Impact on Employment Patterns of Elderly Men Who Provide Nursing Care: Focusing on Occupational Status Just Before Age 60

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Research Objective

The employment landscape is evolving with recent policy changes such as raising the pension eligibility age, revising the Act on Stabilization of Employment of Elderly Persons, and addressing workforce shortages. As a result, employment rates among individuals aged 60 and older are increasing – a trend expected to continue.

While we cannot simply assume that continued employment is always beneficial for older people or that retirement is necessarily detrimental, it is problematic on an individual and societal level when people who want to work cannot do so due to a variety of reasons.

Life events unrelated to work – such as health challenges or family matters – can impact anyone's employment decisions regardless of age. The key question is how much older workers adjust their work arrangements when facing circumstances that threaten their continued employment, particularly as job security often decreases with age. Furthermore, do these adjustments in working style vary according to previous socioeconomic status? This study specifically examines how caregiving responsibilities influence employment decisions among older workers.

Hypothesis

There is substantial research examining the relationship between caregiving and employment, primarily from an economic perspective. Many studies show that taking on caregiving responsibilities negatively affects both employment opportunities and income, though research varies on the magnitude of these effects and differences between men and women (Yamada & Sakai, 2016;[1] Oshio & Usui, 2018;[2] Kikuzawa & Uemura, 2021[3]). On the other hand, caregiving does not have a significant impact on working hours (Kitamura et al. 2021[4]).

Despite this growing body of research, some areas remain unexplored. First, few studies have specifically examined caregiving within the Japanese employment context. As is commonly known in Japan, the retirement age system applies to many regular workers, with 60 being the most common retirement age. As a result, job stability differs before and after this milestone. However, most previous studies have focused on individuals under 60 or those in their 50s and 60s. Consequently, it is not clear how caregiving responsibilities affect employment during the post-retirement years when job security naturally decreases.

Another important aspect within the context of Japanese employment is that corporate welfare has played a significant role in Japan's social security system. Miyamoto, Ito and Uzuhashi (2003)[5] critically examined Esping-Andersen's theory of welfare regimes and discussed Japan's position within this framework. A key characteristic of Japan's welfare system is its support for traditional family structures through employment security policies that prioritize male breadwinners. This can be observed in Japan's relatively low social spending and a stratified social security system that varies according to company size. By age 60, people have entered a life stage where accumulated economic and social advantages or disadvantages become clearly evident (Crystal and Shea, 1990[6]). In Japan especially, the size of the company a person worked for before turning 60 plays a major role in shaping their career prospects after this age (Mugiyama, 2018[7]). As a result, the likelihood of leaving the workforce due to caregiving responsibilities after 60 may also vary depending on the firm size before reaching this milestone.

Few studies have examined the various changes in working arrangements that occur when individuals take on caregiving responsibilities. Most previous research has focused on whether individuals continue working or leave their jobs entirely. However, to balance work and caregiving, some may opt to change their employment status or reduce their working hours. Based on these considerations, this study will test the following two hypotheses:

Hypothesis 1: Men who take on caregiving responsibilities are more likely to become unemployed. However, this risk is relatively lower for those who were employed by a large company before turning 60.

Hypothesis 2: Men who provide care are more likely to shift to non-regular or part-time work (less than 40 hours per week). Furthermore, men who were employed at large companies immediately before turning 60 have a relatively higher likelihood of choosing non-regular or part-time employment when they become caregivers.

Method

This study utilizes data from the *Longitudinal Survey of Middle-aged and Elderly Persons* conducted between 2005 and 2020. The analysis focuses on the career trajectories of men aged 60 to 70. However, the analysis is limited to men who were employed as regular workers at age 59. This approach enables us to examine how

caregiving responsibilities and the size of the company at age 59 affect employment behaviors after age 60 within the context of Japanese employment practices. Furthermore, since caregiving only occurs when there is someone who needs care, the analysis is limited to cases where at least one parent of the respondent or respondent's spouse was still alive. After excluding cases with missing values for the variables used in the estimations, the final sample consisted of 11,656 cases for Analysis 1; 7,050 cases for Analysis 2; and 10,173 for Analysis 3.

To test the hypotheses, three types of analysis using fixed-effects models were conducted. The first examined the transition from employment to non-employment (Analysis 1), the second investigated the shift from regular employment to other employment types (Analysis 2), and the third focused on the transition from full-time to part-time work (Analysis 3).

For dependent variables, Analysis 1 used a dummy variable where 1 indicates non-employment; Analysis 2 used employment type; and Analysis 3 used working hours. Employment types are categorized into four groups: regular employment, non-regular employment, other, and non-employment. Working hours are divided into three categories: full-time workers (40 or more hours per week), part-time workers (less than 40 hours per week), and non-employed.

The main explanatory variables are caregiving responsibilities and company size at age 59.The caregiving status is a dummy variable that equals 1 if the individual provides nursing care to one or more of their own parents or their spouse's parents. Company size is captured as a time-invariant dummy variable that equals 1 if the individual worked as a regular employee at age 59 at a firm with 300 or more employees. This analysis primarily focused on the main effect of caregiving itself, and second, the interaction effect that emerges when we combine caregiving status with company size at age 59.The coefficient of the interaction term represents the effect of caregiving on the dependent variable for men who worked at large companies at age 59, while the main effect represents the impact of caregiving on the dependent variable for men who worked at small or medium-sized companies at age 59.

