

Running Head: CHILD CARE SUBSIDIES AND WORK DISRUPTIONS

Maintaining Work: The Influence of Child Care Subsidies on Child Care-Related Work  
Disruptions

Nicole D. Forry<sup>a</sup>

Sandra L. Hofferth<sup>b</sup>

July 27, 2009

<sup>a</sup> Research Scientist, Child Trends

<sup>b</sup> Professor, Department of Family Science, University of Maryland at College Park

Corresponding Author: Nicole D. Forry, nforry@childtrends.org, 202-641-7389, Child Trends,  
4301 Connecticut Avenue, NW, Suite 350, Washington, DC 20008

Preparation of this manuscript was generously supported by grant number 90YE0090 from the Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services. The contents of this manuscript are solely the responsibility of the author and do not represent the official views of the funding agencies, nor does publication in any way constitute an endorsement by the funding agency. The Fragile Families Study was funded by a grant from NICHD (#R01HD36916) and a consortium of private foundations. Persons interested in obtaining Fragile Families restricted use data should see <http://crrw.princeton.edu/fragilefamilies/data.asp> for further information. The authors would like to thank Meagan McSwiggan, Julia Wessel, and Kate Perper as well as the anonymous reviewers for their thoughtful input.

## Abstract

With the passage of welfare reform, parents' ability to not only obtain, but maintain work has become imperative. The role of child care subsidies in supporting parents' job tenure has received little attention in the literature. This article examines the relationship between receiving a child care subsidy and the likelihood of experiencing a child care-related work disruption using two samples and both cross-sectional and longitudinal regression models. Child care-related work disruptions are found to be less likely among subsidy recipients across samples and methods. Program implications and suggestions for future research are discussed.

Key Words: child care, subsidy, employment, cost, job tenure

## Maintaining Work: The Role of Child Care Subsidies on Child Care-Related Work Disruptions

For mothers with young children, and particularly low-income single mothers, challenges related to child care can serve as significant barriers to employment (Baum, 2002; Dodson & Bravo, 2005). One federal program designed to support low-income parents in obtaining and maintaining employment and economic self-sufficiency is the Child Care and Development Fund (CCDF), a child care subsidy block grant to states. CCDF subsidies are designed to support both parental employment and child development by making high quality child care affordable to low-income working parents. Numerous studies have examined the impact of child care subsidies on reducing barriers to work and found low-income parents with a child care subsidy to be more likely to work than low-income parents without a subsidy (e.g. Bainbridge, Meyers, & Waldfogel, 2003, Brooks, Reisler, Hamilton, & Nackerud, 2002; Tekin, 2005). Less research has addressed the impact of child care subsidies on experiences of child care-related work disruptions and employment retention (see Lee et al., 2004). Though CCDF subsidies do not currently give child care providers incentives for offering reliable care, these subsidies may make reliable child care arrangements more affordable for low-income parents.

Employment retention is important for the economic self-sufficiency of low-income parents as it provides opportunities for health insurance, wage increases, and career advancement. However, maintaining a job is difficult for parents who are frequently absent or tardy due to child care problems. Studies by Dodson (2006) and Holzer, Stoll, and Wissoker (2001) have found that employees with child care-related work disruptions are more likely to experience job termination than employees without such disruptions. Child care-related work disruptions may result from child illness or problems with a child care provider, such as a provider being unreliable, or unable to provide care when expected. Though a recent study by

Gordon, Kaestner, and Koreman (2008) found no statistically significant association between child care-related work disruptions resulting from child illness and job exits, child care-related work disruptions problems resulting from provider unreliability were predictive of job exits among mothers living at or under 50 percent of the poverty threshold.

Two explanations for the relationship between child care-related work disruptions and employment termination have been posited. First, qualitative studies have found parents who experience child care-related work disruptions to be distraught by their inability to fulfill both work and family responsibilities. In an effort to resolve this quandary, some parents choose to quit their job (Chaudry, 2004; Dodson, 2006). Second, employers tend to be more dissatisfied and consequently more likely to terminate employees who are tardy, absent, or unproductive due to child care problems (Holzer et al., 2001).

Recent studies have documented the prevalence of experiencing child care problems and child care-related work disruptions. Using Fragile Families data, Usdansky and Wolf (2008) found 31 percent of families with two year olds experienced a situation in which their child care “fell through” unexpectedly in the last month. Of those whose child care fell through, 46 percent reported missing work in the last month due to a child care problem. In Henly and Lyons’ (2000) study of low-income mothers in California, two-fifths of the sample reported problems with child care interfered with their ability to retain employment. Gordon et al. (2008), using NICHD Study of Early Child Care (NICHD SECC) data, found the probability of experiencing a child care problem varies by the type of care used, with families using center-based care being more likely to miss work due to child illness and families using home-based care being more likely to miss work due to provider unreliability.

The purpose of this research is to examine the impact of child care subsidies on low-income parents' experiences of child care-related work disruptions<sup>1</sup>, or disruptions in one's ability to work the hours one is scheduled. Two questions are posed. First, is child care subsidy receipt predictive of a lower probability of experiencing a child care-related work disruption? Second, among the same parents over time, do parents experience fewer child care-related work disruptions while receiving a child care subsidy as compared to while not receiving a subsidy? This study adds to the literature in the field by using two unique datasets, the first of which includes longitudinal survey and verified administrative data collected using a quasi-experimental design. The second is a subsample of families who were either financially eligible for or receiving a child care subsidy from the Fragile Families and Child Wellbeing study, a national sample of children born in urban areas between 1998 and 2000. The use of multivariate change analyses, applied to the quasi-experimental data in this study, also sets this study apart from current literature in the field.

