Sick Days, Snow Days, and the Labor Market Impacts of Caretaking Inequities*

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November 3, 2025

Abstract

We study how disruptions to childcare schedules impact the labor supply and downstream labor market outcomes of parents in the United States, focusing in particular on events where children cannot attend childcare in the first place due to illness or weather-related issues. Using the Current Population Survey and variation at the county-month level in either snowfall or flu-related mortality, we find that mothers bear the entire brunt of these disruptions in terms of missing work. These effects are concentrated among mothers of higher socioeconomic status and have remained stable over the 21st century. While we do not detect significant labor market impacts one year after exposure to potential childcare disruptions, our findings add to our understanding of the determinants of labor market penalties associated with motherhood and point to the potential usefulness of workplace policies to accommodate childcare problems.

JEL Classification: J16, J22

Keywords: Gender Gap, Child Penalty, Labor Supply, Childcare

*We thank Marika Cabral, Matt Notowidigdo, Joanna Venator, and seminar participants at the Nebraska Labor Summit for helpful comments. Sanjeet Thapa provided excellent research assistance. All errors are our own.

1 Introduction

Caretaking responsibilities are gendered, with mothers spending more time caring for children than fathers. This imbalance leads to differences in the labor market, with mothers more than twice as likely as fathers to cite childcare problems as their reason for not seeking work or for working part-time (Chicago Fed, 2024). While lack of access to childcare understandably impacts mothers' labor force decisions, even families with full-time childcare or schooling experience unexpected disruptions to this care. Many of these disruptions, such as illness or severe weather, are non-transferable demands on parental time. What is the impact of unexpected caretaking demands on parental labor supply, and are parents' responses to these demands gendered?

Using a sample of parents drawn from the Current Population Survey, with monthly data spanning two decades, we measure the impact of severe flu seasons and high snowfall seasons on parents' reported ability to work. We gather data on monthly weather patterns from the National Oceanic and Atmospheric Administration (NOAA) and data on flu- and pneumonia-related deaths from the CDC Wide-ranging ONline Data for Epidemiologic Research (WONDER). With these two sources of exogenous variation, we find a clear pattern: the responsibility for caring for children during unexpected disruptions falls entirely on mothers. We detect that mothers report working fewer hours in months with worse snowfall or flu-related mortality rates and cite needing to work part-time due to childcare problems. We detect no such effects for fathers and find no such sex-based heterogeneity in impacts for childless individuals. The effects we find are additionally concentrated among mothers of children aged less than 5 and are larger still for mothers of relatively high socioeconomic status. We also test whether our estimated impacts have changed between the first two decades of the 21st century and find little evidence of either amplification or attenuation.

Finally, we use data from the CPS Annual Social and Economic Supplement, which allows us to determine individuals' snow and illness exposure one year prior, to investigate whether potential childcare disruptions are associated with measurable decreases in labor supply one year after they happen. We obtain mainly null findings in this analysis, suggesting that mothers may be able to compensate for childcare disruptions with some degree of success. However, these adjustments themselves are likely to be costly, and the extent to which the need for them factors into maternal preferences for flexible workplace arrangements or inhibits career progression will likely be worthwhile avenues for future research.

Related Literature

This paper's primary contribution comes from making progress in identifying the factors that cause mothers' and fathers' career paths to diverge after parenthood. Mothers experience a sizable and lasting drop in earnings after the birth of their first child, a finding that has been documented across many countries [Kleven et al., 2019, 2024, Jack et al., 2025]. However, the mechanisms behind this labor market penalty are less understood. Andresen and Nix [2022] shows that this earnings drop cannot be explained by health impacts of giving birth or fathers' potential advantage in the labor market, and Kleven et al. [2021] rules out biology as a driving factor. It is clear, though, that mothers labor force participation is tied to childcare availability. Consistent childcare, including school, allows mothers to work and earn more than they do when school and childcare are not available, such as during summer vacation [Price and Wasserman, 2025, Gibbs et al., 2024, Humphries et al., 2024]. Nevertheless, the labor market penalty for mothers after childbirth remains even with consistent childcare.

Childcare availability may have a stronger impact on mothers because mothers spend more time on caretaking compared to fathers. Cubas et al. [2021] uses the American Time Use Survey to show that mothers spend significantly more time on "caring for and helping household members" than fathers, both overall and during prime working hours, while Cowan et al. [2024] shows that mothers' time use is impacted more by the school year than fathers'. This difference in caretaking time is not solely due to preferences — Buzard et al. [2025] finds that school principals disproportionately call mothers when needing parental involvement, even when provided contact information for both parents, indicating that external and societal sources play a role in the gendered division of caretaking responsibilities. Our study complements Buzard et al. [2025] well by focusing on other sources of external demands on parental time.

