected on employment history and educational attainment, but appear to have lower levels of social support than non-recipients.

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\* Any opinions and conclusions expressed herein are those of the authors and do not necessarily reflect the views of the U.S. Census Bureau. All results have been reviewed to ensure that no confidential information is disclosed. The statistical summaries reported in this document have been cleared by the Census Bureau's Disclosure Review Board release authorization number CBDRB-FY18-373.

## INTRODUCTION

Since the welfare reforms of the 1990s, the Child Care and Development Fund (CCDF) has been central to U.S. policy on families with low incomes. With the new emphasis on work under the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996, the CCDF was expanded to provide child care subsidies that would enable mothers with low incomes to move off of welfare and into employment (Gornick and Meyers 2003). As of 2015, the CCDF serves approximately 852,900 families and 1.4 million children per month (U.S. Administration for Children and Families 2015). With a mission that is directed specifically at promoting employment—and average payment amounts exceeding the typical monthly value of payments from both Temporary Assistance for Needy Families (TANF) and the Supplemental Nutrition Assistance Program (SNAP) (Ha and Meyer 2010)—the CCDF is a substantial component of U.S. public assistance policy.

The CCDF subsidy can have far-reaching effects on the lives of its recipients, not only affecting whether mothers are able to work for pay (Tekin 2005), but also influencing the type and quality of care their children receive (Johnson and Ryan 2015). Because recipients of the CCDF subsidy are either already employed, or seek the subsidy with the goal of gaining employment or schooling, this group may represent the public assistance recipients who are best able to succeed in the current low-wage labor market. Whereas TANF recipients on average have very low educational attainment and little work experience (Bloom, Loprest and Zedlewski 2011), evidence suggests that CCDF mothers are more likely to be working (Tekin 2005) and enrolled in school (Blau and Tekin 2007) than eligible non-recipients. These same characteristics may also enable CCDF-recipient mothers to provide more cognitively-stimulating home

environments for their children than other mothers with low incomes (Evans 2004). However, most existing research on CCDF recipients is limited by the fact that the data used to study them observes respondents only during or after they have begun to receive the subsidy (Blau and Tekin 2007; Grobe, Weber and Davis 2008). Based on previous studies, it is thus difficult to disentangle the initial characteristics of recipients themselves from the effects of the subsidy, or to understand how women's receipt of the subsidy is situated relative to other life events and circumstances—such as school exit, childbearing, and labor force entry, and women's connections to partners, family, and their broader communities. In addition, much existing research on CCDF mothers focuses on subsidy recipients in only a small number of states (Ha 2009; Forry and Hofferth 2011), or uses data from the late 1990s and early 2000s that is now somewhat out of date (Tekin 2005; Blau and Tekin 2007).

The present study takes a life course approach to investigate the characteristics of CCDF recipients in the 1-2 years *before* they receive the subsidy. I use CCDF administrative records linked to the American Community Survey (ACS) from 38 states to construct a longitudinal data set of women with household incomes below the state-level threshold for CCDF eligibility. I compare women who subsequently received the CCDF subsidy to those who did not go on to receive the subsidy. I consider women's receipt of the CCDF subsidy in the context of their broader family, work, and educational trajectories. I observe both women who had already begun childbearing when they were surveyed in the ACS and those who had not. My estimates cover the years 2001-2010.

I find that women who go on to receive the CCDF subsidy are generally positively-selected on their work experience and educational attainment relative to other women with low incomes. Women with a high school diploma or some college, and those who were enrolled in

school were more likely to go on to receive the subsidy, as were those who were employed when observed in the ACS, and who worked mostly fulltime in the prior year. However, women who go on to receive the CCDF subsidy appear to have relatively low levels of social support.

Women who were unmarried, and lived with no other adults were more likely to subsequently receive the subsidy. The present study offers new insight into the characteristics of this unique population, by illuminating how receipt of childcare subsidies fits in to women's social relationships and life-course trajectories. It contributes to a broader research agenda on how public assistance recipients are faring in the low-wage labor market (Wood, Moore and Rangarajan 2008).

## CHILDCARE AND MOTHERS' EMPLOYMENT

A stated goal of the welfare reforms of the 1990s was to incentivize work among mothers with low incomes (Loprest, Schmidt and Witte 2000). PRWORA replaced the Aid to Families with Dependent Children (AFDC) cash entitlement program with the time-limited TANF, and the Earned Income Tax Credit (EITC), payable to working individuals with low wages. In the absence of the AFDC entitlement, mothers with low incomes (who are largely also single mothers) must rely primarily on their own employment to support their children. However, mothers who seek public assistance often face challenges to finding and maintaining stable, well-paying employment (Pavetti and Acs 2001). Mothers with low incomes are more likely than their higher-income counterparts to have low educational attainment and disabilities (Urban and Olson 2005). TANF recipients in particular also are more likely to lack prior work experience, and to face physical and mental health challenges (Bloom, Loprest and Zedlewski 2011).

The cost of childcare is a major practical barrier employment for mothers with low incomes (Henly and Lyons 2000). Families with low incomes struggle to find care that is affordable, safe, nurturing, and developmentally stimulating, and must spend a higher percentage of their household incomes on childcare than higher-income families (Chaudry 2006). The cost of child care competes with basic needs such as food and housing (Shlay et al. 2004), as well as other costs of employment, including transportation, clothing, and grooming (Edin and Lein 1997; Ciabattari 2007). For mothers with low incomes, employment stability is more sensitive to the cost of care than higher-income mothers' (Hofferth and Collins 2000). This difficulty finding employment is likely magnified in the context of the U.S. labor market, in which steady, well-paying "good jobs" are increasingly the province of more-educated workers (Kalleberg, Reskin and Hudson 2000).

## CCDF SUBSIDY AND RECIPIENTS

The CCDF subsidy is designed to offset the cost of childcare, thus enabling mothers with low incomes to gain employment, job training and education (Minton et al. 2014). The program is funded by a federal block grant, and administered at the state level. It makes childcare subsidies available to families with children aged 12 and under, and household incomes at or below 85 percent of their state's median income (SMI). The CCDF allows parents to choose their preferred care provider from among available market options. Parents can place their children in center-based care, family daycare, or opt for care from babysitters or relatives. Compared to otherwise similar young children whose families do not receive the subsidy, CCDF children receive higher-quality care (Johnson and Ryan 2015), and have more-stable care arrangements

(Chaudry 2006). When observed at older ages, they are less likely to be held back in elementary school, suggesting there may be cognitive benefits of receiving subsidized care (Shattuck 2017).

Evidence to date shows that once they begin receiving the subsidy, CCDF recipients have better labor force outcomes than women with low incomes who do not receive the subsidy. Relative to otherwise similar non-recipient mothers, current CCDF recipient women are more likely to be employed (Tekin 2005), and to be enrolled in school (Blau and Tekin 2007). CCDF recipients have higher earnings after receiving the subsidy (Zanoni and Weinberger 2015), with effects that are more pronounced with longer periods of subsidy recipiency (Ha 2009). While receiving the subsidy, CCDF recipients also had fewer work disruptions due to child care instability than mothers with low incomes who did not receive the subsidy (Forry and Hofferth 2011).

