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

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Abstract

With the passage of welfare reform, support for low-income parents 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 association between receiving a child care subsidy and 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.

Keywords

child care; subsidy; employment; job tenure; work disruptions

For low-income single mothers with young children, child care challenges can be a significant barrier 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 lowering the cost of child care, thus making high quality, reliable child care more affordable. 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). Fewer studies have addressed the impact of child care subsidies on experiences of child care-related work disruptions and employment retention (see Lee et al., 2004).

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 resulting from provider unreliability were predictive of job exits among mothers living at or under 50% of the poverty threshold.

Two explanations for the relation 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 prioritize their familial responsibilities and terminate employment (Chaudry, 2004; Dodson, 2006). Second, employers are 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 data from the Fragile Families and Child Wellbeing study, a national sample of children born in large U.S. cities between 1998 and 2000, Usdansky and Wolf (2008) found 31% 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% 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 disruptions¹, or disruptions in one’s ability to work during scheduled hours. Two questions are posed. First, is receipt of a child care subsidy a negative predictor 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 by using two unique datasets. The first includes longitudinal survey and verified administrative data collected in Montgomery County, Maryland using a quasi-experimental design. The second is a subsample of families from the Fragile Families and Child Wellbeing study who were either financially eligible for or currently receiving a child care subsidy. The use of multivariate change analyses applied to quasi-experimental data also sets this study apart from current literature in the field.

Literature Review

Child Care Subsidies and Child Care-Related Work Disruptions

Most published studies have found receipt of a child care subsidy to be negatively associated with 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

¹In the Fragile Families survey, both work and school disruptions are captured in the item addressing child care disruptions. Thus, school disruptions are included in the child care-related work disruption estimates from the Fragile Families study. Only a small portion of the analytic sample were enrolled in school and not in paid work (11%), of the remaining sample, 21% were engaged in paid work and school, and 68% were engaged in paid work only. For the sake of convenience, both work and school disruptions are referred to as child care-related work disruptions throughout this paper.

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% lower among subsidy recipients. Weinraub, Shlay, Harmon, 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 participation in four of seven welfare demonstration programs offering expanded child care assistance to result in reduced child care problems. 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 analysis of both a subsample of low-income single mothers financially eligible for CCDF subsidies from a national data set and a local sample of mothers eligible for a child care subsidy collected as part of quasi-experimental study.

Additional Influences on Child Care-Related Work Disruptions

Usdansky 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 parents and parents of younger children. Huston et al. also found depressive symptoms to be associated with a greater likelihood of experiencing a child care-related work disruption. 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. Both Usdansky and Wolf (2008) and Huston et al. (2002) found differences in child care-related work disruptions by race/ethnicity, though no consistent patterns emerged. These authors also both found social support and higher household income to be protective factors against child care-related work disruptions. This latter finding was supported by Gordon et al. (2008), who found unreliable child care to be associated with job exits only among impoverished families ($\leq 50\%$ FPL). Though neither of these studies 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).

Child Care Characteristics—Previous literature has found the use of multiple care arrangements and type of care to be related to child care reliability. A positive association between using multiple child care arrangements and experiencing a child care-related work disruption has been documented by multiple studies (e.g., Huston et al., 2002; Usdansky and

Wolf, 2008; Scott, London, & Hurst, 2005). Scott et al. (2005) concluded this unreliability results from confusion that can occur when working with multiple providers.

Gordon et al. (2008) found child care-related work disruptions resulting from provider unreliability to be more likely among mothers using home-based care 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. 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.

Based on these findings and other work focusing on the association between type of care and child care reliability (e.g., Henly & Lyons, 2000; Scott et al., 2005), authors have hypothesized that provider motivation and the circumstances leading one to be a child care provider are associated with child care reliability. Henly and Lyons (2000) found that among informal providers, those who offer care as a favor to family members were less reliable than those who perceive child care to be their profession. Uttal (1999) found parents' choice of a home-based provider may be swayed by the temporary economic needs of family members, particularly among Mexican American and African American families. Scott et al. (2005) theorized the instability of informal care, especially among unpaid providers, to be a function of the situation that leads to them to provide care: their own unemployment, illness, or temporary disability. Thus, it may be that parents trade reliability for free care, or choose to use an unemployed family member or friend, even though this care may be less dependable than formal arrangements.

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.

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

The data from this study come from two sources: the Wait List study, a quasi-experimental study of the effects of child care subsidies in Maryland, and the Fragile Families and Child Wellbeing (Fragile Families) study (Reichman et al., 2001), a national study of children born in urban areas between 1998 and 2000.