This difference in time spent on caretaking points to one reason behind mothers' need for greater flexibility in the workplace. Studying the overall gender gap in earnings, Goldin [2014] highlights women's demand for flexible work arrangements, showing that high returns to hours worked contributes substantially to the persistent gender gap in earnings. Experimental evidence among call center workers shows that mothers have a higher willingness to pay to work from home [Mas and Pallais, 2017]. While caretaking and workplace flexibility are linked, increased childcare availability is not enough to close the gender gap in earnings.

Our work establishes one clear reason why: caretaking needs can be both unpredictable and non-transferable, requiring parental time. By using the universal experiences of childhood

illness and weather disruptions, we show that, consistent with mothers spending more time on childcare overall, mothers also take on the bulk of unexpected caretaking demands. Our paper shows that while robust childcare and schooling systems may help increase mothers' ability to work, they are not a complete solution to the gap in earnings between mothers and fathers, and additional workplace policies designed to better accommodate unanticipated childcare disruptions may be useful.

The remainder of the paper proceeds as follows. Section 2 describes our sources of data for both dependent and independent variables, along with our empirical strategy for estimating the impacts of potential childcare disruptions on the contemporaneous labor supply of parents. Section 3 describes our headline findings, along with heterogeneity analyses and tests for one-year-out impacts. Section 4 discusses potential directions for future research before concluding.

2 Data and Empirical Strategy

2.1 Current Population Survey Data

Our primary analysis sample comes from the 2000-2019 waves of the Current Population Survey. The CPS has several features that makes it ideally suited for our purposes — its large sample size and time horizon enables us to both detect precise estimates and to study how these estimates have changed over the course of the pre-pandemic 21st century. Moreover, the survey is conducted at a *monthly* level, allowing us to leverage within-year variation in factors such as snowfall and illness propagation, and also contains precise county information for individuals living in sufficiently populous areas,[1] thereby allowing us precise measurement of exposure to our exogenous variables of interest.

The CPS also contains basic demographic and socioeconomic information that allows us to easily identify parents in the sample and derive basic measures of labor force attachment. Most important, however, is that the CPS contains a vector of questions that makes it ideal for studying the contemporaneous effects of childcare disruptions on labor supply. The CPS asks respondents whether they worked part-time (specifically, fewer than 35 hours) or were

[1] To the extent that more sparsely populated areas have less public transit and longer travel distances, our focus on more populous counties may result in our underestimating the impact of weather-related disruptions on labor supply. While less population density also reduces the transmissibility of disease, our baseline measure of illness will contend with this somewhat by being a per-capita measure.

absent from work (zero hours) in the previous week, and, if so, why. Potential options include fairly typical reasons, such as slack work conditions, holidays, or the respondent only being able to find part-time work in the first place. However, other reasons are more directly related to our sources of exogenous variation, such as missing work due to weather-related issues, the respondent being sick themselves, or, critically, childcare problems. These responses will form our baseline dependent variables when studying the (very) short-run effects of childcare disruptions on labor force attachment.

We limit our CPS sample to individuals aged 20 to 45 and who are identified as either the household head or the spouse of the household head in the survey and live in a county large enough so as to not be suppressed in the survey. Since we are primarily interested on the impact of childcare disruptions on the contemporaneous labor supply of working parents, we additionally limit our sample to individuals who report being employed.[2] Table 1 presents summary statistics for our analysis sample in terms of hours worked the previous week as well as the frequency with which respondents report either working part-time or being absent last week for various reasons. As is well-known in the literature, mothers work fewer hours than fathers, and the data suggest that childcare problems are a notable driver of this gap — across the entire sample, mothers are approximately 20 pp more likely to have worked part-time in the previous week than fathers, and slightly over 3 pp (or 15%) of this gap appears to be directly attributable to childcare problems. However, missing work *entirely* due to childcare problems alone appears to be a very rare event, even for mothers of children under 5. Gender differences in part-time usage and hours worked remain for childless individuals as well, though the disparities are considerably smaller in magnitude than those for parents.

2.2 Sources of Exogenous Variation

While the CPS contains a considerable amount of useful information, it does not contain direct information about local weather conditions or the day-to-day health of respondents. We thus supplement our CPS sample with external measures that will be strongly related to the likelihood that households in our CPS sample face childcare disruptions related to weather or illness in a given week. Specifically, we gather data on snowfall and flu-related mortality at the county-year-month level, which we now describe.

Weather data comes from the Global Summary of the Month (GSOM) data files, collected

[2]We also cannot observe whether individuals are unemployed specifically because of childcare-related issues. We will turn to extensive-margin labor supply impacts in Section 3.3.

by the National Oceanic and Atmospheric Administration (NOAA). This series aggregates data from weather stations around the world to produce statistics at the station-month level, including variables related to precipitation, temperature, wind, and so on.[3]

We gather data from the universe of stations belonging to the U.S. Cooperative Network, which is the oldest and largest weather network in the United States, having started data collection in 1890. We focus on this particular network due to its complete geographic and temporal coverage of the United States, along with it reliably possessing detailed information pertaining to snowfall that will be key for our research design. We map stations to counties by computing distances of stations from county geographic centroids using longitude and latitude coordinates. For all counties, we average data from all stations within a 50 kilometer radius of the geographic centroid to construct a county-month panel of weather statistics. The key independent variable we gather from this data is the amount of snow (reported in millimeters in the raw data) a given county experienced in the previous month, which we convert to inches for ease of interpretation. Across the United States in the 2000-2019 period, the average snowfall in a given county in a given month is approximately 2 inches, with a standard deviation of around 5 inches.