## Literature Review

### *Child Care Subsidies and Child Care-Related Work Disruptions*

Most currently published studies have found receipt of a child care subsidy to be associated with a lower probability of experiencing a child care-related work disruption. Using a sample of low-income mothers residing in Philadelphia, Press, Fagan, and Laughlin (2006) compared mothers who applied but were not receiving a subsidy to those currently receiving a subsidy. Press et al. found the probability of experiencing a change in work shift/schedule, working fewer hours per week than desired, or being unable to work overtime because of child care in the last year was 21 percent lower among subsidy recipients. Weinraub, Shlay, Harmon,

---

<sup>1</sup> In the Fragile Families analyses, both work and school disruptions are captured in the term child care-related work disruptions. School disruptions are included in this definition to reflect the question wording on the child care-related work disruption survey item from the Fragile Families study.

and Tran (2005) also interviewed African American low-income parents in Philadelphia and found parents with a child care subsidy to be absent from work because of child care problems significantly less often than parents without a child care subsidy. Finally, Gennetian, Crosby, Huston, & Lowe (2004) found four of seven welfare demonstration programs offering expanded child care assistance in the 1990s to reduce child care problems that interfered with parents' ability to obtain or maintain work. To date only one study (Danziger, Ananet, & Browning, 2004) did not find a difference in the prevalence of child care-related work disruptions among subsidy and non-subsidy users.

Each of the studies above adds evidence to the field about the association between child care subsidies and child care-related work disruptions. However, most of these studies used samples obtained from one city or state, thus calling into question the generalizability of the findings. Although Gennetian et al. (2004) used a longitudinal quasi-experimental design with multi-state data, the programs evaluated were expanded subsidy demonstration projects and thus are not widely available. The current study adds to the literature reviewed above through the use of both a subsample of low-income single mothers financially eligible for CCDF subsidies from a national data set and cross-sectional as well as longitudinal analyses of survey and administrative data from a quasi-experimental study.

#### *Additional Influences on Child Care-Related Work Disruptions*

Uzdansky and Wolf (2008) and Huston, Chang, and Gennetian (2002) have examined individual, family, child care, and community characteristics associated with experiencing a child care-related work disruption. Based on this work, contextual factors that may affect the probability of experiencing a child care-related work disruption are included in this study.

*Individual and Family Characteristics*

Individual characteristics of parents and children have been associated with the probability of experiencing a child care-related work disruption. Huston et al. (2002) found child care-related work disruptions are more likely among younger children and younger parents. Huston et al. also found depressive symptoms to be associated with a greater likelihood of experiencing a child care-related work disruption. Both Usdansky and Wolf (2008) and Huston et al. (2002) found social support to be a protective factor against child care-related work disruptions. Usdansky and Wolf (2008) and Huston et al. (2002) also found differences in child care-related work disruptions by race/ethnicity, though no consistent patterns emerged. Finally, Usdansky and Wolf found longer parental work hours to be associated with a lower likelihood of experiencing child care-related work disruptions. This finding was thought to reflect the high value parents who work long hours, likely due to financial necessity, ascribe to maintaining their jobs. An alternative hypothesis regarding maternal work hours is that longer work hours place a family at greater risk for experiencing a child care-related work disruption (Henly & Lyons, 2000). Though neither Usdansky and Wolf (2008) nor Huston et al. (2002) found it to be a significant predictor of child care-related work disruptions, maternal education is another important characteristic to consider in studying child care-related work disruptions due to its association with child care preferences (Mulligan, Brimall, West, & Chapman, 2005).

Both Usdansky and Wolf (2008) and Huston et al. (2002) found a higher household income to be a protective factor against experiencing a child care-related work disruption. Likewise, Gordon et al. (2008) found unreliable child care to be associated with job exits only among impoverished families ( $\leq 50\%$  FPL). Finally, social capital associated with financial

resources has been tied to being connected to social networks that can provide alternative care arrangements should one's child care fall through (Usdansky & Wolf, 2008).

### *Child Care Characteristics*

Previous literature has found type of care and multiplicity of care to be related to child care reliability. Gordon et al. (2008) found mothers using home-based care to be more likely to experience a child care-related work disruption due to provider unreliability than mothers using center-based care. In their ethnographic study of low-income families, Knox, London, Scott, and Blank (2003) also found home-based providers to be less reliable than center-based providers.

The association between use of home-based care and child care-related work disruptions resulting from provider unreliability varies by the location of care and, some have theorized, the provider's motivation. Though Usdansky and Wolf (2008) did not find a difference in the experience of child care-related work disruptions among families using home-based as compared to center-based care, they did find the odds of experiencing a child care-related work disruption to be lower among families using relative care in their own home as opposed to relative or non-relative care in another person's home. Due to the small percentage of child care providers that lived with the focal child in this study, the authors hypothesized that this difference might be related to the motivation of the provider (Usdansky & Wolf, 2008). Scott, London, and Hurst (2005) also theorized the instability of informal care, especially unpaid informal care, is likely a function of the situation that leads to the availability of such a provider: their own unemployment, illness, or temporary disability. Findings from a qualitative study by Uttal (1999) further supported this notion, finding that, especially among Mexican American and African American families, parents' choice of a home-based provider may be swayed by the temporary economic needs of family members. Additionally, Henly and Lyons (2000) theorized

that the motivation of an informal provider, specifically whether they perceive child care to be their profession or a favor to a family member is associated with the reliability of care they provide with those offering a favor providing less reliable care. Using multiple child care providers for a child has also been linked to an increased probability of experiencing child care-related work disruptions (Huston et al., 2002; Usdansky and Wolf, 2008; Scott et al., 2005). Scott et al. (2005) concluded this unreliability results from confusion that can occur when working with multiple providers.

