Eldercare Frequency and Earnings in the U.S.

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1. Introduction

Over 37 million Americans provide unpaid care to elderly relatives (U.S. Bureau of Labor Statistics 2023b). This population represents a form of labor that occurs behind closed doors in millions of American households, with opportunity costs estimated at $522 billion annually (Chari et al. 2015).

Economic implications of eldercare emerge in wage patterns that vary with how often care is provided. Allocating time between care and work affects employed caregivers, particularly those providing more frequent care. These patterns differ by gender.

Previous research finds that caregiving affects labor market outcomes differently for men and women. Van Houtven, Coe, and Skira (2013) show that men face employment effects primarily when providing personal care, while women experience more persistent wage effects across different types of care. While Wolff et al. (2016) demonstrate that these effects vary with care frequency and intensity, social norms and labor market conditions also shape these gender differences (Barigozzi, Cremer, and Roeder 2020).

The American Time Use Survey (ATUS) (U.S. Bureau of Labor Statistics 2023a) provides data on caregiving patterns and labor market outcomes. The anal-

ysis sample includes 66,084 employed individuals with reported wages, allowing examination of how eldercare frequency relates to earnings by gender. The empirical strategy uses interaction terms to identify gender differences in caregiving wage patterns. Regression models reveal how demographic factors and occupation choices relate to gender differences in care penalties.

The results show daily eldercare associates with a 21% wage reduction for men but a 3.3% reduction for women before adding controls. This difference persists but narrows after accounting for demographics, region, and occupation, with wage penalties of 20% for men and 11% for women. The models explain 43% of wage variation.

2. Data and Methods

The American Time Use Survey (ATUS) provides national data on how Americans spend their time. Data collection began in January 2003, with approximately 8,500 individuals interviewed annually. ATUS respondents are randomly selected from households that completed the Current Population Survey (CPS), with one individual age 15 or over per household reporting detailed time-use information for a designated 24-hour period. The analysis sample includes 133,050 individuals between 2003-2023, with women comprising 55.07% of respondents and men 44.93%. To account for this unbalanced gender distribution, analyses of caregiving patterns examine proportions within gender rather than raw frequencies.

The analysis sample includes 66,084 employed individuals with reported wages between 2003-2023. Weekly earnings above $2,884.61 receive an imputed value of 1.5 times the threshold and are converted to 2023 dollars using the Consumer Price Index. Detailed occupational categories consolidate into nine groups: Management and Business, STEM, Education and Community Services, Healthcare and Arts, Service Occupations, Sales, Administrative Support, Manual Labor, and Transportation.