County-level data on the number of reported flu cases spanning our time period of interest are not reliably available. For exogenous variation related to the probability of illness in a household, we instead use mortality data from the CDC Wide-ranging ONline Data for Epidemiologic Research (WONDER) database. For each county-year-month combination, we take the total number of deaths due to influenza or pneumonia[4]-related reasons before converting these numbers to deaths per 100,000 residents using Census county population estimates[5]. While death rates in a county due to influenza are certainly related to the degree of propagation of the disease in the area, they may also relate to the county's age composition, since more elderly individuals are much more susceptible to pneumonia than their younger counterparts — to account for this and other county-specific factors, we include county-level fixed effects in our empirical specification.

[3]For more documentation, refer to www.ncei.noaa.gov/data/gsom/doc/GSOM_documentation.pdf

[4]Pneumonia being the primary complication from influenza that actually results in fatality.

[5]We choose this scaling for ease of interpretation, as an additional death per 100,000 residents is roughly equivalent to a one-standard-deviation increase, with the mean rate per 100k being 1.67. The CDC reports when a county has zero deaths in a month but suppresses the exact count if it is between 0 and 10 — we code such cases as missing for lack of a better alternative.

2.3 Empirical Strategy

Our baseline specification simply studies the impact of increased exposure to snow or illness on labor supply. Specifically, our baseline strategy estimates the following equation:

$$Y_{ictm} = \lambda_c + \tau_t + \gamma_m + \boldsymbol{\beta X_i} + \delta T_{ctm} + \varepsilon_{ictm}, \tag{1}$$

where Y_{ictm} is the outcome of interest (e.g., hours worked the previous week or working part-time last week due to childcare problems) for individual i in the CPS, measured in county c in year t and month m. We include fixed effects for county, year, and month to account for geographic, annual, and seasonal trends in the dependent and treatment variables. We additionally include vectors of demographic characteristics $\boldsymbol{X_i}$ to account for individual factors that may relate to the dependent or independent variable, including controls for race, marital status, education, and a cubic polynomial in age.

The parameter of interest is thus δ, which captures the impact of a unit increase in the independent variable T_{ctm} (namely, inches of snow or flu deaths per capita) in the relevant county-year-month. Identifying variation comes from county-level differences in snowfall or illness relative to trend, which may happen within counties across time, across counties within time, and combinations of the two. The identifying assumption is that, after accounting for geographic and temporal trends, changes in snowfall or mortality rates at the county level are unrelated to any other factors that may impact short-run labor supply decisions. While this baseline assumption is strong, the features of our data allow us to conduct myriad face validity and placebo tests along with robustness exercises that focus on more heavily restricted sources of identifying variation. We now turn to discuss the results of these tests along with our main findings.

3 Results

3.1 Contemporaneous Effects

Table 2 presents our main findings for the contemporaneous effects of increased snow or illness on the labor supply of respondents in the CPS. All numbers in the table are separate estimates of δ from Equation 1 and their standard errors. Binary outcome variables, such as part-time status, are scaled to be either 0 or 100, so that the estimates are interpretable as percentage point changes in the outcome of interest.

Several features of the results warrant discussion. The first is that, among parents (the final four columns), the impacts of increased exposure to either snow or illness on labor supply are almost exclusively loaded onto mothers. This is especially true for parents of children less than 5 years old. Increases in monthly snowfall or flu-related mortality are associated with reductions in hours worked the previous week throughout the CPS sample, but the effects are the most significant (both statistically and substantively) for the mothers of young children — an additional inch of snowfall in the county-month is associated with 0.026 fewer hours worked the previous week for such mothers, while the corresponding effect for an additional flu-related death per 100,000 residents in the county-month is 0.1.