Wait List Data—The Wait List study sample consists of forty predominately single, low-income parents from metropolitan Montgomery County, Maryland. Data were collected through a pre/post quasi-experimental design, thus providing 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 study 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 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 were eligible for inclusion in the 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 2005ⁱⁱ 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 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 retrospective questions for the three months prior to changing subsidy status in addition to questions about their current experiences.ⁱⁱⁱ

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. The cross-sectional Wait List data file has 98 observations (44 of which capture data during subsidy receipt). 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. The longitudinal file has 86 observations (56 of which represent changes in subsidy status). Table 1 provides a synopsis of how the longitudinal database was constructed. Analyses with each data file incorporated a family

ⁱⁱInterviewing 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.

ⁱⁱⁱThe 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 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.

identification clustering variable used to appropriately adjust standard errors for the use of non-independent observations.

Fragile Families and Child Wellbeing Data—The Fragile Families study is a national, longitudinal study of urban families living in economically and politically diverse cities throughout the United States. A stratified random sample of 4,700 primarily single, low-income parents with children born between 1988 and 2000 was used for this study. For a detailed description of the Fragile Families sample design, see Reichman et al. (2001).

This study used a subsample from the Fragile Families data of low-income single mothers with a singleton child^{iv} who were financially eligible for a child care subsidy. Due to the relatively long gap of two years between data collection waves with the Fragile Families data, longitudinal analyses of this dataset were not conducted. 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^v (N= 477), and had non-missing responses on any key variables of interest (N= 459). As data came from both the one- and three- year data collection waves, mothers could have a maximum of two observations in this data file. A family identification clustering variable was included to appropriately adjust the standard errors for use of non-independent observations. The Fragile Families analytic sample contained 459 mothers (117 of whom were receiving a subsidy).

The selection criteria detailed above were used to make the demographics of the Fragile Families analytic sample similar to those of Wait List participants, isolate the effect of receiving a child care subsidy, and eliminate child care arrangements that are not eligible to receive a child care subsidy (i.e. parent/sibling/self-care).^{vi} However, these selection criteria exclude the majority of the Fragile Families study participants from our analytic sample. Comparisons were made to identify differences between families in the analytic sample and families with multiple children who would otherwise meet the sample criterion. Compared to families in the analytic sample, a higher proportion of single working mothers with multiple children received a child care subsidy (42% vs. 34%) and used center-based care (47% vs. 40%). Additionally, single working mothers with multiple children were less educated than members of the analytic sample, had more people living in their household, work slightly longer hours, had an older focal child, and had a higher family income (mean difference of approximately \$3,000 per year). Finally, single working mothers with multiple children were less likely to use relative care and multiple arrangements than members of the analytic sample. Based on the work of Usdansky and Wolf (2008) and Huston et al. (2002), single working families with multiple children were more likely to have protective factors against child care-related work disruptions than mothers in our analytic sample.

^{iv}Studying families with only one child allows for further isolation of the association between child care subsidy receipt and child care-related work disruptions.

^vFinancial 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.

^{vi}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.

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 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 is three months for families whose child care subsidy status did not change in the three months prior to the interview and reflects 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^{vii}: Focal child's age is a continuous parent-report indicator of the focal child's age in years. The number of children aged twelve or under in care and 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, are also based on parent report. Center-based programs include child care centers, after-school programs, and Head Start. Non-center providers include family child care providers and informal providers including friends, neighbors, and relatives.

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),

^{vii}Due to the conservative nature of longitudinal analyses and the small sample size, control variables were included in the cross-sectional analyses only.

maternal race (Hispanic, non-Hispanic Black, and non-Hispanic/non-Black^{viii}), 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 indicator of maternal depression was created 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 includes day care centers and Head Start/Early Head Start. Non-center providers includes family child care providers and informal providers including friends, neighbors, and relatives. Household income was based on maternal report. Finally, two indicators of the community economic context, percent of civilian workforce (16 and older) unemployed and median housing value, were extracted from a restricted data file containing census tract data from summary files of the 2000 Census. These indicators serve as proxies for the availability of informal providers and child care affordability in the local child care market, respectively.

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 subsidy receipt and the probability of experiencing a child care-related work disruption controlling for individual, family, child care, and community variables. In the Wait List cross-sectional models, control variables were limited to: focal child's age, number of children aged twelve or under in care, and type 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 were 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

^{viii}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% of the sample in this race category identified as Asian, American-Indian, and persons of an "other" race.

household, an older focal child ($p \leq .10$), 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. Subsidy recipients had slightly fewer adults living in the household ($p \leq .10$) and worked slightly fewer hours than non-subsidy recipients ($p \leq .10$). Finally, on average, 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 had a lower ratio of out-of-pocket costs to household income, were more likely to use center-based care, and were less likely to experience a child care-related work disruption than non-subsidy recipients. Additionally, bivariate analyses of the longitudinal Wait List sample found a significant difference in number of child care-related work disruptions among families who changed subsidy status, with fewer disruptions experienced while receiving a subsidy.