Despite the seemingly positive effects of the subsidy, however, uptake is relatively low. It is estimated that only about 15 percent of eligible children (Blau and Tekin 2007) and 28 percent of welfare-leaving mothers (Schumacher and Greenberg 1999) receive the subsidy at a given time, while about 30 percent of eligible families have ever received it (Layzer and Burstein 2007). Some of this low uptake is due to state-level restrictions on the availability of funds (Minton et al. 2014). Many states are unable to serve all eligible families, and so must do some combination of freezing funds, maintaining waiting lists, or setting eligibility thresholds below 85 percent of the median income (Blau and Tekin 2007). However, the effort required to apply for and maintain eligibility for the subsidy is typically substantial, and navigating eligibility rules and bureaucratic hurdles is often frustrating and confusing (Adams, Snyder and Sandfort 2002; Grobe et al. 2008).

Existing evidence on the characteristics of parents who use non-parental care overall, and of those who receive the CCDF subsidy, suggests that these two overlapping sets of individuals are likely positively-selected on human capital characteristics. Mothers who choose non-parental care on average have higher educational attainment than those who do not (Huston, Chang and Gennetian 2002; NICHD Network 1997). Studies that observe women after beginning receipt of childcare subsidies indicate that relative to otherwise similar single mothers, those who receive the subsidy have more adults in their households (Zanoni and Weinberger 2015); they are also more likely to be high school graduates (Blau and Tekin 2007) and have fewer children (Ha 2009) than non-recipients. CCDF recipients who participate in the program for relatively longer spells are more likely to have stable housing (Grobe et al. 2008), better English language ability (Adams et al. 2002), higher earnings, and more work experience (Ha 2009). They are less likely to receive TANF (Grobe et al. 2008; Ha and Meyer 2010), and less likely to have a disability (Ha 2009) than otherwise similar single mothers who do not receive the subsidy.

### *Life Course Significance of CCDF Recipiency*

Most studies to date observe CCDF recipient women only *after* they have begun receiving the subsidy, comparing them to other women who have never received it. Zanoni and Weinberger (2015) observe baseline characteristics of CCDF-recipient women in the first quarter of recipiency. To my knowledge, no studies to date have investigated the characteristics of CCDF recipients *before* they receive the subsidy. Previous studies have used statistical techniques to parse out aggregated selection effects from the effects of the subsidy itself on women's employment outcomes during and after subsidy receipt (Blau and Tekin 2007). However, no studies to date have been able to make a detailed prospective comparison of CCDF

recipients to non-recipients, nor to identify which characteristics are associated with greater or lesser likelihood of subsequent subsidy receipt. In addition, research to date provides an incomplete picture of how receipt of the CCDF subsidy may fit into a woman's life course with respect to work and family formation events, and her relationships with other adults (Elder 1994). It is thus unclear how beginning receipt of the CCDF subsidy is sequenced relative to the timing of childbearing, pursuing education or leaving school, and entry into fulltime or part-time employment, or how connections (or lack thereof) to partners, family, friends, and communities may either enable receipt of the CCDF subsidy or minimize the need for it.

To address this knowledge gap, the present study observes women who received the CCDF in the 1-2 years *before* they received the subsidy, comparing them to women who did not go on to receive the subsidy, across an array of educational, work and family characteristics. An additional limitation of existing research on CCDF recipient women is that studies have largely been confined to one- or few-state data samples (Lee et al 2004; Zanoni and Weinberger 2015), or use national-level data sets from 1990s and early 2000s (Tekin 2005; Blau and Tekin 2007). In contrast, the present study uses a data set from 38 states, and generates estimates for more recent years, covering 2001-2010.

## DATA AND METHODS

### *Data File Construction*

I use CCDF administrative records from the years 2003-2011, and the American Community Survey (ACS) for the years 2001-2010.<sup>1</sup> The ACS is an annual cross-sectional sample survey with information on the demographic, social, economic and housing characteristics of the U.S. household population.<sup>2</sup> The CCDF file contains monthly information about families that received the CCDF subsidy between October 2003 and September 2011, with children born in the years 1997-2011. I limit both the CCDF and ACS files to the thirty-seven states, plus the District of Columbia (DC), that submitted their full file of information to the U.S. Department of Health and Human Services' Administration for Children and Families, which administers the CCDF. I exclude the remaining thirteen states that submitted only a sample file. Excluding these sample states ensures that I will not mistakenly identify CCDF recipients who appear in the ACS, but who were not sampled in their state's CCDF file, as being non-recipients. I limit the CCDF file to include mothers who received the subsidy because of the recipient adult's employment and/or schooling. I designate the date when the mother was first observed in the CCDF file either by using the "start date" variable listed in the file, or, if this is missing, the month when the family first appears in the file. A limitation of this measure is that due to inconsistencies in the "start date" variable, and to the fact that some families cycle in and out of the subsidy, some unknown number of these start dates may be incorrectly late, particularly those first observed in 2003 and 2004. However, these errors are likely to be few and minor (Davis, Grobe and Weber 2012).

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<sup>1</sup> This file includes data from both the large-scale demonstration phase of the ACS (2001-2004) and the full implementation of the survey (2005-2010). See Torrieri et al. 2014. I use data on the household population only, excluding individuals in group quarters.

<sup>2</sup> For more information about the American Community Survey, visit <https://www.census.gov/programs-surveys/acs/>

I use information from the ACS to observe mothers from the CCDF file in the 1-2 years before they began receiving the CCDF subsidy. I link the CCDF file to the ACS using a unique, anonymized, protected identifier that is assigned to adults in the CCDF file, and to individuals of all ages in the ACS. This identifier is assigned based on a combination of individuals' social security number and other personally identifiable information (PII). PII is removed from the data files before researchers can use them for research (Wagner and Layne 2014). Among CCDF parents, 100 percent received the unique identifier, and thus could potentially link to the ACS. Approximately 90 percent of ACS respondents received the unique identifier. Younger, and minority individuals are less likely to receive the unique identifier (Bond et al. 2014). I therefore adjust the survey weights I use in generating my estimates for the probability of receiving the identifier based on respondents' observed age and race/ethnicity.

I designate as CCDF subsidy recipients those individuals in the ACS who match to the CCDF file. I designate as non-recipients the individuals in the ACS who do not match to the CCDF file. I exclude from my data file those mothers from the CCDF file who do not match to the ACS. I limit the final linked file to include only women whose total household incomes as measured in the ACS were at or below the specific CCDF income eligibility threshold for their state of residence, as indexed to the poverty line (Minton et al. 2013).

[TABLE 1 ABOUT HERE]

Table 1 shows the years and ages when CCDF-recipient mothers were observed in the ACS and the years they were first observed in the CCDF file, by the birth years of their children. For example, women whose children were born in 1997 and were aged 15-45 in 1997 would be

aged 19-49 in 2001. Similarly, women whose children were born in 2011 would have been aged 13-43 in 2009, and so forth. Among CCDF recipient women, I separate out women who were and were not already mothers when they were observed in the ACS. I designate as current-mothers those women whose CCDF-recipient children (i.e. children who are observed in the 2004-2011 CCDF file) had already been born when the women were observed in the ACS. I also designate as current-mothers CCDF-recipient women whose CCDF-recipient children were not yet born, but who were observed in the ACS with children in their households who were between 15 and 45 years younger, and who appear to be their children.<sup>3</sup> I designate as non-mothers those women whose CCDF-recipient children were not yet born at the time that the women were observed in the ACS, and did *not* have children living in their households who could belong to them when they were observed in the ACS.