Though multiple researchers have found cost to be a constraining factor in parents' selection of a child care provider (e.g. Chin & Phillips, 2004; Fuller, Kagan, Caspary, & Gauthier, 2002), only one research team has examined the association between cost constraints and child care-related work disruptions. Kisker and Silverberg (1991) interviewed a random sample of teen mothers from a parenting demonstration program and found parents who perceived they could not afford child care were more likely to switch their work hours or quit their jobs in response to child care problems than parents who perceived child care to be affordable. Though not yet empirically supported, theories proposed earlier in this paper regarding the association between provider motivation and child care-related work disruptions may also be supported via a measure of child care cost, as providers that are "helping out" a family member or friend are less likely to be paid or be paid less than professional providers.

### *Community Characteristics*

Contextual factors in the community may also be associated with experiencing a child care-related work disruption. For example, the unemployment rate and median housing price have been associated with the availability of informal providers (Scott et al., 2005) and the

affordability of the child care market (Weber, Grobe, Davis, Kreader, & Pratt, 2007), respectively.

## Methods

### *Data*

Two sources provide the data for this study: the Wait List study, a quasi-experimental study of the effects of child care subsidies in a mid-Atlantic county, and the Fragile Families and Child Well-Being (Fragile Families) study (Reichman et al., 2001), a national study of child born in urban areas between 1998 and 2000.

#### *Wait List Data*

The Wait List study contains data from a sample of forty, predominately single, low-income parents from a mid-Atlantic metropolitan county. These data were collected through a pre/post quasi-experimental design, thus they provide an opportunity to compare the same family's child care choices and experiences of child care-related work disruptions before and after receiving a child care subsidy. The Wait List data also includes verified administrative data, which are more reliable than self-reported survey data (Guzman & Freed, 2006), on household income and child care subsidy receipt.

Parents living in the Wait List study county who were on the wait list for a child care subsidy or had been on the wait list within the last three months, spoke English well enough to complete an interview, and consented with the county subsidy office to be contacted for research participation were eligible for inclusion in the Wait List sample. Parents meeting the eligibility criteria were recruited by phone. There was a 65% response rate among those contacted with non-response resulting from language barriers (6%), refusal to participate (47%), and an inability to be reached (47%). Interviews occurred either in-person or on the phone, depending upon the

parent's preference. The first wave of interviews occurred in the summer of 2005<sup>2</sup> and the second wave in winter of 2006, approximately eight months later. Participants were provided with a \$10 incentive after each interview. The attrition rate for this study was 30%.

The county in which data were collected has two child care subsidy programs: the CCDF subsidy program and a county-funded subsidy program. At the time of the study, in this state, families not exceeding 191% of the federal poverty threshold met the income eligibility criteria for receiving a CCDF subsidy. The county-funded subsidy program is designed to support low-income families who exceed the CCDF income eligibility threshold. Income eligibility for this program is calculated based on the household income and ages of children in care.

Data from this study were organized into two data files, one cross-sectional and one longitudinal. The intended quasi-experimental design for this study was to collect baseline data from parents before they received a child care subsidy, then to collect follow-up data once parents had been receiving a subsidy for six months. As the commencement of this study coincided with the county lifting the wait list for child care subsidies, some parents had already received their child care subsidy prior to the baseline survey. Additionally, because subsidy receipt is sometimes short-lived (see Meyers et al., 2002), by the time of the follow-up data collection effort, some parents had already discontinued their use of a child care subsidy. Families who experienced a change in child care subsidy status within the last three months were asked for retrospective data for the three months prior to changing subsidy status in addition to questions about their current experiences.<sup>3</sup>

---

<sup>2</sup> Interviewing parents for a longitudinal study in the summer and winter is not ideal as many parents change their child care arrangements when their children are not in school. However, this timing was necessary to capture the effects of an increase in funding that allowed the subsidy programs to open their wait lists in late summer 2005.

<sup>3</sup> The time frame for retrospective questions varied depending upon when the family experienced a transition in subsidy status. Usually, the time frame for retrospective questions was three months. However, of the 98 observations used in the cross-sectional analyses, fourteen had a shortened time frame. Specifically, five cases had a time frame of two months, and nine cases had a time frame between one and two months. As there was no

For the cross-sectional data file, each completed observation point (Waves 1 and 2 of data collection, plus retrospective data for persons who had changed subsidy status within the past three months) was used as an observation, thus parents could have a maximum of four observations. For the longitudinal data file, each combination of completed time points was used to create change variables. Parents could have a maximum of four observations in the longitudinal data file. Table 1 provides a synopsis of how the cross-sectional and longitudinal databases were constructed. The cross-sectional Wait List data file has 98 observations (44 of which capture data during subsidy receipt). The longitudinal file has 86 observations (56 of which represent changes in subsidy status). Analyses with each data file incorporated a family identification clustering variable used to appropriately adjust standard errors for the use of non-independent observations.

#### *Fragile Families and Child Well-Being Data*

The Fragile Families study is a national, longitudinal study of urban families. These data offer information on multiple individual and community characteristics from parents living in economically and politically diverse cities throughout the United States. For this study, a subsample of low-income single mothers who were financially eligible for a child care subsidy with a singleton child<sup>4</sup> was used. Due to the relatively long gap (two years) between data collection waves with the Fragile Families data, longitudinal analyses of this dataset were not conducted.

The Fragile Families study has a stratified random sample of 4,700 primarily single, low-income parents with children born between 1988 and 2000 in one of 20 cities across the United

---

variability in the dependent variable among observations with a time frame less than three months, no control variable was included to account for an abbreviated time frame.

<sup>4</sup> Studying families with only one child allows further isolation of the association between child care subsidy receipt and child care-related work disruptions.