Table 1: Caregiver Characteristics by Gender

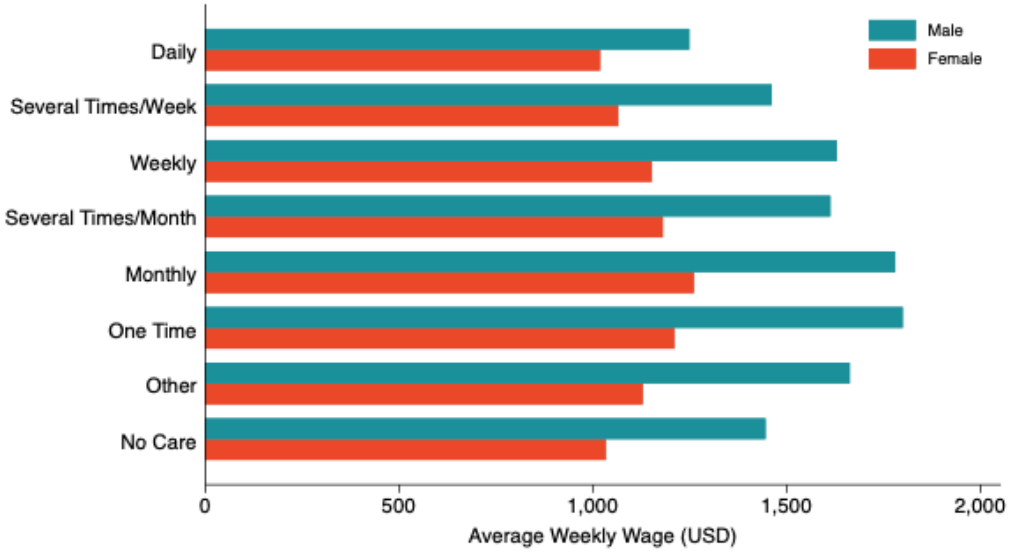
	Women		Men	
	Caregivers	Non-Caregivers	Caregivers	Non-Caregivers
Age	49.961	45.733	47.902	44.538
	(17.541)	(19.670)	(17.963)	(18.942)
Working for pay	0.579	0.562	0.674	0.684
	(0.494)	(0.496)	(0.469)	(0.465)
Retired	0.198	0.173	0.145	0.135
	(0.399)	(0.378)	(0.352)	(0.342)
Hours of work/week	37.151	36.705	42.340	41.979
	(13.553)	(12.323)	(14.187)	(12.802)
Weekly wage	1,130.397	1,035.142	1,575.016	1,448.307
	(993.312)	(901.378)	(1,301.039)	(1,221.220)
Race				
White	0.821	0.788	0.833	0.805
	(0.383)	(0.409)	(0.373)	(0.396)
Black	0.132	0.130	0.110	0.117
	(0.339)	(0.336)	(0.312)	(0.321)
Asian	0.029	0.059	0.034	0.056
	(0.167)	(0.235)	(0.180)	(0.230)
Other	0.018	0.024	0.024	0.022
	(0.131)	(0.152)	(0.153)	(0.146)
Highest Grade Completed	14.020	13.446	13.738	13.364
	(2.697)	(2.919)	(2.855)	(2.988)
N	14,313	53,260	9,388	45,517

Notes: Means and (standard deviations). Sample includes employed individuals aged 15-85. Caregivers are anyone who provided eldercare in the three months prior to completing the survey.
Source: American Time Use Survey, 2003–2023.

Table 1 presents means and standard deviations by gender and caregiver status. Female caregivers are older (50.0 years) than female non-caregivers (45.7 years) and male caregivers (47.9 years). Employment patterns differ by gender: men maintain higher employment rates (67%) and longer work hours (42 per week) than women (57% employed, 37 hours per week), regardless of caregiver status. Weekly wages reveal substantial gender differences, with male caregivers earning $1,575 on average compared to $1,130 for female caregivers.

Figure 1 shows the relationship between eldercare frequency and average

Figure 1: Average Weekly Wages by Eldercare Frequency and Gender



Notes: Sample includes employed individuals aged 15-85 with reported wages.
Source: American Time Use Survey, 2003–2023.

weekly wages by gender. Males have higher average weekly wages than females across all care frequencies. Both men and women who provide less frequent care tend to have higher wages than those providing more intensive care. For example, those providing monthly care earn more on average than those providing daily care, suggesting potential wage penalties associated with more intensive caregiving responsibilities.