I compare CCDF-recipient women to female ACS respondents who *do not* appear in the CCDF administrative records, and thus can be inferred *not* to have gone on to receive the CCDF subsidy. I select this comparison group of women to match the ages of CCDF-recipient women in a given year of the ACS file, and the years of these women's (prospective or actual) children's births, as outlined in Table 1. To compare to CCDF recipients who were already mothers when they were observed in the ACS, I select ACS respondent women who had children (as described above) with the same birth years as the CCDF-recipient children—i.e. mothers of children in the same birth cohorts as CCDF-recipient children. To compare to CCDF recipients who had not yet had children when they were observed in the ACS, I select ACS respondent women who would

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<sup>3</sup> The majority of these mother and child pairs are explicitly labelled as mother and child on the ACS household relationship variable. In doubled-up households in which a woman and child's relationship appears only relative to the "householder" reference person and not to each other, I rely on their relationship to the householder to make this determination (e.g. I would designate a woman and child who are the daughter and grandchild of the householder as being mother and child in relation to each other).

be of childbearing ages (ages 15-45) in the years when the children of the CCDF-recipient mothers were subsequently born, but who had no children when they were observed in the ACS—i.e. prospective mothers of children in the same birth cohorts as CCDF children.

### *Variables*

My outcome variable is a binary measure of whether or not a woman received the CCDF subsidy in the 1-2 years after being observed in the ACS. Again, this variable is measured by the woman's presence or absence in the CCDF file beginning 1-2 years after she was observed in the ACS.<sup>4</sup>

All independent variables are measured in the ACS. They are as follows. To capture women's connection to welfare benefits, I measure current receipt of public assistance, according to a self-report of whether the individual receives assistance from the Supplementary Nutrition Assistance Program (SNAP) or cash public assistance. I measure marital status with the three categories of married, widowed/divorced/separated, and never-married; I treat marital status as one measure of within-household social support and access to other potential adult caretakers for children. Other measures capturing the respondent's living situation and other potential sources of informal child care are as follows. I measure whether a woman lives in a doubled-up household, defined as living in a household with other subfamilies and/or one or more adults who are not a woman's spouse or partner. I measure whether there is one or more other adult aged eighteen or above living in the woman's household, including spouses and partners. I capture women's housing stability with a measure of whether or not the householder moved into

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<sup>4</sup> A limitation of this measure of CCDF reciprocity specifically among women who are not mothers when they are observed in the ACS is that for this group the outcome variable captures both subsequently having begun childbearing *and* having received the subsidy. Women who postponed childbearing past the next 1-2 years may have different characteristics from women who had their first births in that time.

his or her current residence in the past six months, as a binary variable. Roughly 63% of women in the data file are the householder and roughly 34% are the spouse or partner of the householder. Thus, while not a perfect measure of women's own move dates, this measure is likely accurate for the majority of women. Among women who have children when they are observed in the ACS, I measure the age of their youngest child, and the total number of children in the household.

Measures capturing dimensions of human capital that are directly relevant to employment are as follows. I measure educational attainment with the four categories of less than high school, a high school diploma, some college, or a bachelor's degree or more. Measures of respondents' recent experience with the activities the CCDF is designed to promote—namely employment and schooling—are as follows. I measure whether the respondent is currently in school. I measure whether the respondent was employed (either fulltime or part-time) in the previous week. I additionally measure respondent's fulltime employment status as follows: worked mostly fulltime in the past year, worked mostly less than fulltime in the past year, and did not work for pay in the past year.

I measure race/ethnicity, with the categories of non-Hispanic White, non-Hispanic Black, non-Hispanic Asian, non-Hispanic Other (including American Indian/Alaska Native, Native Hawaiian/Pacific Islander, some other race, and multiple races), and Hispanic, any race. I measure whether or not the respondent is foreign-born. I measure English language ability as a binary variable capturing whether the respondent speaks English only or very well versus poorly or not at all. I measure respondents' age when they are observed in the ACS, as well as the year they are observed in the ACS. Finally, I measure respondents' household income when they are observed in the ACS, although I include this measure in descriptive statistics only.

## *Analyses*

I first use descriptive statistics to compare the characteristics of women who did and did not go on to receive the CCDF subsidy, broken down by whether or not a woman had children when she was observed in the ACS. I next estimate a two-level logistic regression model of the likelihood that a woman will go on to receive the CCDF subsidy with state-level random intercepts (Raudenbusch and Bryk 2002). I estimate this model separately among women who had children when they were observed in the ACS, and among those who did not have children when they were observed in the ACS. I then pool these two models to test for statistical significance of the difference of results between these two groups. The level-one unit of analysis in this regression model is the woman. Women are nested within states of residence. Random intercepts account for unmeasured state-level differences in administration of the CCDF subsidy (Minton et al. 2014) and other unmeasured differences between states.

This regression model can be expressed in two equations. In the level-one equation, the log odds of receiving the subsidy for the  $i$ th woman in the  $j$ th state is estimated as a function of the state-specific intercept  $\beta_{0j}$ , and the woman's characteristics  $X_{ij}$ . I also include a measure  $\beta_3 P_j$  of whether—in the period when a woman could have been observed in the CCDF file based on the ages of her children (see Table 1)—CCDF administrators in the woman's state of residence maintained a waiting list, or froze enrollment, due to a shortage of funds (Schulman and Blank 2004-2011). This latter variable captures constraints on women's likelihood of receiving the CCDF subsidy that is independent of their own characteristics, eligibility, or any efforts they may make to receive the subsidy. In this model, only the state intercept varies by state; other

slopes for individual-level variables and the state-level measure of waiting lists and/or frozen enrollment do not vary.

$$\text{Log}(p_{ij} / 1-p_{ij}) = \beta_{0j} + \beta_2 X_{ij} + \beta_3 P_j \quad (1)$$

In the level-two equation, each state intercept is estimated as the overall intercept, or grand mean  $\gamma_{00}$  plus the deviation of the individual state mean from the grand mean  $\mu_{0j}$ .  $\mu_{0j}$  is assumed to be normally distributed with a mean of 0 and a variance of  $\tau_{00}$ .

$$\beta_{0j} = \gamma_{00} + \mu_{0j}, \mu_{0j} \sim N(0, \tau_{00}) \quad (2)$$

I first estimate an unconditional random-intercept model to ascertain that there is indeed state-level variation in whether or not a woman receives the CCDF subsidy. I next separately estimate a model with individual-level predictors only. I add the individual-level predictors to the model that includes state-level intercepts. Finally, I add the state-level measure of constraints on enrollment due to availability of funds. As discussed above, I weight my estimates with ACS person weights that have been adjusted for the number of years in the pooled file and for ACS respondents' inverse probability of receiving the anonymous unique identifier I use for record linkage.

I present the regression model described above aggregated over all 38 states in the sample: this is my main multivariate analysis, which I present in Table 3 and discuss in detail in the Results section below. As a sensitivity check on the robustness of these main results, I also present the same model, but further break down the sample according to three key dimensions of

state-level difference in eligibility rules. I present these sensitivity-check models in Appendix Tables 1 and 2, and also discuss them below.