We perform the following calculation to put the magnitude of our results into context, noting the exogenous variables are measured at the monthly level while the outcome variables ask about labor supply in the preceding week. Taking the snow coefficient for the mothers of young children as an example, consider the case of a county receiving a foot of snow in a given month (around two standard deviations above the mean). The impact of hours worked for the month may be approximated as $0.026 \times (12 \text{ inches}) \times (4 \text{ weeks}) = 1.25$ hours, which on a basis of an average of 32.3 weekly hours worked for the mothers of young children translates to around a 1 percent reduction in hours worked each month. Considering a similar 2σ scenario for flu mortality rates yields a remarkably similar figure of 1.4 hours, though we acknowledge that the latter estimate is noisily estimated. The magnitudes of our estimates may also be usefully interpreted through the baseline gap in hours worked between mothers and fathers: with mothers of young children working on average 10 fewer hours per week than fathers, or 40 fewer hours per month, the aforementioned numbers would constitute a roughly 3 percent increase in the parental labor supply gap.[6]

While worse weather or more widespread illness could depress labor supply through a number of channels, our results also directly point to childcare disruptions as being a key driver in the heterogeneity of effects between mothers and fathers. When looking at the reasons given for working part-time in the previous week, the rate at which fathers report missing work due to childcare problems is a precisely estimated zero, regardless of treatment or whether the father has young children in the household. This is emphatically not the case for mothers,

[6]An additional factor that may drive our estimates down is that the true impacts of more snow or illness on labor supply are likely bimodal, with the majority of parents being unaffected and a subset losing more substantial work time. We observe similar gendered heterogeneity patterns when looking at the impacts of snowfall on an indicator variable for having missed eight hours or more in the previous week, but the associations between this outcome and increased illness are considerably less precise.

who consistently cite childcare problems as forcing them to work part-time — for instance, an additional inch of snow (flu death per 100k) increases the likelihood that mothers of young children work part time due to childcare problems by 0.038 (0.305) percentage points, which on the base rate of approximately 5 percent constitutes increases of 0.76 (6.1) percent in any given week.

Our results also pass several face validity and placebo tests. For instance, we sensibly find that increased snowfall makes all CPS respondents more likely to miss work due to weather-related problems with limited heterogeneity by sex; the effects of increased flu mortality on missing work due to one's own illness follow a qualitatively similar pattern. Moreover, the effects of our treatments on the labor supply of *childless* CPS respondents show either negligible heterogeneity by sex or larger effects for men, such that an alternative empirical approach that estimated impacts on mothers by "differencing out" the effects for childless men and women would either maintain or increase our baseline point estimates.[7]

We consider additional placebo tests in Table 3, where we estimate Equation 1 for the outcome variables of *usual* (as opposed to actual) weekly hours worked and an indicator for the respondent being *absent* from work (that is, missing work entirely) in the previous week due to childcare problems. Significant associations between our treatment variables and usual weekly hours would raise concerns that our baseline estimates are in fact either detecting a spurious relationship or are contaminated by omitted variable bias, while the near-zero frequency of absence from work due to childcare problems observed in Table 1 suggests that we should anticipate null effects for this outcome variable as well. Reassuringly, we obtain nearly exclusively precise null estimates for both placebo outcome variables. We also consider more stringent specifications in Table A.I, where we include either year-by-month or state-by-year fixed effects in our estimating equation, thereby substantially limiting our identifying variation to within-month-cross-county or cross-month-within-county differences in treatment. Even with this limited source of identifying variation, we find quite similar results to our baseline estimates.

[7] We also note that we would not necessarily expect the impacts of increased exposure to snow or illness on hours worked for childless individuals to be zero, since they, too, may be influenced by weather or sickness-related disruptions. Indeed, in some cases the estimated magnitudes are *larger* for childless individuals, potentially pointing to their labor supply being slightly more elastic in response to inconveniences than parents.

3.2 Heterogeneity

We now investigate heterogeneity in the impacts of potential childcare disruptions on labor supply over demographic and socioeconomic characteristics. The results of these analyses are presented in Figure 1. For all analyses, we focus on the mothers of young children, as this was the subgroup for whom we identified the largest impacts on Section 3.1. We report impacts on hours worked and whether the respondent worked part-time due to childcare issues — additionally, to improve visual interpretability we flip the sign on the estimated impacts for hours worked, so the estimates may be interpreted as hours *lost* due to increased exposure to our exogenous variables.

The main thematic result we obtain from this exercise is that the contemporaneous impacts of increased snow or illness on labor supply appear to be larger for individuals that are of higher socioeconomic status. We typically find larger impacts on labor supply for white mothers than Black mothers, for single mothers than married mothers, and for college-educated women than non-college-educated women. These findings are consistent with several possible explanations, such as the opportunity cost of taking time off work being lower when there are multiple earners in the household or Black and single women relying more heavily on informal childcare than their white or married counterparts [Anstreicher and Venator, 2024]. It is important to distinguish this story, however, from married women taking time off work more specifically because they earn *less* than their spouses — when we focus on married women who had *higher* income from wages and salary in the previous year[8], we continue to obtain positive and statistically significant estimates, including some that are larger than for mothers who are *not* the household's primary earner[9].

Taken together, our results suggest that mothers bear the brunt of childcare disruptions in terms of their labor supply adjustments and that higher-SES mothers are more heavily impacted than lower-SES mothers. As a final heterogeneity exercise, we test whether our impacts have changed over the course of the 21st century by separately estimating impacts in the 2000-2009 and the 2010-2019 window. We do not observe any clear or consistent patterns of heterogeneity across these two time periods, which provides some evidence that the impacts we find are persistent and unlikely to go away on their own accord.