States. For a detailed description of the Fragile Families sample design, see Reichman et al. (2001). Mother data from the one- and three-year follow-up waves of Fragile Families are used in this study, thus mothers could have a maximum of two observations in this data file. A family identification clustering variable is included to appropriately adjust the standard errors for use of non-independent observations. Single mothers from the one- and three-year data collections were selected for the study sample if, at the time of the interview, they were at least 18 years old (N=6155), employed or in school (N=2036), living in a household with only one child (N=671), not using parent, sibling, or self-care for their child's primary child care arrangement (N=528), financially eligible to receive a child care subsidy<sup>5</sup> (N= 477), and had non-missing responses on any key variables of interest (N= 459). These selection criteria were used to make the demographics of this sample similar to those of Wait List participants, isolate the effect of receiving a child care subsidy, and eliminate child care choices that are not eligible to receive a child care subsidy (i.e. parent/sibling/self-care).<sup>6</sup> The Fragile Families analytic sample contained 459 mothers (117 of whom were receiving a subsidy). Fragile Families restricted data were merged into the analytic dataset to provide contextual variables and calculate subsidy income eligibility.

### *Measures*

#### *Wait List Data*

*Independent variable.* The child care subsidy variable was extracted from county administrative data. In the cross-sectional Wait List analyses, child care subsidy status indicates whether a family was receiving a Child Care and Development Fund (CCDF) or county-funded

---

<sup>5</sup> Financial eligibility for a child care subsidy was determined by comparing self-reported family income data and state indicators to income eligibility criteria from the appropriate year's CCDF state plan.

<sup>6</sup> Because multiple criteria were used to select a subsample with certain sociodemographic characteristics, analyses with the Fragile Families subsample are not representative of a national sample of urban families. In order to maximize the number of families in the current analyses, these data were not weighted.

child care subsidy at the time of the interview (1=yes, 0=no). In the Wait List longitudinal analyses, child care subsidy status is coded (1) if the family changed child care subsidy status during the course of the study and (0) if they did not.

*Dependent variable.* The child care-related work disruptions question asked mothers whether and how often the respondent experienced any of the following as a result of a problem with a child care provider: changed work hours, arrived at work late, left work early, or missed a day at work. The time frame for this variable was three months for families whose child care subsidy status did not change in the three months prior to the interview and reflected the time since the last subsidy status change for the remaining families. For the Wait List longitudinal analysis, a difference in the number of child care-related work disruptions was calculated by subtracting the number of child care-related work disruptions experienced while not receiving a subsidy from the number of child care-related work disruptions while receiving a subsidy. Thus, a negative result means the number of child care-related work disruptions was lower when a subsidy was used and a positive result means the number of child care-related work disruptions was higher when a subsidy was used. For observations that did not capture a change in subsidy status, the number of child care-related work disruptions from the earlier wave of data was subtracted from the number of child care-related work disruptions in the most recent wave.

*Control variables*<sup>7</sup>. The focal child's age indicates the child's age in years according to the parent. The number of children aged twelve or under in care was also parent report as was the use of center-based care (1=center, 0=non-center) as the primary child care arrangement of the focal child, or the provider with whom the child spent the most time. Center-based programs included child care centers, after-school programs, and Head Start. Non-center providers

---

<sup>7</sup> Due to the conservative nature of longitudinal analyses and the small sample size, control variables were included in the cross-sectional analyses only.

included family child care providers and informal providers including friends, neighbors, and relatives. Financial burden, or percent of family income spent on child care, is a ratio of out-of-pocket child care cost to household income. The monthly out-of-pocket cost of child care for one child was based on maternal report and the household income variable was obtained from verified administrative data. Financial burden was calculated by dividing the families' monthly out-of-pocket child care cost for one child by their monthly household income.

### *Fragile Families Data*

*Independent variable.* In the Fragile Families study, mothers were asked: "Did the government give you money, a voucher, or a scholarship to help pay for child care?" An affirmative response to this question was coded (1) and a negative response (0).

*Dependent variable.* To ascertain the frequency of child care-related work disruptions, mothers who reported experiencing child care unreliability in the last month were asked "How many times did you miss work or school because your child care arrangement fell through?" Data from this question were translated into a dichotomous variable indicating whether a parent experienced at least one child care-related work disruption in the last month (1=yes, 0=no).

*Control variables.* Focal child's age was dichotomized based upon the interview wave with one-year-olds serving as the reference category. Maternal school enrollment (whether the mother was currently attending school, classes, or a training program; 1=yes, 0=no), maternal race (Hispanic, non-Hispanic Black, and non-Hispanic/non-Black<sup>8</sup>), highest grade completed, number of hours usually worked at current job, and whether those hours sometimes occurred during non-traditional hours (6:00 pm-7:00 am, nights, and weekends; 1=yes, 0=no) were all based on maternal self-report. A dichotomous indicators of maternal depression was created

---

<sup>8</sup> The non-Hispanic/non-Black race category was not further disaggregated for multivariate analyses due to the small distribution of non-Caucasians in this category. A total of 4 percent of the sample in this race category identified as Asian, American-Indian, and persons of an "other" race.

using a series of questions and coding instructions from the Composite International Diagnostic Interview (CIDI; 1=yes, 0=no) (Fragile Families, 2005). Two variables, both based on maternal self-report were included as proxies of available social support: the number of adults living in the household and whether the mother reported receiving help from any source other than the government in paying for child care (1=yes, 0=no). The use of center-based care (1=center, 0=non-center) as the primary child care arrangement of the focal child and use of multiple child care arrangements (1=yes, 0=no) were also based on maternal self-report. Center-based care included day care centers and Head Start/Early Head Start. Non-center providers included family child care providers and informal providers including friends, neighbors, and relatives. Financial burden, or percent of family income spent on child care, is a ratio of out-of-pocket child care cost to household income. The monthly out-of-pocket cost of child care and the household income were based on maternal report. Financial burden was calculated by dividing the families' monthly out-of-pocket child care cost for their singleton child by their monthly household income. Finally, two indicators of the community economic context, percent of civilian workforce (16 and older) unemployed and median housing value, reflecting census tract data from summary files of the 2000 Census, were extracted from a restricted data file.