## RESULTS

[TABLE 2 ABOUT HERE]

Table 2 shows the descriptive characteristics of women who did and did not go on to receive the CCDF subsidy, broken down by whether or not they had children at the time when they were observed in the ACS. For brevity, I refer below to women who went on to receive the CCDF subsidy after they were observed in the ACS simply as having “received” the subsidy, and as “CCDF recipients.” Similarly, I refer to those who did not go on to receive the CCDF subsidy as “non-recipients.” Most differences between women who did and did not receive the subsidy are statistically significant; however, I discuss below only those differences that are substantively meaningful.

To summarize, descriptive results in Table 2 show that the characteristics of CCDF recipients differed systematically from other income-eligible women who did not go on to receive the CCDF subsidy. CCDF recipients were overall less materially-advantaged than non-recipients. Relative to non-recipients, CCDF recipients were on average younger, had lower incomes, and included higher percentages who lived in households receiving welfare benefits. Relative to non-recipients, CCDF recipients also appear less connected to other adults who might serve as social support, and potentially help with childcare (e.g. husbands, coresidential partners, roommates, relatives or neighbors). CCDF recipients’ apparently lower social support may mean

that women who go on to receive the CCDF subsidy do so in part because they must use paid childcare in order to access care for their children, whereas non-recipient women may have easier access to unpaid care. This interpretation is consistent with previous research that finds that women with low incomes who avoid using welfare benefits are able to do so because they have strong social support networks on which they can rely (Edin and Lein 1997). CCDF recipients had lower educational attainment than non-recipients; however substantially higher percentages of CCDF recipients were enrolled in school relative to non-recipients. CCDF recipients also had higher labor force attachment than non-recipients. This evidence on schooling and employment is consistent with an expectation that CCDF recipients would be positively selected on education and employment history relative to other mothers with low incomes.

Details of the results in Table 2 are as follows. Out of the total group of childless women, 0.3 percent went on to receive the CCDF subsidy in the 1-2 years after they were observed in the ACS. Among women who already had children, 9.4 percent went on to receive the subsidy. Higher percentages of CCDF recipients were receiving SNAP or public assistance when they were observed in the ACS, as compared to non-recipients (40.7 percent versus 26.7 percent among childless women, and 61.0 percent versus 37.0 percent among mothers). This may reflect the fact that in some states, women receiving TANF are automatically enrolled to receive the CCDF subsidy (Minton et al. 2014); CCDF recipients may also learn of the subsidy from SNAP or TANF case workers. There were substantial race/ethnic difference between recipients and non-recipients. Those who received the subsidy included higher percentages of non-Hispanic Black women (49.21 percent versus 20.2 percent among childless women, and 40.9 percent versus 16.4 percent among mothers). CCDF recipients also included lower percentages of non-Hispanic White women (30.2 percent versus 48.2 percent among childless women, and 37.5

percent versus 43.9 percent among mothers) and Hispanic women (16.8 percent versus 25.3 percent among childless women, and 17.7 percent versus 34.3 percent among mothers). Substantially fewer CCDF recipients were foreign-born, at 3.7 percent versus 16.8 percent for childless women, and 6.0 percent versus 28.0 percent for mothers. Higher percentages of CCDF recipients spoke English only or very well, at 99.3 percent versus 92.3 percent among childless women, and 98.0 percent versus 83.2 percent among mothers.

CCDF recipients included higher percentages of women who had never married (81.9 percent versus 65.3 percent among childless women, and 63.4 percent versus 30.0 percent among mothers), and lower percentages who were currently married or divorced, widowed or separated. Among childless women, a lower percentage of CCDF recipients were living in doubled-up households relative to non-recipients (39.3 percent versus 52.2 percent). Among women with children, however, a higher percentage of CCDF recipients were living in a doubled-up household (32.9 percent versus 13.0 percent). This difference between women with and without children may reflect doubling up due to economic necessity among CCDF recipients who already had children. Among both childless women and mothers, lower percentages of CCDF recipients were living with another adult (62.9 percent versus 79.9 percent among childless women and 56.6 percent versus 73.8 percent among mothers). This suggests that before and after having children, CCDF recipients may have had less social support, and less access to individuals who could provide informal child care, than their non-recipient peers. Higher percentages of CCDF recipients had moved in the past six months, at 26.3 percent versus 21.4 percent among mothers and 28.1 percent versus 22.9 percent among non-mothers. This suggests that CCDF recipients may have less-stable housing than women who did not go on to receive the

subsidy, and again by extension that they may have been less able to call on neighbors or other community members for informal child care.

Among both childless women and mothers, CCDF recipients generally had educational attainment concentrated below a Bachelor's degree. Childless CCDF recipients included a higher percentage with less than a high school education (42.1 percent versus 33.1 percent), and lower percentage with some college (23.2 percent versus 26.7 percent). CCDF recipients with children included a higher percentage with a high school diploma (42.2 percent versus 35.8 percent). In both groups, CCDF recipients also included a lower percentage with a Bachelor's degree (2.1 percent versus 9.2 percent for childless women, and 2.5 percent versus 8.9 percent for mothers). Among both childless women and mothers, higher percentages of CCDF recipients were in school when observed in the ACS (46.7 percent versus 35.4 percent among childless women, and 19.5 percent versus 10.2 percent among mothers). For both childless women and mothers, CCDF recipients had stronger attachment to the labor force. Among women with children, CCDF recipients were more likely to have worked for pay in the previous week (51.7 percent versus 44.1 percent). Larger percentages of CCDF recipients had worked mostly fulltime (38.7 percent versus 34.5 percent among non-mothers, and 45.6 percent versus 35.6 percent among mothers). Higher percentages of CCDF mothers had also worked mostly part-time (28.5 percent versus 22.0 percent) in the previous year. Among both groups, smaller percentages of CCDF recipients than non-recipients had not worked for pay in the previous years. Higher percentages of CCDF recipients lived in states with enough available funds for the CCDF subsidy that waiting lists and frozen enrollment were not necessary. Among women with no children, 58.6 percent of CCDF recipients lived in states that did not maintain waiting lists for freeze enrollment, as compared

with 43.1 percent among non-recipients; among women with children, these percentages were 54.6 percent versus 40.4 percent.

CCDF recipients on average were younger than non-recipients when observed in the ACS, with a mean age of 22.7 versus 27.4 among childless women, and 25.3 versus 29.2 among mothers. CCDF recipients were observed slightly earlier on average in the ACS (2004 or 2005 versus 2006). CCDF recipients had lower household incomes, at means of \$23,140 versus \$27,980 among childless women and \$20,150 versus \$23,910 among mothers. Among mothers, CCDF recipients on average had younger children, with a mean age of youngest child at 1.7 versus 2.1. They also had more children, with a mean number of children in their households at 1.8 versus 1.6.

[TABLE 3 ABOUT HERE]

Table 3 shows the results of a random intercept logistic regression model of the likelihood that women will go on to receive the CCDF subsidy in the next 1-2 years, with models stratified by whether or not women had children when they were observed in the ACS. The models include all variables listed above, except household income. I do not include income in the model because when I include income as a covariate, its effect in the model is substantively null. I again stratify the sample by whether or not women had children at the time when they were observed in the ACS. All sociodemographic covariates, and the state-level measure of waiting lists and/or frozen enrollment, are introduced in Model 1, which is identical for mothers and non-mothers. For mothers, Model 2 introduces controls for the number of children in the household and the age of youngest child. To test for statistical significance of differences in the

effects of predictor variables on likelihood of receiving the subsidy for women with children versus women without children, I run a pooled version of Model 1, including both women with children and women without children, and interact all variables in the model with a dummy variable for “has children.” Statistical significance of these differences is presented in the far right column of Table 3. Almost all differences between women with and without children are statistically significant; however, I discuss below only those differences that are substantively meaningful.