[8] Available from the Annual Social and Economic Supplement in the CPS, administered in March.

[9] Our focus on increasingly small subsamples of the CPS results in statistical noise such that we are often unable to reject the equivalence of estimated coefficients with a strong degree of confidence.

3.3 Downstream Labor Market Impacts

Our results above demonstrate that increased exposure to adverse weather or illness generates childcare disruptions that negatively impact the labor supply of mothers. Are these contemporaneous effects associated with longer-run impacts in labor supply and employment? To probe this question, we evaluate one-year-out impacts of increased exposure to the same sources of exogenous variation using CPS Annual Social and Economic Supplement (ASEC) data. This supplement, conducted yearly in March, asks additional questions that enable us to determine previous-year exposure to snow or illness with some confidence and so estimate the downstream labor market impacts of potential childcare disruptions.

In particular, the ASEC asks respondents whether the respondent moved across counties in the previous year. We limit our sample as before to household heads and their spouses aged 20 to 45 and then restrict our sample further to individuals who made no such move so that their current county of residence identifies their county from one year ago. We then regress labor market outcomes that are less likely to immediately response to childcare disruptions — including wage income in the previous year, indicators for employment and labor force non-participation, and usual hours worked weekly — on the county's exposure to snow or illness in the *previous year*, which we define as either total snowfall, in inches, in the previous calendar year's winter months[10], or average county-level flu and pneumonia-related deaths per 100,000 residents in the same time window. Conceptually, these tests are intended to focus less on the immediate impacts of childcare disruption and more on whether potential childcare disruptions in the past have measurable impacts on labor market outcomes in the present.

The results of this exercise are presented in Table 4, with the headline finding being that we do not detect any statistically significant impacts of potential childcare disruptions on labor market outcomes one year after they happen. Virtually all estimated impacts for previous-year snowfall are either statistically insignificant or do not exhibit meaningful heterogeneity by sex. While some heterogeneity in impacts between mothers and fathers appears to manifest when looking at the impacts of previous-year exposure to illness, with mothers showing slight decreases in wage income, employment, and usual hours worked, these patterns are both noisily estimated and frequently do not differ qualitatively from patterns found for childless individuals.

[10]Defined as December, January or February

We discourage interpreting these findings as evidence that the contemporaneous impacts we detected earlier are unimportant. The null effects we find here are consistent with mothers being able to compensate for lost work in the face of childcare disruptions to a degree, such as by taking paid time off or through working additional hours in subsequent weeks. This does not take away from the fact that the burden of covering work time lost due to childcare disruptions appears to primarily fall on mothers, and these adjustments themselves may be costly and inconvenient. These sorts of unpredictable disruptions may also be among the factors that drive mothers to select into more flexible work arrangements, which in turn may inhibit their career progression [Goldin, 2014]. Detecting such a long-run association would clearly require a different sample than the one we use here.

4 Discussion and Conclusion

This paper adds to the ongoing effort to unpack the determinants of the labor market penalty that mothers experience by focusing on the impacts of childcare disruptions that virtually all parents face at one point or another: sick days and snow days. By combining data from the Current Population Survey with data on snowfall and flu-related mortality, all at the county-month level, we document that increased exposure to potential childcare disruptions results in contemporaneous decreases in labor supply that are strongly concentrated among mothers, especially high-socioeconomic-status mothers with young children. While we do not detect that these immediate impacts result in adverse labor market outcomes in the longer run, we also find that they have been relatively stable over the course of the 21st century. In addition, maternal expectations about future childcare disruptions may contribute towards their selection into more flexible or part-time employment, which is a question for future research.

One interesting feature of our results is that we consistently estimate stronger impacts of snowfall and illness on the labor supply of the mothers of young children specifically. In the case of illness, this may be explained by increased transmissibility of disease among younger children, but the stronger impacts for increased snow exposure may be surprising to the extent that snow days primarily impact older children already enrolled in public school systems. We interpret these results as potentially indicating increased sensitivity of private childcare centers in response to weather events or increased difficulty in finding alternative or informal care arrangements for younger children than for older children. Further research

into the interactions of child age and potential labor supply disruptors may be useful.

While reliable childcare and schooling encourage maternal labor force participation, these two systems alone are not sufficient to close the existing gender gap in the labor market. Unexpected caretaking responsibilities, which are not covered by these systems, fall disproportionately on mothers. While there are various policies that may aim to address this gender gap, we also highlight the socioeconomic gap in mothers' caretaking in response to illness and weather-related events. This additional gap suggests that access to resources affects parents' ability to take time away from work when a child needs extra care. Related policies, such as paid sick time or flexible work arrangements, would need to be evaluated along both dimensions if intended to increase equity in the labor market.