### *Analysis*

#### *Cross-Sectional Models*

Bivariate comparisons by subsidy status on the dependent and control variables were analyzed for each sample. Next, logistic regressions were used to test the association between child care subsidies and the probability of experiencing a child care-related work disruption controlling for individual, family, child care, and community variables. In the analysis of Wait List cross-sectional models, control variables were limited to: focal child's age, number of

children aged twelve or under in care, type of care, and financial burden of care. Additional control variables included in the Fragile Families analyses were whether the mother was in school, maternal race, education, depression, work hours, work during non-traditional hours, two measures of social support (whether the mother received non-governmental assistance for paying for child care and the number of adults in the household), household income per month (natural log), whether the child had multiple child care arrangements, and percent of the civilian labor force unemployed and median housing value (natural log) for the census tract in which the participant lived.

### *Longitudinal Model*

With the Wait List data only, a longitudinal model analyzed the same families over time. This model used ordinary least squares regression to assess whether a change in child care subsidy status (from not receiving a subsidy to receiving a subsidy) was predictive of a decrease in the number of child care-related work disruptions parents experienced. Due to the small sample size and the conservative nature of a longitudinal model, no covariates are included.

## Findings

### *Descriptives*

Table 2 compares subsidy recipients and non-subsidy recipients from each sample. Three statistically significant differences between demographics of subsidy and non-subsidy recipients in the Wait List data emerged. Subsidy recipients had fewer adults living in their household, an older focal child (trend), and were more likely to be in school. In the Fragile Families data, subsidy recipients differed from non-recipients on income, household composition, race, employment, child care, and contextual variables. Subsidy recipients in this sample had lower average household incomes than non-subsidy recipients, were less likely to be non-Black/non-

Hispanic, less likely to be using multiple child care arrangements, and more likely to be getting non-governmental help in paying for child care. There were also two trends detected: subsidy recipients had fewer adults living in the household and worked fewer hours than non-subsidy recipients. Finally, subsidy recipients lived in census tracts with higher unemployment rates and lower median housing prices compared to non-subsidy recipients.

In both samples, subsidy recipients were more likely to use center-based care, had a lower financial burden of care, and were less likely to experience a child care-related work disruption than non-subsidy recipients. In the Wait List sample, this relationship also held true using a continuous measure of child care-related work disruptions. Additionally, the longitudinal Wait List bivariate analyses revealed that families who changed subsidy status experienced fewer child care-related work disruptions while receiving a subsidy compared to those who did not change subsidy status.

### *Child Care Subsidies and Child Care-Related Work Disruptions*

#### *Wait List Data*

Child care subsidy status was a significant predictor of child care-related work disruptions in the Wait List study. Controlling for individual, family and child care predictors in the cross-sectional model (Table 3), the odds of experiencing a child care-related work disruption were 73% lower for parents receiving a subsidy than parents not receiving a subsidy. None of the control variables included in this analysis were statistically significant predictors of child care-related work disruptions. The longitudinal analysis, which compared the same Wait List parents over time, found that parents who changed subsidy status experienced 0.36 fewer child care-related work disruptions, on average, over the last three months while receiving a child care subsidy compared to parents who did not change subsidy status. The change in subsidy status

variable alone predicted 6% of the variation in the difference of child care-related work disruptions experienced (Table 3).

#### *Fragile Families Data*

A significant but slightly weaker relationship<sup>9</sup> between child care subsidy status and parents' experiences of child care-related work disruptions was found with the Fragile Families regressions (Table 4). Controlling for individual, family, child care, and community variables, subsidized parents' odds of experiencing a child care-related work disruption were 48% lower than the odds for non-subsidized parents. Several predictors (maternal participation in school, maternal depression, living with more adults in the household, and living in an area with a higher median housing price) were positively associated with experiencing a child care-related work disruption.

#### Discussion

The aim of this study was to analyze the association between child care subsidies and parents' experiences of child care-related work disruptions while controlling for individual, family, child care, and community characteristics. Evidence from both cross-sectional and longitudinal models and using both datasets was found to support the study hypotheses. First, parents who received a child care subsidy were less likely to experience a child care-related work disruption than parents who had not received a subsidy. Second, receipt of a child care subsidy was found to decrease the number of child care-related work disruptions experienced by the same parents over time.

Though a statistically significant negative relationship between child care subsidy receipt and experiences of child care-related work disruptions was documented, the magnitude of this

---

<sup>9</sup> This difference in magnitude may reflect measurement error in the Fragile Families self-reported child care subsidy variable (see Guzman & Freed, 2006), or may result from the use of additional control variables.

relationship was relatively small. There are several explanations for this. First, parents who receive a child care subsidy may select an unreliable provider. This selection may occur due to a lack of information on the provider's reliability; or limited choices among available providers who accept child care subsidies. Second, child care subsidies are currently not tied to standards or resources that could facilitate the provision of reliable care.

The individual, family, child care, and community control variables did not play a significant role in predicting child care-related work disruptions in the Wait List data. In the Fragile Families study, attending school (usually in addition to work), having depressive symptoms, living with more adults, and living in a community with a higher median housing price were all risk factors for experiencing a child care-related work disruption. It is logical that parents who are juggling work and school, or experiencing symptoms of depression, are more likely to experience child care-related work disruptions. However, it was surprising to find that having more adults in the household (what was thought to be a proxy for social support) and living in a census tract with a higher median housing price were positively predictive of experiencing a child care-related work disruption. It was assumed that mothers living with other adults would have greater access to alternative providers and those census tracts with higher median housing prices would have higher quality, reliable child care providers. It may be, however, that parents living with more adults are doing so out of financial necessity and that the other adults in the household do not serve as sources of support. Likewise, parents who live in a census tract with a higher median housing price may be less able to afford high quality care, both because of higher child care market rates and fewer available financial resources due to higher housing costs.