Overall results for both women who had no children when they were observed in the ACS, and those who were mothers, are as follows. Women whose households received SNAP or other public assistance were more likely to subsequently receive the CCDF subsidy. Relative to non-Hispanic White women, Hispanic women and non-Hispanic Black and other race women were more likely to receive the subsidy. Non-Hispanic Asian women were less likely to receive the subsidy. Less likely to receive the subsidy were foreign-born women, older women, and those who were observed later in the ACS. More likely to receive the subsidy were women with strong English language ability.

Relative to women with less than high school, women with a high school diploma were more likely to receive the subsidy; women with a Bachelor’s degree were less likely to receive the subsidy. Among non-mothers, women with some college were less likely to receive the subsidy. Among mothers, and after controlling for child characteristics, women with some college were more likely to receive the subsidy. Among women without children, women who were enrolled in school when they were observed in the ACS were less likely to receive the subsidy, likely because women pursuing education were less likely to imminently have a first birth. Among women with children, those enrolled in school were more likely to receive the

subsidy. In aggregate, these results suggests that although CCDF recipients have lower educational attainment on average than those who do not receive the subsidy, after controlling for all other factors, CCDF recipients are somewhat positively-selected on education relative to the broader group of women with low incomes, particularly among those who began childbearing at least 1-2 years before first receiving the subsidy. This educational pattern varies somewhat by state eligibility requirements, which I discuss below.

Reflecting CCDF recipients's seemingly strong labor force attachment, women who worked mostly fulltime in the past year were more likely to receive the CCDF subsidy than those who worked mostly part-time or did not work for pay, among both mothers and non-mothers. Among childless women, those who had worked in the previous week were more likely to receive the subsidy; among women with children, those who had worked in the previous week were less likely to receive the subsidy. This may suggest that after having their employment disrupted by children, some women may seek the CCDF subsidy in order to reenter the labor force.

Overall, women with less social support were more likely to receive the subsidy. Women without another adult in the household were more likely to receive the subsidy. Among women with children, all those who were not currently married were more likely to receive the subsidy. Among childless women, those who had never married were slightly less likely to receive it; this may either reflect a somewhat more-advantaged profile among women who began receiving the subsidy soon after beginning childbearing, or may reflect a higher probability of first birth in the next 1-2 years among married women. Among childless women, those living in a doubled-up household were less likely to receive the subsidy; among mothers, those living in a doubled-up household were more likely to receive the subsidy. For women with children, living in a

doubled-up household may reflect economic necessity; it may also involve women taking in and caring for others' children. Among non-mothers, women who had moved in the past six months were more likely to receive the subsidy. This may suggest that CCDF recipients receive the subsidy in part because they lack long-term connections in their communities, and thus have limited or no access informal care from friends or neighbors. Among mothers, however, women who moved in the past six months were less likely to receive the subsidy; for these women, connections to a community may support their ability to apply for and receive the subsidy, and to identify participating caregivers.

Among women with children, those with younger children were more likely to receive the subsidy. Those with more children in their households were more likely to receive the subsidy, possibly reflecting a need for the subsidy to offset the higher cost of care for a larger number of children. Finally, women who lived in states where CCDF administrators did not maintain waiting lists or freeze enrollment were more likely to receive the subsidy.

As a sensitivity check, Appendix Tables 1 and 2 present models from Table 3—Model 1 for childless women, and Model 2 for women with children—with the sample broken down by state-level differences in eligibility requirements that may plausibly lead to state-level differences in the composition of CCDF recipients. These models investigate the extent to which the differences between CCDF recipients and non-recipients as presented in Table 3 are relatively stable across policy environments. The sample is broken down across the following three dimensions: states that set minimum work hours for an individual to be eligible to initially receive the CCDF subsidy versus those that do not; states that allow postsecondary education as a qualifying activity, versus those that either do not allow it at all, or place major constraints upon it; and states that impose more-stringent work hour requirements for two-parent families

than single parent families, versus those that do not. These variables are based on state policies in 2010, the last ACS year in the linked data file (Minton et al. 2013). I test for statistical significance of differences between results for women in these respective groupings of states. Work hour requirements for individual recipients are expected to influence the degree of prior work attachment among CCDF recipients. Allowability of postsecondary education is expected to influence the extent to which CCDF recipients are positively selected on educational attainment relative to non-recipients. Differences in eligibility rules for one- versus two-parent families are expected to influence the extent to which CCDF recipients are partnered (as proxied by either being married, or having other adults in the household), as compared with non-recipients.<sup>5</sup>

Overall, the pattern of results in the Appendix tables is similar to those in Table 3. Between-state differences in whether women were more likely to receive the subsidy if they worked in the week prior to being observed in the ACS, or worked primarily fulltime in the past year, were of only a very small magnitude. Similarly, there were only very minor differences in whether women who were married or lived with another adult were more likely to receive the subsidy relative to non-recipients, between states that did and did not impose additional work requirements for two-parent families.

However, there were meaningful differences in whether women with some college were more likely to get the CCDF subsidy between states that allowed postsecondary education as a qualifying activity versus those that either did not allow it, or restricted this activity. This pattern of associations appears to work in opposite directions for women with children when they are

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<sup>5</sup> A limitation of this robustness check is that CCDF eligibility varies across states on many different dimensions that cannot be easily summarized, and as such any effects of the policy differences described above may overlap with the effects of other state-level policy differences in ways that cannot be easily differentiated. A more-detailed account of such differences is outside the scope of the present study, but may be a fruitful topic for future research.

observed in the ACS, versus those without. For women with children, those living in states where postsecondary education is not allowable were less likely to receive the subsidy if they had some college education; for those living in states where postsecondary education is allowable, they were more likely to receive the subsidy if they had some college, and there was a larger magnitude in the positive association between being a high school graduate and receiving the subsidy. These results likely indicate that in states where postsecondary education is an allowable activity, women with high school diplomas or some college are more likely to apply for the CCDF subsidy because it will enable them to pursue an Associate's or Bachelor's degree. For women without children, those living in states where postsecondary education is not an allowable activity were *more* likely to receive the subsidy if they have a high school diploma or some college education; those living in states where postsecondary education *is* allowable were *less* likely to receive the subsidy if they have a high school diploma or some college. For women without children, these results likely reflect wider differences between states, wherein an array of characteristics within states that have more-generous educational policies for CCDF mothers also create circumstances that make it easier for women to graduate from high school and/or earn college credentials before they begin childbearing, or to afford child care without need of the CCDF subsidy. Thus, this sensitivity test shows that the pattern of positive selection on educational attainment among CCDF mothers as shown in Table 3 is stronger in states that permit postsecondary education as an allowable activity for CCDF subsidy reciprocity. Overall, however, the general pattern of results is comparable across states with different eligibility requirements.