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Table 1: Summary Statistics of CPS Sample

Variable	Mean(SD)	Mean(SD)	Mean(SD)	Mean(SD)	Mean(SD)	Mean(SD)	Mean(SD)
Hours worked last week	38.69	40.79	37.81	42.06	34.10	41.96	32.32
	(13.77)	(13.26)	(13.27)	(12.94)	(13.99)	(13.02)	(14.77)
Part-time last week	0.183	0.140	0.201	0.105	0.287	0.111	0.315
	(0.387)	(0.347)	(0.400)	(0.307)	(0.452)	(0.314)	(0.465)
Due to weather	0.003	0.003	0.002	0.004	0.002	0.004	0.002
	(0.053)	(0.055)	(0.041)	(0.063)	(0.044)	(0.065)	(0.043)
Due to illness	0.013	0.011	0.016	0.010	0.016	0.010	0.016
	(0.114)	(0.104)	(0.126)	(0.100)	(0.127)	(0.100)	(0.125)
Due to childcare problems	0.011	0.000	0.002	0.003	0.035	0.003	0.053
	(0.105)	(0.018)	(0.043)	(0.052)	(0.183)	(0.059)	(0.223)
Absent from work last week	0.035	0.026	0.034	0.026	0.054	0.026	0.074
	(0.185)	(0.158)	(0.182)	(0.160)	(0.226)	(0.160)	(0.262)
Due to weather	0.001	0.001	0.000	0.001	0.000	0.001	0.000
	(0.024)	(0.025)	(0.013)	(0.032)	(0.019)	(0.030)	(0.018)
Due to illness	0.006	0.004	0.006	0.004	0.008	0.004	0.007
	(0.074)	(0.065)	(0.074)	(0.067)	(0.087)	(0.062)	(0.082)
Due to childcare problems	0.000	0.000	0.000	0.000	0.001	0.000	0.002
	(0.020)	(0.006)	(0.010)	(0.014)	(0.033)	(0.017)	(0.046)
Sample	All	Childless Men	Childless Women	Fathers	Mothers	Young Fathers	Young Mothers
N	2802341	653610	519434	794079	835218	391947	318590

Notes: Data from 2000-2019 waves of the Current Population Survey. Data restricted to employed household heads and spouses of household heads age 20-45; see text for details. Absence from work defined as working zero hours in previous week. Part-time work defined as working positive but fewer than 35 hours in previous week. Young fathers/mothers defined as fathers or mothers with at least one own child age less than 5 present in the household.

Table 2: Baseline Results

Panel A: Effects of Increased Snow

SAMPLE	All	CM	CW	F	M	YF	YM
VARIABLE							
Hours worked last week	-0.014	-0.018	-0.018	-0.004	-0.013	-0.008	-0.026
	(0.002)	(0.004)	(0.005)	(0.004)	(0.004)	(0.005)	(0.007)
Missed $\geq$ 8 hours	0.049	0.065	0.068	0.026	0.052	0.0267	0.055
	(0.007)	(0.014)	(0.015)	(0.012)	(0.012)	(0.017)	(0.021)
Part-time last week	0.058	0.054	0.065	0.030	0.069	0.040	0.107
	(0.007)	(0.013)	(0.017)	(0.010)	(0.015)	(0.015)	(0.024)
Due to weather	0.070	0.056	0.087	0.059	0.083	0.058	0.080
	(0.002)	(0.004)	(0.005)	(0.004)	(0.004)	(0.006)	(0.006)
Due to childcare problems	0.004	-0.001	-0.004	0.001	0.015	0.003	0.038
	(0.002)	(0.001)	(0.001)	(0.002)	(0.006)	(0.003)	(0.012)

Panel B: Effects of Increased Illness

VARIABLE							
Hours worked last week	-0.046	-0.083	-0.029	-0.054	-0.028	-0.002	-0.100
	(0.019)	(0.041)	(0.046)	(0.035)	(0.035)	(0.050)	(0.061)
Missed $\geq$ 8 hours	-0.014	-0.089	0.000	0.110	-0.075	-0.008	-0.017
	(0.061)	(0.129)	(0.144)	(0.112)	(0.113)	(0.160)	(0.194)
Part-time last week	0.189	0.368	0.155	0.202	0.108	0.075	0.287
	(0.064)	(0.119)	(0.153)	(0.094)	(0.136)	(0.136)	(0.231)
Due to illness	0.075	0.063	0.021	0.082	0.112	0.061	0.108
	(0.019)	(0.041)	(0.052)	(0.032)	(0.039)	(0.043)	(0.065)
Due to childcare problems	0.050	0.003	-0.002	0.016	0.140	0.017	0.305
	(0.017)	(0.008)	(0.017)	(0.017)	(0.057)	(0.026)	(0.116)

Notes: CM: Childless men. CW: childless women. F: fathers. M: mothers. YF: young fathers. YM: young mothers. Young fathers/mothers defined as fathers or mothers with at least one own child age less than 5 present in the household. Table presents estimates of δ from Equation 1 for indicated dependent variables and samples. Robust standard errors in parentheses. Data from 2000-2019 waves of the Current Population Survey, restricted to employed household heads and spouses of household heads age 20-45. Part-time work defined as working positive but fewer than 35 hours in previous week. Snow measured in inches of accumulation in relevant county-month. Illness measured in deaths per 100,000 residents due to flu or pneumonia-related reasons in relevant county-month. See text for details.