This study is limited by a few factors. First, due to data limitations, some variables of interest (e.g., number of child care options) were not included in the multivariate models. Second, as administrative data to supplement the Fragile Families data was not available, measurement error, particularly with the family income and child care subsidy variables, may have confounded results. Third, as this was not an experimental study, the possibility that selection effects influenced findings cannot be ignored. Selection bias is of particular concern with the Wait List study data due to its mediocre response rate. Finally, the Wait List study results may not be generalizable due to the small, geographically-limited sample.

Despite these limitations, this research furthers the field by testing the association between child care subsidies and child care-related work disruptions through two unique samples and multiple analytic methods and consistently finding child care subsidy receipt to be associated with a decreased likelihood of experiencing a child care-related work disruption. As the literature on child care subsidies and child care-related work disruptions is scarce and inconsistent, these results are timely and noteworthy.

Multiple efforts tied to CCDF are currently underway to improve the quality of child care available to low-income working families. These efforts could be expanded by adding a specific focus on child care reliability. For example, an increasing number of states are developing Quality Rating and Information Systems, which aim to increase the floor of child care quality by making indicators of child care quality easily accessible to parents (see Tout, Zaslow, Halle, and Forry, 2009). Additionally, tiered reimbursement systems have been used to provide higher subsidy payments to child care providers who possess indicators of high quality child care. States could expand these indicators to include measures of child care reliability (e.g., availability of contingency plans for provider emergencies) in their quality assessments for these

systems. This inclusion could not only provide parents with additional information about the reliability of care they are selecting, but also encourage child care providers to be prepared for unexpected events that could affect their ability to provide care.

In conclusion, this study provides important information regarding child care subsidies. It validates previous researchers' findings of a negative relationship between child care subsidy receipt and child care-related work disruptions using unprecedented samples and analytic methods and lends evidence to support the efficacy of child care subsidies in supporting parents' ability to maintain their employment. This study also paves the way for future research to identify the mechanisms by which child care subsidy status reduces parents' experiences of child care-related work disruptions.

#### References

- Bainbridge, J., Meyers, M. K. & Waldfogel, J. (2003). Child care policy reform and the employment of single mothers. *Social Science Quarterly*, 84(4), 771-791.
- Baum, C. L. (2002). A dynamic analysis on the effect of child care costs on the work decisions of low-income mothers with infants. *Demography*, 39(1), 139-164.
- Brooks, F., Reisler, E., Hamilton, C., & Nackerud, L. (2002). Impacts of child care subsidies on family and child well-being. *Early Childhood Research Quarterly*, 17(4), 498-511.
- Chaudry, A. (2004). *Putting children first: How low-wage working mothers manage child care*. New York: Russell Sage.
- Chin, T. & Phillips, M. (2004). Social reproduction and child-rearing practices: Social class, children's agency, and the summer activity gap. *Sociology of Education*, 77(3), 185-210.
- Danziger, S. K., Ananet, E. O., & Browning, K. G., (2004). Child care subsidies and the transition from welfare to work. *Family Relations*, 53, 219-228.

- Dodson, L. (2006). After welfare reform: You choose your child over the job. *Focus*, 24(3), 25-28.
- Dodson, L. & Bravo, E. (2005). When there is no time or money: work, family and community lives of low-income families. In J. Heymann & C. Beem (Eds.), *Unfinished work: Building equality and democracy in an era of working families* (pp. 122-155). New York: New Press.
- Fragile Families. (2005). *Scales documentation and question sources for one-year questionnaires*. Retrieved August 13, 2007, from <http://www.fragilefamilies.princeton.edu/surveys/Fragile%20Families%20One-Year%20Scales%20Documentation%20-jk%20092905.pdf>
- Fuller, B., Kagan, S. L., Caspary, G. L. & Gauthier, C. A. (2002). Welfare reform and child care options for low-income families. *The Future of Children*, 12(1), 97-119.
- Gordon, R. A., Kaestner, R., & Korenman, S. (2008). Child care and work absences: Trade-offs by type of care. *Journal of Marriage and the Family*, 70, 239-254.
- Guzman, L., & Freed, S. (2006). *Developing measures of child care as a support to employment and self-sufficiency*. Paper presented at the Child Care Bureau Roundtable on Performance Measures of Childcare and Employment.
- Henly, J. R. & Lyons, S. (2000). The negotiation of child care and employment demands among low-income parents. *Journal of Social Issues*, 56(4), 683-706.
- Holzer, H. J., Stoll, M. A., & Wissoker, D. (2001). Job performance and retention among welfare recipients. Institute for Research on Poverty Discussion Paper 1237-01. Retrieved March 19, 2007, from <http://www.irp.wisc.edu/publications/dps/pdfs/dp123701.pdf>