## DISCUSSION AND CONCLUSIONS

The present study is the first to prospectively investigate the characteristics of women who subsequently go on to receive the federal means-tested CCDF child care subsidy, relative to those who do not receive the subsidy. The CCDF is the largest source of means-tested assistance for families with low incomes in the U.S. (Chaudry 2006; Ha and Meyer 2010). CCDF reciprocity is associated with greater likelihood of employment (Tekin 2005), higher earnings (Ha 2009; Zanoni and Weinberger 2015) and less work disruption (Forry and Hofferth 2011) for mothers, and better school outcomes for children (Shattuck 2017). Studies indicate that, once they receive the subsidy, CCDF-recipient mothers have higher educational attainment and more work experience than non-recipients (Ha 2009). However, because prior studies have been able to observe the characteristics of mothers only *after* they have begun receiving the subsidy, these studies have been unable to fully explore whether, and on what characteristics, CCDF mothers may be positively-selected. In addition, because previous studies have been unable to observe CCDF recipients prior to receiving the subsidy, the place of the CCDF subsidy in recipients' broader work and family trajectories has been under-explored. Moreover, research to date on CCDF recipient mothers has been limited to using data either on a small number of states (Lee et al 2004; Zanoni and Weinberger 2015), or national-level data that is now out of date (Tekin 2005; Blau and Tekin 2007).

The present study took a life course perspective to investigate the characteristics of the women who went on to receive the CCDF subsidy *before* they did so, as compared with other estimated-eligible women with low incomes who did not go on to receive the subsidy. I linked administrative records from the CCDF to information on the same women in the ACS from the

1-2 years before they first began receiving the CCDF subsidy. I compared women who went on to receive the subsidy to other women in the ACS who did not go on to receive the subsidy. I separately investigated the characteristics of women who were and were not mothers at the time when they were observed in the ACS. I generated estimates for 38 U.S. states, covering the years 2001-2010.

I found that, relative to other women with low incomes, those who went on to receive the CCDF subsidy were positively-selected on educational characteristics and labor force attachment. Women with a high school diploma were more likely to receive the subsidy than women with less than a high school education. Among women who already had children at the time they were observed, those with some college were more likely to receive the subsidy. Also among mothers, women who were enrolled in school at the time they were observed in the ACS were more likely to subsequently receive the subsidy. CCDF recipients had stronger labor force attachment than those who did not go on to receive the subsidy. Women who had primarily worked fulltime or part-time in the past year were more likely to receive the subsidy versus those who had not worked for pay in the past year. Among women without children, those who were employed at the time they were observed in the ACS were also more likely to receive the subsidy. These results were robust to sensitivity checks for differences in state-level policies with respect to allowable educational activities, and work hour requirements.

Despite their relatively strong educational and work-history characteristics, CCDF recipients appear to have less social support and fewer sources of informal childcare relative to women with low incomes who did not receive the subsidy. In general, women who were unmarried and who did not have other adults in their households when they were observed in the ACS were more likely to receive the subsidy. Among women who had not begun childbearing

when they were observed in the ACS, those who had moved in the past six months were also more likely to receive the subsidy. These results were robust to sensitivity checks for state-level differences in eligibility requirements for one- vs. two-parent families. These findings suggest that relative to other women with low incomes, CCDF recipients may be less able to rely on husbands, relatives, roommates or neighbors as sources of informal and/or unpaid childcare. It may also be the case that CCDF recipients must use paid care in order to access any childcare.

When considered in conjunction with findings from previous research about the characteristics of CCDF recipients during and after receiving the CCDF subsidy, my findings offer further insights into the role CCDF subsidy receipt may play in women with low incomes' broader work and family trajectories. Previous studies have found that women are more likely to be employed (Tekin 2005) and enrolled in school (Blau and Tekin 2007) when they are receiving the subsidy. In the context of these earlier studies, my findings that women are also more likely to *receive* the subsidy if they have relatively stronger labor force attachment, and (among women who are already mothers) are enrolled in school, suggest that for CCDF recipients, receiving the CCDF subsidy fits in with a larger pattern of pursuing education and employment. The CCDF subsidy may enable women to continue these activities, either after beginning childbearing, after having more children, or after a union dissolution. Some of my findings, however, are in conflict with previous research. For example, whereas my results show that women are more likely to receive the CCDF subsidy when they do not have other adults in their household, Zanoni and Weinberger (2015) found that women were more likely to have more adults in their households after receiving the subsidy. This may suggest that the employment and schooling that the CCDF facilitates may connect CCDF recipients to other adults who later become partners or housemates.

The characteristics and behaviors of CCDF recipients that the present study shows—relatively higher human capital (education and employment) but fewer social ties (coresidential and/or neighborly connections)—suggest potentially fruitful avenues for future research on both CCDF recipients and their children. The pattern of results that shows women more likely to receive the CCDF subsidy when they have more education, more work experience, and are enrolled in school would seem to suggest that at least some of the positive association between CCDF recipients’s positive employment outcomes is related to these pre-existing characteristics (Blau and Tekin 2007). CCDF mothers may be better able to succeed in the labor market while receiving the CCDF subsidy in part because prior to doing so they already had an established track record of employment (Alon, Donohue and Tienda 2001). They may have more contacts that can lead to jobs, more inculcation in workplace norms, and more self-identity as workers than other mothers with low incomes who do not receive the CCDF (Becker 1975; Mortimer, Harley and Aaronson 1999). Future research might productively investigate the relationship between CCDF recipients’s previous work experience, educational attainment, and history of school enrollment, and the duration and quality of their employment during and after receipt of the CCDF. Future research might also productively investigate whether more prior work experience and education are associated with longer spells of CCDF reciprocity.

Understanding the characteristics of CCDF recipients can also contribute to a broader research agenda on how mothers with low incomes and public assistance recipients are faring in the low-wage labor market (Blank 2002; Lichter and Jayakody 2002). Scholars have argued that after the welfare reforms of the 1990s eliminated the entitlement to AFDC, mothers with low incomes are largely reliant on their own success in the labor market to support their families (Lichter and Jayakody 2002). Women who receive AFDC and TANF welfare benefits often have

low educational attainment and a track record of little and unstable work experience (Lichter and Jayakody 2002; Hennessy 2006; Parisi et al. 2006); they are therefore to a large extent ill-equipped to find the kind of “good job” that will allow them to attain long-term financial stability (Kalleberg, Reskin and Hudson 2000; Pavetti and Acs 2001). The present study suggests, however, that relative to the broader population of public assistance recipients, CCDF recipient women are positively-selected on educational attainment and enrollment, and employment history. Future research might productively consider whether CCDF recipients who also receive TANF benefits are more successful in gaining steady employment than other TANF leavers.

Characteristics of CCDF mothers may also have implications for their children’s development. Children with low incomes face cognitive disadvantages due to the material deprivation and stress of growing up in impoverished households and communities (Brooks-Gunn and Duncan 1997). Future research might productively investigate whether CCDF recipients’s relatively higher educational attainment and attachment to the labor force may mean that CCDF recipients can create more cognitively-stimulating home environments for their children than other mothers with low incomes. At the same time, if CCDF recipients have fewer close connections within their homes and neighborhoods than other women with low incomes, their children may experience lower father involvement (Edin and Nelson 2013), and have fewer ties to other adults and children within their communities (Henly, Danziger and Offer 2005). These, in turn, may be detrimental to children’s cognitive and social development (Cabrera, Shannon and Tamis-LeMonda 2007). Future research that focuses specifically on CCDF children might productively investigate the extent of their ties to fathers and paternal kin, as well as social ties to other relatives and unrelated adults and children.