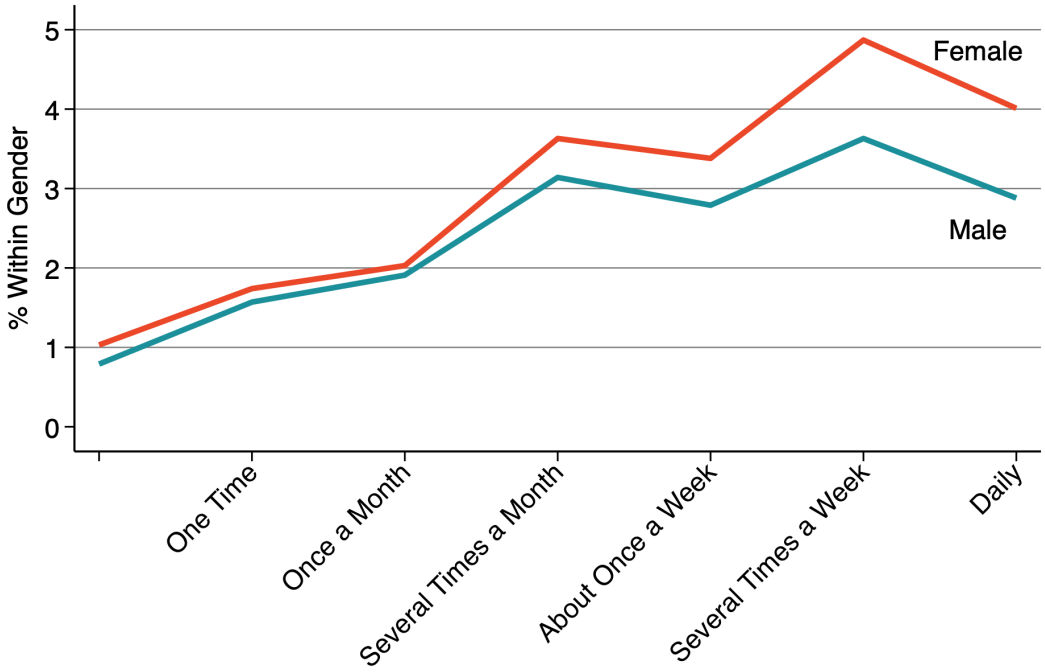
I examine how wages vary with eldercare frequency using ordinary least squares regression. The baseline specification is:

$$log(weeklywage_i) = \beta_0 + \beta_1 Eldercare\ Frequency + \epsilon_i$$

where $log(weeklywage_i)$ represents log real weekly wages in 2023 dollars and *Eldercare Frequency* contains indicator variables providing eldercare daily, several times per week, weekly, several times per month, monthly, one-time, and other.

The analysis builds sequentially more detailed specifications:

Figure 2: Gender



Notes: Sample includes employed individuals aged 15-85 who provided eldercare in the past three months. Care frequency categories are mutually exclusive.
Source: American Time Use Survey, 2003–2023.

1. Model 1: Base model with eldercare frequency indicators

2. Model 2: Addition of gender interactions, age, education, race, and year effects

3. Model 3: Full specification adding region and occupation effects

3. Results

Figure 2 reveals a systematic gender gap in eldercare provision that widens as care frequency increases. While the gender difference is modest for one-time care provision, it grows substantially for more intensive care schedules. For daily care, women are nearly 40% more likely to be providers than men (4.01% versus 2.88%). The disparity reaches its peak for several-times-weekly care, where 4.87% of women provide care compared to 3.63% of men - a difference of more than 34%. A chi-square

test confirms these gender differences in care provision are statistically significant (χ^2 =388.09, p $<$ 0.001).

The pattern of increasing gender disparity in care provision helps explain the wage effects revealed by the regression analysis. Model 1 establishes the baseline relationship without controls: daily eldercare associates with a 21% wage reduction for men (-0.210, SE=0.048) but only a 3.2% reduction for women after accounting for the interaction term (0.177, SE=0.060). Less frequent care shows a different pattern with men who provide care several times a month receiving a 14.6% wage premium, while women show no significant premium (0.146 main effect, -0.019 interaction).

Adding demographic controls in Model 2 changes these patterns. The male wage penalty for daily care remains substantial at 22.1% (-0.221, SE=0.041), while the female interaction term decreases to 0.097 (SE=0.052). The wage premiums for less frequent care largely disappear after controlling for age, education, and race. These demographic controls explain much of the wage variation, with R^2 increasing from 0.038 to 0.372.

The full specification in Model 3 adds occupation and region controls. Daily eldercare remains associated with a 19.9% wage reduction for men (-0.199, SE=0.039). The female interaction term of 0.089 (SE=0.049) indicates wage penalties for women, while still significant, are less severe than wage penalties for men. Occupation categories explain an additional 6 percentage points of wage variation, bringing the total R^2 to 0.429.