- Huston, A. C., Chang, Y. E., & Gennetian, L. (2002). Family and individual predictors of child care use by low-income families in different policy contexts. *Early Childhood Research Quarterly, 17*(4), 441-469.
- Kisker, E. E. & Silverberg, M. (1991). Child care utilization by disadvantaged teenage mothers. *Journal of Social Issues, 47*(2), 159-177.
- Knox, V. W., London, A. S., Scott, E. K., & Blank, S. (2003). *Welfare reform, work, and child care: The role of informal care in the lives of low-income women and children*. Retrieved October 20, 2004, from <http://www.mrdc.org/publications/353/policybrief.html>
- Lee, B. J., Goerge, R.M., Reidy, M., Kreader, J. L., Georges, A., Wagmiller, R. L., Staveley, J., Stevens, D., & Witte, A. D. (2004). *Child Care Subsidy Use and Employment Outcomes of Low-Income Mothers during Early Years of Welfare Reform: A Three-State Study*. Chicago: The University of Illinois, Chapin Hall Center for Children.
- Meyers, M. K., Peck, L. R., Davis, E. E., Collins, A., Kreader, J. L., Georges, A., Weber, R., Schexnayder, D. T., Schroeder, D. G., & Olson, J. A. (2002). Dynamics of child care subsidy use: A collaborative study of five states. New York. Columbia University, National Center for Children in Poverty.
- Mulligan, G.M., Brimall, D., West, J., & Chapman, C. (2005). *Child care and early education arrangements of infants, toddlers and preschoolers: 2001*. U.S. Department of Education, National Center for Education Statistics. Washington, DC: US Government Printing Office.
- Press, J. E., Fagan, J., & Laughlin, L. (2006). Taking pressure off families: Child-care subsidies lessen mothers' work-hour problems. *Journal of Marriage and the Family, 68*(1), 155-171.

- Reichman, N. E., Teitler, J. O., Garfinkel, I., & McLanahan, S. S. (2001). Fragile Families: Sample and design. *Children and Youth Services Review, 23*(4/5), 303-326.
- Scott, E. K., London, A. S., & Hurst, A. (2005). Instability in patchworks of child care when moving from welfare to work. *Journal of Marriage and Family, 67*(2), 370-386.
- Tekin, E. (2005). Child care subsidy receipt, employment, and child care choice of single mothers. *Economic Letters, 89*, 1-6.
- Tout, K., Zaslow, M., Halle, T., & Forry, N. (2009). *Issues for the Next Decade of Quality Rating and Improvement Systems*. Washington, DC: Prepared by Child Trends for the Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.
- Usdansky, M. L. & Wolf, D. A. (2008). When child care breaks down: Mothers' experiences with child care problems and resulting missed work. *Journal of Family Issues, 29*(9), 1185-1210.
- Uttal, L. (1999). Using kin for child care: Embedment in the socioeconomic networks of extended families. *Journal of Marriage and the Family, 61*(4), 845-857.
- Weber, R. B., Grobe, D., Davis, E. E., Kreader, J. L., & Pratt, H. C. (2007, May). Child care market rate survey practices of states, territories, and tribes. Corvallis, OR: Family Policy Programs, Oregon State University. Retrieved July 6, 2008, from <http://www.researchconnections.org/SendPdf?resourceId=12266>
- Weinraub, M., Shlay, A. B., Harmon, M., & Tran, H. (2005). Subsidizing child care: How child care subsidies affect the child care used by low-income African American families. *Early Childhood Research Quarterly, 20*(4), 373-392.

Table 1. Description of Wait List Longitudinal Data Set

<b>No Change in Child Care Subsidy Status (N=30)</b>						
Pre-Time 1 (no subsidy)	Time 1 (no subsidy)	Time 1 (subsidy)	Pre-Time 2 (subsidy)	Time 2 (no subsidy)	Time 2 (subsidy)	N
-	-					0
X				X		5
			-		-	0
	X			X		9
		X	X			5
		X			X	11
			-		-	0
<b>Change in Child Care Subsidy Status (N=56)</b>						
Pre-Time 1 (no subsidy)	Time 1 (no subsidy)	Time 1 (subsidy)	Pre-Time 2 (subsidy)	Time 2 (no subsidy)	Time 2 (subsidy)	N
X		X				22
X			X			5
X					X	11
	-	-				0
	X		X			3
	X				X	3
		X		X		5
			X	X		7
<b>Attrited (Not in Wave II, N=12)</b>						
Pre-Time 1 (no subsidy)	Time 1 (no subsidy)	Time 1 (subsidy)	Pre-Time 2 (subsidy)	Time 2 (no subsidy)	Time 2 (subsidy)	N
-	X	X				12
<b>Total Sample:</b>						
<b>98</b>						

Table 2. Means and Standard Deviations by Subsidy Status

Variable	Wait List Sample					Fragile Families Sample				
	Whole Sample (N=98)		No Subsi dy (N=54 )	Subsi dy (N=44 )	sig. <sup>a</sup>	Whole Sample (N=459)		No Subsidy (N=342)	Subsidy (N=117)	sig. <sup>a</sup>
	Mean	SD	Mean	Mean		Mean	SD	Mean	Mean	
<b>Dependent Variables</b>										
Proportion Experienced a Child Care-Related Employment Disruptions	0.276	0.449	0.407	0.182	**	0.150	0.358	0.167	0.103	*
Number of Child Care-Related Work Disruptions	0.378	0.725	0.778	0.250	**	0.368	1.199	0.389	0.308	
Difference in Child Care-Related Work Disruptions (Longitudinal Analysis)	0.000	0.703	0.367	-0.300	**	NA	NA	NA	NA	
<b>Individual-Level Predictors</b>										
Focal Child's Age	4.271	2.233	3.914	4.708	†	NA	NA	NA	NA	
Proportion of the Sample Aged 3 Years <sup>c</sup>	NA	NA	NA	NA		0.529	0.500	0.515	0.573	
Mother's Education										
Less than high school	NA	NA	NA	NA		0.357	0.480	0.366	0.333	
High school/GED/vocational	0.347	0.478	0.371	0.318		0.397	0.490	0.377	0.453	
Some college/college	0.653	0.478	0.630	0.682		0.235	0.425	0.243	0.214	
Race										
Hispanic	0.133	0.341	0.130	0.136		0.407	0.492	0.395	0.444	
Black	0.510	0.502	0.519	0.500		0.420	0.494	0.412	0.444	
Non-Hispanic/Non-Black	0.276	0.449	0.278	0.273		0.172	0.378	0.193	0.111	*
Maternal Depression	NA	NA	NA	NA		0.192	0.394	0.175	0.239	
Mother in School	0.224	0.419	0.111	0.364	***	0.322	0.468	0.316	0.342	