In conclusion, the present study offers evidence on the characteristics of CCDF recipients—a group of public-assistance-using mothers with low incomes who differ substantially from the more widely-studied TANF recipients. Further research on this unique population of women can help to illuminate both the circumstances shaping their children’s cognitive and social development, and whether positive selection on educational attainment and employment history combined with childcare assistance can enable these women to succeed in the current U.S. labor market.

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Table 1: Ages When Mothers Who Appear in the CCDF File Are Observed in the ACS by Birth Year of Oldest Child

Year mother is observed in the ACS	Birth Year of Oldest Child Observed in the CCDF															Year mother is first observed in the CCDF file	
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011		
	Mother's age when observed in the ACS																
2001	19-49	18-48	17-47	16-46	15-45	14-44	13-43										2003
2002	20-50	19-49	18-48	17-47	16-46	15-45	14-44	13-43									2003 or 2004
2003	21-51	20-50	19-49	18-48	17-47	16-46	15-45	14-44	13-43								2004 or 2005
2004	22-52	21-51	20-50	19-49	18-48	17-47	16-46	15-45	14-44	13-43							2005 or 2006
2005	23-53	22-52	21-51	20-50	19-49	18-48	17-47	16-46	15-45	14-44	13-43						2006 or 2007
2006	24-54	23-53	22-52	21-51	20-50	19-49	18-48	17-47	16-46	15-45	14-44	13-43					2007 or 2008
2007		24-54	23-53	22-52	21-51	20-50	19-49	18-48	17-47	16-46	15-45	14-44	13-43				2008 or 2009
2008			24-54	23-53	22-52	21-51	20-50	19-49	18-48	17-47	16-46	15-45	14-44	13-43			2009 or 2010
2009				24-54	23-53	22-52	21-51	20-50	19-49	18-48	17-47	16-46	15-45	14-44	13-43		2010 or 2011
2010					24-54	23-53	22-52	21-51	20-50	19-49	18-48	17-47	16-46	15-45	14-44		2011

Table 2: Characteristics of Women of Childbearing Age, Comparing Those Who Did and Did Not Go On to Receive the CCDF Subsidy Beginning in the Following 1-2 Years, by Whether or Not They Currently Had Children, Observed in 2001 through 2010, among Women with Household Incomes at or below the CCDF Income Eligibility Threshold for Their State of Residence

	Women with No Children When Observed in the ACS						Women with Children When Observed in the ACS							
	Total		Did not receive subsidy		Received subsidy		Total		Did not receive subsidy		Received subsidy			
	Est.	S.E.	Est.	S.E.	Est.	S.E.	Est.	S.E.	Est.	S.E.	Est.	S.E.		
<i>Percentages</i>														
Went on to receive CCDF subsidy	0.3	0.012	0.0	-	100.0	-	-	9.4	0.126	0.0	-	100.0	-	-
Receives SNAP or cash public assistance	26.7	0.094	26.7	0.094	40.7	2.201	*	39.2	0.182	37.0	0.184	61.0	0.701	*
Marital status														
Married	17.8	0.083	17.8	0.083	8.1	1.474	*	52.2	0.187	55.6	0.191	19.6	0.543	*
Widowed/divorced/separated	16.8	0.082	16.9	0.082	10.0	1.424	*	14.6	0.131	14.4	0.133	17.0	0.537	*
Never-married	65.4	0.103	65.3	0.103	81.9	1.916	*	33.1	0.179	30.0	0.179	63.4	0.681	*
Race/ethnicity														
White, non-Hispanic	48.2	0.107	48.2	0.107	30.2	1.956	*	43.3	0.181	43.9	0.187	37.5	0.666	*
Black, non-Hispanic	20.3	0.091	20.2	0.091	49.2	2.248	*	18.7	0.158	16.4	0.153	40.9	0.722	*
Asian, non-Hispanic	2.9	0.035	2.9	0.035	0.5	0.209	*	2.3	0.053	2.5	0.058	0.5	0.079	*
Other, non-Hispanic	3.3	0.037	3.3	0.037	3.3	0.671		3.0	0.064	3.0	0.066	3.4	0.240	*
Hispanic, any race	25.3	0.100	25.3	0.100	16.8	1.793	*	32.7	0.180	34.3	0.188	17.7	0.560	*
Educational attainment														
Less than high school	33.2	0.104	33.1	0.104	42.1	2.257	*	29.9	0.179	29.8	0.184	30.2	0.679	
High school diploma	30.9	0.101	30.9	0.101	32.5	2.078		36.4	0.181	35.8	0.185	42.2	0.709	*
Some college	26.7	0.092	26.7	0.092	23.2	1.807	*	25.4	0.153	25.4	0.157	25.0	0.592	
Bachelor's degree or more	9.2	0.057	9.2	0.057	2.1	0.473	*	8.3	0.090	8.9	0.098	2.5	0.185	*
Foreign-born	16.8	0.086	16.8	0.086	3.7	0.803	*	25.9	0.166	28.0	0.177	6.0	0.327	*
English language ability														
Speaks English only or very well	92.3	0.065	92.3	0.065	99.3	0.292	*	84.6	0.141	83.2	0.152	98.0	0.198	*
Speaks English poorly or not at all	7.7	0.065	7.7	0.065	0.7	0.292	*	15.4	0.141	16.8	0.152	2.0	0.198	*
Lives in a doubled-up household	52.2	0.107	52.2	0.108	39.3	2.159	*	14.9	0.138	13.0	0.133	32.9	0.667	*



Table 3: Random Intercept Logistic Regression Model of the Likelihood of Receiving the Child Care and Development Fund Subsidy in the Next 1-2 Years on Women's Sociodemographic Characteristics, among Women with Household Incomes at or below the CCDF Income Eligibility Threshold for Their State of Residence

	Women with no children when observed in the ACS		Women with children when observed in the ACS				Statistical significance of difference between women with and without children in Model 1
	Model 1		Model 1		Model 2		
	Coeff.	S.E.	Coeff.	S.E.	Coeff.	S.E.	
Receives SNAP or cash public assistance	0.416 ***	0.006	0.608 ***	0.002	0.528 ***	0.002	***
Marital status (vs. Married)							
Widowed/divorced/separated	0.045 ***	0.012	0.653 ***	0.003	0.690 ***	0.003	***
Never-married	-0.153 ***	0.010	0.589 ***	0.003	0.667 ***	0.003	***
Race/ethnicity (vs. White, non-Hispanic)							
Black, non-Hispanic	1.441 ***	0.007	0.856 ***	0.002	0.816 ***	0.002	***
Asian, non-Hispanic	-0.345 ***	0.037	-0.158 ***	0.011	-0.171 ***	0.011	***
Other, non-Hispanic	0.381 ***	0.015	0.016 ***	0.005	-0.009 *	0.005	***
Hispanic, any race	0.738 ***	0.009	0.244 ***	0.003	0.220 ***	0.003	***
Educational attainment (vs. Less than high school)							
High school diploma	0.088 ***	0.007	0.064 ***	0.002	0.094 ***	0.002	***
Some college	-0.045 ***	0.007	-0.007 **	0.002	0.028 ***	0.002	***
Bachelor's degree or more	-1.124 ***	0.018	-0.600 ***	0.005	-0.561 ***	0.005	***
Foreign-born	-0.799 ***	0.015	-0.644 ***	0.004	-0.626 ***	0.004	***
Speaks English only or very well	1.327 ***	0.032	1.043 ***	0.006	1.029 ***	0.006	***
Age observed in the ACS	-0.100 ***	0.001	-0.064 ***	0.000	-0.063 ***	0.000	***
Year observed in the ACS	-0.096 ***	0.001	-0.181 ***	0.000	-0.179 ***	0.000	***
Lives in a doubled-up household	-0.354 ***	0.007	0.945 ***	0.003	0.965 ***	0.003	***
Has at least one other adult in the household aged 18+	-0.468 ***	0.007	-0.183 ***	0.003	-0.212 ***	0.003	***
Moved in the past six months	0.150 ***	0.006	-0.041 ***	0.002	-0.031 ***	0.002	***
In school	-0.123 ***	0.007	0.352 ***	0.002	0.404 ***	0.002	***
Employed last week	0.127 ***	0.007	-0.018 ***	0.002	-0.008 ***	0.002	***
Fulltime employment status (vs. Worked mostly fulltime last year)							
Worked mostly less than fulltime in past year	-0.381 ***	0.007	-0.016 ***	0.002	-0.011 ***	0.002	***
Did not work in past year	-0.765 ***	0.009	-0.385 ***	0.003	-0.400 ***	0.003	***
State CCDF agency <u>did not</u> maintain waiting list or freeze enrollment in period of possible enrollment	0.714 ***	0.029	0.324 ***	0.003	0.310 ***	0.006	***