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 75% lower for parents receiving a subsidy than parents not receiving a subsidy. None of the control variables included in this analysis was a statistically significant predictor 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^{ix} 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 51% lower than the odds for non-subsidized parents. Maternal depression, living with more adults in the household, and living in an area with a higher median housing price were also positively associated with experiencing a child care-related work disruption.

Discussion

The objective 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

^{ix}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.

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 association between child care subsidy receipt and experiences of child care-related work disruptions was documented, the magnitude of this relationship was relatively small. There are several explanations for this. Child care subsidies are designed to make reliable child care more affordable. However, parents may choose to use unreliable providers due to a lack of information on the provider's reliability or limited choices among available providers who accept child care subsidies. Parents using a subsidy may also make a volitional choice to use a provider that is not reliable, but to whom they are personally committed (e.g., family/friend) or who has other characteristics highly valued by the parent.

Alternately, it may be that cost and reliability of care are not strongly associated. Bivariate correlations using the Fragile Families and Wait List data found weak correlations between out-of-pocket costs and child care-related work disruptions. One would expect formal, and usually more expensive, providers to offer more reliable care. However, current literature on the association between type of care and child care-related work disruptions reveals more nuanced associations that depend upon individual provider characteristics, such as motivation or personal circumstances, which may not be associated with the price of 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, maternal depressive symptoms, having more adults in the household, and living in a community with higher child care costs (as approximated by a measure of median housing price) were all risk factors for experiencing a child care-related work disruption. It was surprising to find that having more adults in the household, which was included as a proxy for social support and as a possible source of emergency care, was a positive predictor of experiencing a child care-related work disruption. It may be that parents living with more adults are doing so out of financial necessity, or that the other adults in the household are working and thus are not available to provide emergency care. The positive association between child care prices in a local market and child care-related work disruptions was not surprising given Kisker and Silverberg's (1999) finding that parents without affordable child care options were more likely to experience a child care-related work disruption than parents with affordable options.

This study is limited by a few factors. First, due to data limitations, some variables of interest (e.g., the number of affordable child care options parents had) were not included in the multivariate models. Second, as verified administrative data was not available with the Fragile Families data, measurement error, particularly with the family income and child care subsidy variables, may have confounded results. Third, due to the small sample size and mediocre response rate of the Wait List study and the restrictive sample selection criteria of the Fragile Families study, the possibility of selection effects can not be ignored and the generalizability of findings may be limited. Finally, due to question wording in the Fragile Families survey, it was impossible to disaggregate school and work disruptions in analyses of this sample. Thus, some disruptions captured in the Fragile Families analyses may reflect class absences, which are arguably less policy-relevant than work absences.

Despite these limitations, this research furthers the field by testing the association between child care subsidies and child care-related work disruptions using two unique samples and multiple analytic methods and consistently finds 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, 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 (QRIS), 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). Including indicators of reliability in QRIS systems could provide valuable information to parents. 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 systems to include indicators related to child care reliability (e.g., availability of contingency plans for provider emergencies) in their quality assessments. These measures would not only educate parents, 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 unique 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 focus on more nuanced analyses of the mechanisms through which child care subsidy receipt reduces parents' experiences of child care-related work disruptions.

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Table 1

Description of Wait List Longitudinal Data Set

No Change in Child Care Subsidy Status (N=30)						
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
Change in Child Care Subsidy Status (N=56)						
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
Attrited (Not in Wave II, N=12)						
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					12
Total Sample:						98

Note. "Pre-Time 1" and "Pre-Time 2" refer to retrospective data collected at the first and second data wave. "Time 1" and "Time 2" refer to the two data collection waves.