Work Hours	35.592	12.314	35.972	35.125		35.122	10.524	35.652	33.573	†
Non-Traditional Work Hours	0.418	0.496	0.426	0.409		0.479	0.500	0.465	0.521	
Number of Other Adults in the Household (Social Support)	0.439	0.675	0.556	0.296	*	3.200	1.344	3.263	3.017	†
Has Non-Governmental Help Paying for Child Care (Social Support)	0.337	0.475	0.389	0.273		0.087	0.282	0.061	0.162	**
<b>Family-Level Predictors</b>										
Household Income <sup>b</sup>	27839	10731	27853	27822		16851	9513	17814	14037	***
Number of Children in Care aged 12/Under in Care	1.592	0.860	1.500	1.705		NA	NA	NA	NA	
<b>Child Care Predictors</b>										
Used Center Care for Focal Child	0.510	0.502	0.426	0.614	*	0.403	0.491	0.301	0.701	***
Used Multiple Child Care Arrangements	0.265	0.444	0.222	0.318		0.174	0.380	0.193	0.120	*
Financial Burden of Care/Child	0.153	0.156	0.184	0.114	*	0.162	0.190	0.167	0.085	***
Out-of-Pocket Costs	NA	NA	NA	NA		0.035	0.184	0.038	0.0256	
<b>Community-Level Predictors</b>										
Percent Unemployed	0.29 <sup>d</sup>	NA	NA	NA		0.108	0.068	0.103	0.123	**
Median Housing Cost <sup>b</sup>	425,000 <sup>e</sup>	NA	NA	NA		114243	102065	120581	95720	*

*Note.* As this sample was pooled over time points, the same parents may be counted more than once. <sup>a</sup> Significance of difference in means. <sup>b</sup> Household income and median housing cost were inflated to 2005 dollars for ease of comparison with the Wait List data. <sup>c</sup> As compared to the proportion of the sample aged 1 year. <sup>d</sup> FedStats. (2007). Montgomery County, Maryland. Retrieved September 19, 2007, from <http://www.fedstats.gov/qf/states/24/24031.html> <sup>e</sup> Maryland Department of Planning. (2005). Workforce housing background briefing. Retrieved September 19, 2007, from [http://www.mdp.state.md.us/pdf/WorkForceHousing\\_2005\\_rR\\_Backup.ppt](http://www.mdp.state.md.us/pdf/WorkForceHousing_2005_rR_Backup.ppt)

†  $p \leq .10$ , \*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$ , control variables are tested using two-tailed tests, dependent variables with one-tailed tests

Table 3. Wait List Regressions

	Cross-Sectional Model		Longitudinal Model
	Child Care-Related Work Disruption		Number of Child Care-Related Work Disruptions
	Model 1		Model 2
	B	e <sup>B</sup>	B
Subsidy	-1.367 (.637)*	0.255	-0.358 (.168)*
<i>Individual-Level Predictor</i>			
Child's Age	0.030 (0.126)	1.031	
<i>Family-Level Predictor</i>			
Number Children in Care Under 12	0.383 (0.257)	1.467	
<i>Child Care Predictors</i>			
Center	-0.186 (0.519)	0.831	
Financial Burden (per child)	0.392 (1.91)	1.481	
Constant	-1.326 (.777)*		0.233 (0.108)*
R <sup>2</sup>	0.093		0.060
Log Likelihood	-52.347		
N	98		86

Note. Significance based on one-tailed tests. \*  $\leq .05$ , \*\*  $\leq .01$ , \*\*\*  $\leq .001$

Table 4. Fragile Families Regressions

	Child Care-Related Work Disruption Cross-Sectional Model	
	B	e <sup>B</sup>
Subsidy	-0.659 (0.364)*	0.517
<i>Individual-Level Predictors</i>		
Child's Age	0.363 (0.305)	1.437
Maternal Education (Less than High School as reference)		
HS/GED/Vocational	0.183 (0.325)	1.200
Associates/College	-0.167 (0.426)	0.847
Race (Non-Hispanic/Non-Black as reference)		
Hispanic	0.454 (0.459)	1.575
Black	0.533 (0.452)	1.705
Maternal Depression	0.658 (0.331)*	1.932
Mother in School	0.506 (0.298)*	1.659
Maternal Work Hours	-0.012 (0.012)	0.988
Maternal Work During Non-Traditional Hours	0.468 (0.292)	1.597
Number of Adults in Household (Social Support)	0.168 (0.104)*	1.183
Help from Non-Gov Source (Social Support)	-0.228 (0.578)	0.796
<i>Family-Level Predictor</i>		
Household Income (log)	0.147 (0.164)	1.158
<i>Child Care Predictors</i>		
Center Care	0.241 (0.288)	1.273
Use of Multiple Child Care Arrangements	0.418 (0.351)	1.519

Financial Burden (per child)	0.787 (0.772)	2.196
Imputed Out-of-Pocket Costs	-0.440 (0.762)	0.644
<i>Community-Level Predictors</i>		
Percent Unemployed	1.129 (2.354)	3.094
Median Housing Price (log)	0.187 (0.109)*	1.206
Constant	-6.483 (1.952)***	
R <sup>2</sup>	0.066	
Log Likelihood	-180.213	
N	459	

---

*Note.* Significance based on one-tailed tests. \*  $\leq .05$ , \*\*  $\leq .01$ , \*\*\*  $\leq .001$