Age of youngest child					-0.022 ***	0.001	***
Number of children in the household					0.274 ***	0.001	***
Constant	-7.806 ***	0.134	-5.031 ***	0.141	-4.929 ***	0.142	
State-level error variance	0.618 ***	0.145	0.757 ***	0.177	0.760 ***	0.178	
Number of observations							
Women (Rounded)	474,000		167,000		167,000		
States	38		38		38		

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Source: Child Care and Development Fund administrative records including years 2003 through 2011, and American Community Survey 2001 through 2010 from the states of Alabama, Arizona, Arkansas, Colorado, Delaware, Georgia, Hawaii, Idaho, Illinois, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, North Dakota, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, West Virginia, Wisconsin, Wyoming, and the District of Columbia. For more information in the ACS see <https://www.census.gov/programs-surveys/acs>.

\* p<.050, \*\*p<.010, \*\*\*p<.001

Note: Estimates are weighted. Census DRB release number CBDRB-FY18-373.



Worked mostly less than fulltime in past year	-0.409 ***	0.010	-0.360 ***	0.009 *	-0.250 ***	0.011	-0.460 ***	0.008 *	-0.454 ***	0.009	-0.306 ***	0.010 *
Did not work in past year	-0.643 ***	0.012	-0.892 ***	0.012 *	-0.527 ***	0.015	-0.887 ***	0.010 *	-0.670 ***	0.012	-0.867 ***	0.013 *
State CCDF agency <u>did not</u> maintain waiting list or freeze enrollment in period of possible enrollment	0.495 ***	0.045	0.868 ***	0.041 *	0.732 ***	0.047	0.700 ***	0.037 *	0.468 ***	0.045	0.843 ***	0.042 *
Constant	-7.300 ***	0.226	-9.163 ***	0.184	-8.124 ***	0.283	-7.598 ***	0.139	-7.335 ***	0.214	-9.042 ***	0.187
State-level error variance	0.736 **	0.280	0.559 ***	0.170	0.974 ***	0.399	0.429 ***	0.125	0.704 **	0.214	0.551 ***	0.172
Number of observations												
Women (Rounded)	245,000	229,000	161,000	313,000	259,000	215,000						
States	15	23	13	25	16	22						

Source: Child Care and Development Fund administrative records including years 2003 through 2011, and American Community Survey 2001 through 2010 from the states of Alabama, Arizona, Arkansas, Colorado, Delaware, Georgia, Hawaii, Idaho, Illinois, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, North Dakota, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, West Virginia, Wisconsin, Wyoming, and the District of Columbia. For more information in the ACS see <https://www.census.gov/programs-surveys/acs>.

\* p<.050, \*\*p<.010, \*\*\*p<.001

Note: Estimates are weighted. Census DRB release number CBDRB-FY18-373.

- A "\*\*\*" indicates that the difference in coefficients between women in states that did and did not impose minimum work hours is statistically significant at at least the .05 level.
- Non-Hispanic Asian and non-Hispanic Other race categories were collapsed due to cell size and collinearity.
- A "\*\*\*" indicates that the difference in coefficients between women in states that did and did not allow for postsecondary education as a qualifying activity is statistically significant at at least the .05 level.
- A "\*\*\*" indicates that the difference in coefficients between women in states that did and did not impose additional minimum work hours fortwo-parent families is statistically significant at at least the .05 level.



Worked mostly less than fulltime in past year	-0.007 *	0.003	-0.022 ***	0.003 *	-0.016 ***	0.003	-0.008 **	0.003	0.016 ***	0.003	-0.048 ***	0.003 *
Did not work in past year	-0.362 ***	0.004	-0.446 ***	0.004 *	-0.477 ***	0.004	-0.362 ***	0.003 *	-0.353 ***	0.003	-0.464 ***	0.004 *
State CCDF agency <u>did not</u> maintain waiting list or freeze enrollment in period of possible enrollment	0.562 ***	0.011	0.183 ***	0.007 *	0.652 ***	0.010	0.185 ***	0.007 *	0.568 ***	0.011	0.186 ***	0.007 *
Age of youngest child	-0.040 ***	0.001	-0.002 **	0.001 *	-0.028 ***	0.001	-0.017 ***	0.001 *	-0.03868 ***	0.001	-0.0012	0.001 *
Number of children in the household	0.280 ***	0.001	0.267 ***	0.001 *	0.281 ***	0.002	0.274 ***	0.001 *	0.2791 ***	0.001	0.2678 ***	0.0014 *
Constant	-5.255 ***	0.080	-4.597 ***	0.237	-5.295 ***	0.003	-4.851 ***	0.218	-5.291 ***	0.076	-4.541 ***	0.248
State-level error variance	0.094 ***	0.036	1.288 ***	0.390	0.051 ***	0.021	1.188 ***	0.344	0.091 ***	0.033	1.345 ***	0.417
Number of observations												
Women (Rounded)	86,000		81,000		57,000		110,000		91,000		76,000	
States	15		23		13		25		16		22	

Source: Child Care and Development Fund administrative records including years 2003 through 2011, and American Community Survey 2001 through 2010 from the states of Alabama, Arizona, Arkansas, Colorado, Delaware, Georgia, Hawaii, Idaho, Illinois, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, North Dakota, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, West Virginia, Wisconsin, Wyoming, and the District of Columbia. For more information in the ACS see <https://www.census.gov/programs-surveys/acs>.

\* p<.050, \*\*p<.010, \*\*\*p<.001

Note: Estimates are weighted. Census DRB release number CBDRB-FY18-373.

a. A "\*" indicates that the difference in coefficients between women in states that did and did not impose minimum work hours is statistically significant at at least the .05 level.

b. A "\*\*" indicates that the difference in coefficients between women in states that did and did not allow for postsecondary education as a qualifying activity is statistically significant at at least the .05 level.

c. A "\*\*\*" indicates that the difference in coefficients between women in states that did and did not impose additional minimum work hours fortwo-parent families is statistically significant at at least the .05 level.