Table 2: Eldercare Frequency and Earnings by Gender: OLS Regressions

	(1) Base	(2) + Demographics	(3) + Region/Occupation
Eldercare Frequency (No Care omitted):			
Daily	−0.210	−0.221	−0.199
	(0.048)	(0.041)	(0.039)
Several times/week	0.023	−0.040	−0.030
	(0.036)	(0.028)	(0.027)
Weekly	0.111	0.029	0.016
	(0.043)	(0.034)	(0.032)
Several times/month	0.146	0.033	0.027
	(0.033)	(0.023)	(0.023)
Monthly	0.182	0.012	0.014
	(0.048)	(0.037)	(0.034)
One time	0.168	0.033	0.020
	(0.061)	(0.041)	(0.038)
Other	0.127	0.158	0.115
	(0.083)	(0.074)	(0.062)
Female	−0.340	−0.372	−0.308
	(0.011)	(0.008)	(0.009)
Eldercare × Female Interactions:			
Daily × Female	0.177	0.097	0.089
	(0.060)	(0.052)	(0.049)
Several times/week × Female	0.004	−0.058	−0.066
	(0.047)	(0.037)	(0.036)
Weekly × Female	−0.024	−0.088	−0.064
	(0.055)	(0.044)	(0.042)
Several times/month × Female	−0.019	−0.024	−0.021
	(0.048)	(0.034)	(0.034)
Monthly × Female	0.009	0.023	0.012
	(0.064)	(0.048)	(0.045)
One time × Female	−0.056	−0.083	−0.075
	(0.082)	(0.060)	(0.057)
Other × Female	−0.112	−0.269	−0.216
	(0.109)	(0.090)	(0.080)
Age		0.120	0.108
		(0.002)	(0.002)
Years of Education		0.117	0.097
		(0.001)	(0.002)
Race Effects		Yes	Yes
Region Effects			Yes
Occupation Effects			Yes
R^2	0.038	0.372	0.429
N	66,084	66,084	66,084

Notes: Eldercare frequency coefficients are estimated relative to individuals who provided no care (NIU). Interaction terms measure the additional effect for women. Robust standard errors in parentheses.

Source: American Time Use Survey, 2003–2023.

My regression results align with the descriptive patterns shown in Figure 2. Women provide more frequent eldercare than men, particularly at higher intensities of care, yet face smaller wage penalties for this care provision. After controlling for demographics, region, and occupation, this gender difference in wage effects persists. The models explain 43% of wage variation through observable characteristics, suggesting eldercare responsibilities play an important role in determining wages, though the relationship varies by gender and care frequency.

4. Summary and Conclusion

The American Time Use Survey data from 2003-2023 reveals systematic differences in eldercare provision and wage patterns by gender. Women provide more frequent eldercare than men across all categories of care - 4.01% of women provide daily care compared to 2.88% of men, and 4.87% of women provide care several times per week versus 3.63% of men.

The wage patterns show clear gender differences in how eldercare relates to earnings. The base model indicates that daily eldercare associates with a 21% wage reduction for men but only a 3.2% reduction for women. After accounting for demographics, region, and occupation, daily eldercare remains associated with a 19.9% wage reduction for men, while women experience an 11% reduction. The models explain 43% of wage variation through observable characteristics like age, education, race, region, and occupation. The fact that men, on average, earn more than women goes some way to explaining the severity of the wage penalty men receive: they have further to fall.

Cross-sectional data allows us to document robust correlations between caregiving frequency and wages while accounting for key demographic and occupational factors. The stability of the gender interaction terms across model specifications indicates these wage patterns persist even after controlling for observable characteristics. However, more than half of wage variation remains unexplained by the factors

included in this analysis, highlighting the complex relationship between caregiving responsibilities and labor market outcomes.

My analysis demonstrates how standard econometric techniques applied to time-use data can reveal detailed patterns in caregiving and wages. The sequential regression approach identifies which observable characteristics - particularly demographics and occupation - explain portions of the gender differences in care provision and wage patterns. The results document the substantial wage effects associated with eldercare provision in the United States, especially for those providing the most frequent care.

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