Table 3: Placebo Tests: Impacts on Usual Hours Worked and Work Absence

Panel A: Effects of Increased Snow

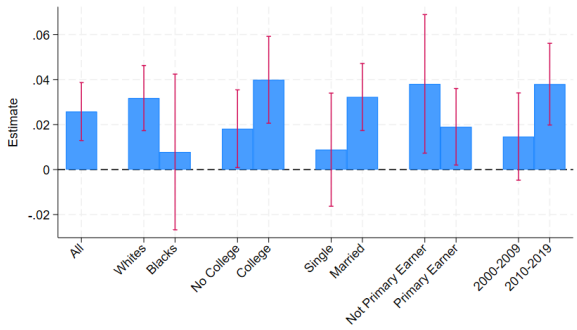
SAMPLE	All	CM	CW	F	M	YF	YM
VARIABLE							
Usual hours worked weekly	0.000	0.000	0.000	-0.001	0.000	-0.001	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Absent due to childcare	0.000	0.000	-0.001	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.002)

Panel B: Effects of Increased Illness

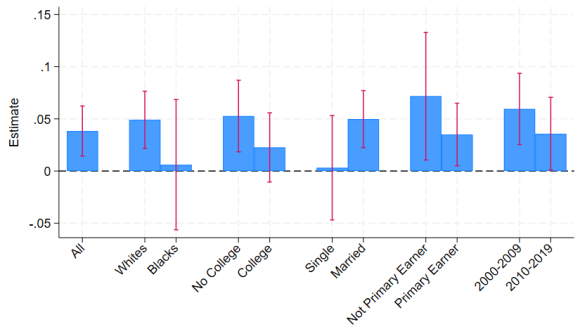
VARIABLE							
Usual hours worked weekly	0.002	0.004	0.004	0.001	0.000	0.006	0.002
	(0.001)	(0.003)	(0.002)	(0.003)	(0.001)	(0.003)	(0.002)
Absent due to childcare	0.000	0.000	-0.004	0.002	0.001	-0.002	-0.014
	(0.003)	(0.001)	(0.003)	(0.003)	(0.010)	(0.004)	(0.021)

Notes: CM: Childless men. CW: childless women. F: fathers. M: mothers. YF: young fathers. YM: young mothers. Young fathers/mothers defined as fathers or mothers with at least one own child age less than 5 present in the household. Table presents estimates of δ from Equation 1 for indicated dependent variables and samples. Robust standard errors in parentheses. Data from 2000-2019 waves of the Current Population Survey, restricted to employed household heads and spouses of household heads age 20-45. Absence from work defined as working exactly zero hours in the previous week. Snow measured in inches of accumulation in relevant county-month. Illness measured in deaths per 100,000 residents due to flu or pneumonia-related reasons in relevant county-month. See text for details.

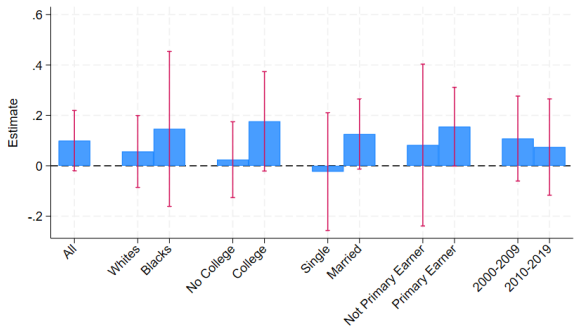
Figure 1: Heterogeneity Analyses



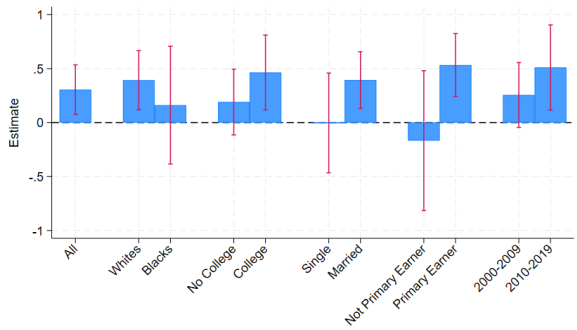
(a) Snow, Hours Worked



(b) Snow, Part-Time for Childcare



(c) Illness, Hours Worked



(d) Illness, Part-Time for Childcare

Notes: Figure presents estimates of δ for indicated subgroups of mothers of children age less than 5 in the CPS. Red lines indicate 95% confidence intervals of estimates. Data from 2000-2019 waves of the Current Population Survey, restricted to employed household heads and spouses of household heads age 20-45. Part-time work defined as working positive but fewer than 35 hours in previous week. Primary earner status defined for married mothers as having the highest wage/salary income among household members in the previous year. Snow measured in inches of accumulation in relevant county-month. Illness measured in deaths per 100,000 residents due to flu or pneumonia-related reasons in relevant county-month. See text for details.