Table 2

Means and Standard Deviations by Subsidy Status

	Wait List Sample		Fragile Families Sample	
	No Subsidy (N=54)	Subsidy (N=44)	No Subsidy (N=342)	Subsidy (N=117)
	Mean	Mean	Mean	Mean
Dependent Variables				
Proportion Experienced a Child Care-Related Employment Disruptions	0.407	0.182	0.167	0.103
Number of Child Care-Related Work Disruptions	0.778	0.250	0.389	0.308
Difference in Child Care-Related Work Disruptions (Longitudinal Analysis)	0.367	-0.300	NA	NA
Individual-Level Predictors				
Focal Child's Age	3.914	4.708	NA	NA
Proportion of the Sample Aged 3 Years ^c	NA	NA	0.515	0.573
Mother's Education				
Less than high school	NA	NA	0.366	0.333
High school/GED/vocational	0.371	0.318	0.377	0.453
Some college/college	0.630	0.682	0.243	0.214
Race				
Hispanic	0.130	0.136	0.395	0.444
Black	0.519	0.500	0.412	0.444
Non-Hispanic/Non-Black	0.278	0.273	0.193	0.111
Maternal Depression	NA	NA	0.175	0.239
Mother in School	0.111	0.364	0.316	0.342
Work Hours	35.972	35.125	35.652	33.573
Non-Traditional Work Hours	0.426	0.409	0.465	0.521
Number of Other Adults in the Household (Social Support)	0.556	0.296	3.263	3.017
Has Non-Governmental Help Paying for Child Care (Social Support)	0.389	0.273	0.061	0.162
Family-Level Predictors				
Household Income ^b	27853	27822	17814	14037
Number of Children in Care aged 12/Under in Care	1.500	1.705	NA	NA
Child Care Predictors				

	Wait List Sample		Fragile Families Sample			
	No Subsidy (N=54)	Subsidy (N=44)	sig. ^a	No Subsidy (N=342)	Subsidy (N=117)	sig. ^a
	Mean	Mean		Mean	Mean	
Used Center Care for Focal Child	0.426	0.614	*	0.301	0.701	***
Used Multiple Child Care Arrangements	0.222	0.318		0.193	0.120	*
Ratio of Out-of-Pocket Cost Per Child: Household Income	0.184	0.114	*	0.167	0.085	***
Community-Level Predictors						
Percent Unemployed	NA	NA		0.103	0.123	**
Median Housing Cost ^b	NA	NA		120581	95720	*

Note. As this sample was pooled over time points, the same parents may be counted more than once.

^aSignificance of difference in means.

^bHousehold income and median housing cost were inflated to 2005 dollars for ease of comparison with the Wait List data.

^cAs compared to the proportion of the sample aged 1 year.

^dFedStats. (2007). Montgomery County, Maryland. Retrieved September 19, 2007, from <http://www.fedstats.gov/qf/states/24/24031.html>

^eMaryland 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

[†]p ≤ .10,

* p ≤ .05,

** p ≤ .01,

*** p ≤ .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	
	Logit Model 1		OLS Model 2
	B	e ^B	B
Subsidy	-1.4 (0.600) **	0.246	-0.358 (.168) *
<i>Individual-Level Predictor</i>			
Child's Age	0.033 (0.125)	1.034	
<i>Family-Level Predictor</i>			
Number Children in Care Under 12	0.355 (0.228)	1.427	
<i>Child Care Predictors</i>			
Center	-0.152 (0.527)	0.859	
Constant	-1.227 (0.581) *		0.233 (0.108) *
R ²	0.092		0.060
Log Likelihood	-52.372		
N	98		86

Note. Significance based on one-tailed tests.

*
≤ .05,

**
≤ .01,

≤ .001

Table 4

Fragile Families Regressions

Child Care-Related Work Disruption Cross-Sectional Logit Model		
	B	e^B
Subsidy	−0.720 (0.352) *	0.487
<i>Individual-Level Predictors</i>		
Child's Age	0.290 (0.303)	1.336
Maternal Education (Less than High School as reference)		
HS/GED/Vocational	0.189 (0.323)	1.208
Associates/College	−0.139 (0.418)	0.870
Race (Non-Hispanic/Non-Black as reference)		
Hispanic	0.512 (0.454)	1.668
Black	0.547 (0.447)	1.729
Maternal Depression	0.650 (0.329) *	1.915
Mother in School	0.478 (0.299)	1.614
Maternal Work Hours	−0.010 (0.012)	0.990
Maternal Work During Non-Traditional Hours	0.459 (0.290)	1.583
Number of Adults in Household (Social Support)	0.171 (0.104) *	1.187
Help from Non-Gov Source (Social Support)	−0.297 (0.572)	0.743
<i>Family-Level Predictor</i>		
Household Income (log)	0.123 (0.153)	1.131
<i>Child Care Predictors</i>		
Center Care	0.263 (0.283)	1.301
Use of Multiple Child Care Arrangements	0.422 (0.355)	1.524
<i>Community-Level Predictors</i>		
Percent Unemployed	0.927 (2.265)	2.528
Median Housing Price (log)	0.181 (0.104) *	1.198
Constant	−6.163 (1.793) ***	
R ²	0.069	
Log Likelihood	−180.849	
N	459	

Note. Significance based on one-tailed tests.

*
≤ .05,

**
≤ .01,

≤ .001