Table 4: Downstream Labor Supply Impacts

Panel A: Effects of Increased Snow

SAMPLE	All	CM	CW	F	M	YF	YM
VARIABLE							
Wage Income	11.8	10.4	10.0	16.2	11.4	13.3	0.111
	(6.99)	(16.8)	(15.4)	(14.4)	(8.77)	(20.6)	(13.4)
Employed	0.004	-0.018	0.023	0.004	0.007	-0.004	-0.021
	(0.008)	(0.018)	(0.020)	(0.010)	(0.014)	(0.016)	(0.021)
Not in Labor Force	-0.002	0.000	-0.003	0.006	-0.010	0.006	0.020
	(0.007)	(0.014)	(0.019)	(0.008)	(0.013)	(0.010)	(0.021)
Usual Hours Worked	0.008	-0.008	0.007	0.012	0.018	0.010	0.014
	(0.004)	(0.008)	(0.008)	(0.006)	(0.004)	(0.008)	(0.008)

Panel B: Effects of Increased Illness

VARIABLE							
Wage Income	-156.6	-125.0	-408.2	57.62	-167.0	91.40	-430.0
	(140.3)	(345.9)	(325.8)	(273.4)	(172.2)	(409.1)	(255.9)
Employed	-0.023	0.096	-0.096	0.217	-0.389	0.203	-0.614
	(0.163)	(0.340)	(0.455)	(0.188)	(0.282)	(0.275)	(0.451)
Not in Labor Force	0.248	0.583	0.201	-0.086	0.412	-0.057	0.663
	(0.149)	(0.279)	(0.405)	(0.143)	(0.273)	(0.209)	(0.446)
Usual Hours Worked	0.057	0.277	0.224	0.108	-0.193	0.158	-0.266
	(0.074)	(0.173)	(0.192)	(0.114)	(0.112)	(0.178)	(0.173)

Notes: CM: Childless men. CW: childless women. F: fathers. M: mothers. YF: young fathers. YM: young mothers. Young fathers/mothers defined as fathers or mothers with at least one own child age less than 5 present in the household. Table presents estimates of δ from Equation 1 for indicated dependent variables and samples. Robust standard errors in parentheses. Data from 2000-2019 waves of the Current Population Survey ASEC, restricted to employed household heads and spouses of household heads age 20-45 who did not move across counties in the previous calendar year. Snow measured in inches of accumulation in the December-January-February of the previous calendar year in the relevant county. Illness measured in average deaths per 100,000 residents due to flu or pneumonia-related reasons in relevant county in the December-January-February of the previous calendar year. See text for details.

A Supplementary Tables

Table A.I: Robustness to Alternate Fixed Effects Structures

Panel A: Effects of Increased Snow

SAMPLE	F	M	YF	YM	F	M	YF	YM
VARIABLE								
Hours worked last week	-0.000	-0.01	-0.003	-0.026	-0.007	-0.010	-0.010	-0.026
	(0.004)	(0.004)	(0.006)	(0.007)	(0.004)	(0.004)	(0.004)	(0.007)
Part-time due to childcare	-0.000	0.018	0.004	0.049	0.000	0.012	0.002	0.032
	(0.002)	(0.006)	(0.003)	(0.013)	(0.002)	(0.006)	(0.003)	(0.012)

Panel B: Effects of Increased Illness

VARIABLE								
Hours worked last week	-0.054	-0.019	-0.001	-0.105	-0.097	-0.017	-0.039	-0.075
	(0.038)	(0.039)	(0.055)	(0.066)	(0.037)	(0.039)	(0.054)	(0.065)
Part-time due to childcare	0.017	0.116	0.024	0.264	0.016	0.092	0.016	0.254
	(0.018)	(0.062)	(0.027)	(0.125)	(0.018)	(0.061)	(0.028)	(0.127)
Fixed Effects	Y-Mo	Y-Mo	Y-Mo	Y-Mo	S-Y	S-Y	S-Y	S-Y

Notes: F: fathers. M: mothers. YF: young fathers. YM: young mothers. Y-Mo: Year-month fixed effects included. S-Y: state-year fixed effects included. Young fathers/mothers defined as fathers or mothers with at least one own child age less than 5 present in the household. Table presents estimates of δ from Equation 1 for indicated dependent variables and samples. Robust standard errors in parentheses. Data from 2000-2019 waves of the Current Population Survey, restricted to employed household heads and spouses of household heads age 20-45. Part-time work defined as working positive but fewer than 35 hours in previous week. Snow measured in inches of accumulation in relevant county-month. Illness measured in deaths per 100,000 residents due to flu or pneumonia-related reasons in relevant county-month. See text for details.