Control variables include age, marital status, retirement age (whether the individual was above or below the mandatory retirement age of the company they belonged to at age 59), savings amount, presence of debt, home ownership, housing debt status, whether or not they lived with their children, whether or not they lived with their siblings, and subjective health assessment.

Analysis of Employment Trends

First, descriptive analyses are conducted to examine the employment patterns of men with and without caregiving responsibilities. *Table 1* presents changes in employment status,

TABLE 1

Changes in employment status, employment type & working hours

(categorized by whether men are caregivers or not, Unit: %)

	(years old)	60	61	62	63	64	65	66	67	68	69	70
Unemployment rate for men who were employed the previous year												
Providing nursing care		17.1	22.5	25.9	32.4	37.9	47.6	51.1	54.9	53.4	52.8	60.5
Not providing nursing care		13.5	17.2	19.2	24.0	28.5	40.1	44.6	46.1	49.0	51.9	56.2
Percentage of men who were regular workers in the previous year, by type of employment & unemployment status												
Providing nursing care	Regular	46.7	28.5	25.1	19.5	14.3	9.9	8.7	6.8	7.9	5.6	4.0
	Non-regular	31.5	40.6	39.9	38.0	37.2	29.5	26.2	27.0	27.3	27.6	22.2
	Other	4.9	8.6	9.0	10.6	11.0	13.3	14.3	11.7	11.9	14.3	14.1
	Unemployed	17.0	22.2	26.0	31.9	37.6	47.3	50.9	54.6	52.9	52.6	55.8
Not providing nursing care	Regular	49.0	33.1	29.1	25.0	21.3	13.5	9.2	8.5	6.8	6.4	5.1
	Non-regular	32.2	42.7	43.7	43.1	41.4	37.5	36.7	34.8	32.9	30.2	27.6
	Other	5.6	7.2	8.4	8.2	9.1	9.6	10.0	11.1	11.7	11.9	11.5
	Unemployed	13.2	17.0	18.8	23.8	28.2	39.7	44.1	45.6	48.7	51.6	55.8
Percentage of men who worked full-time the previous year & are still working full time, have switched to part-time work, or become unemployed												
Providing nursing care	Full-time	68.1	53.6	47.3	39.6	35.0	22.8	19.3	16.6	18.2	14.2	13.2
	Part-time	15.0	24.2	26.8	28.8	27.8	30.4	30.1	29.3	29.5	33.5	28.3
	Unemployed	16.9	22.1	25.9	31.6	37.3	46.8	50.6	54.1	52.3	52.3	58.6
Not providing nursing care	Full-time	70.8	60.1	54.7	48.4	43.2	31.2	24.8	21.2	19.6	16.6	14.7
	Part-time	16.1	23.0	26.7	28.0	28.8	29.6	31.6	33.6	32.3	32.4	30.1
	Unemployed	13.1	16.9	18.6	23.7	28.0	39.3	43.6	45.2	48.2	51.0	55.2

Source: Compiled by the author

TABLE 2

Effects of providing parental care on employment status

(fixed effects binary logit model)

	Model 1		Model 2	
	Coef.	s.e.	Coef.	s.e.
Provides nursing care	0.303 **	0.107	0.552 ***	0.150
Large company × Provides nursing care			-0.501 *	0.214
Age	0.358 ***	0.015	0.359 ***	0.015
Marital status	-0.140	0.454	-0.166	0.454
Retirement age (ref. Age below company retirement age at age 59 / No retirement age)				
Respondent's age (59) matches the company's mandatory retirement age	0.177	0.266	0.165	0.266
Respondent's age (59) exceeds the company's mandatory retirement age	1.880 ***	0.286	1.871 ***	0.285
Savings (ref. 0 yen)				
1-9.99 million yen	0.220	0.148	0.228	0.148
10 million yen or more	0.415 *	0.175	0.417 *	0.175
Outstanding debt	-0.555 **	0.179	-0.552 **	0.179
Home ownership	0.417	0.326	0.425	0.326
Carries a mortgage	0.089	0.233	0.095	0.234
Lives with children	-0.125	0.115	-0.131	0.115
Lives with siblings	-0.220	0.599	-0.163	0.595
Subjective health	-0.223 ***	0.046	-0.222 ***	0.046
N	11656		11656	
Log likelihood	-2743.11		-2740.35	

*Note: * p<0.05, ** p<0.01, *** p<0.001.*
Source: Compiled by the author

employment type, and working hours, disaggregated by caregiving status.

The data reveals that across all age groups, men with caregiving responsibilities consistently experience higher unemployment rates compared to those without caregiving duties. The unemployment rates for men with care responsibilities is 17.1% at age 60, 47.6% at age 65, and 60.5% at age 70. In contrast, the unemployment rates for men without caregiving responsibilities are 13.5% at age 60, 40.1% at age 65, and 56.2% at age 70.

Next, looking at the working patterns of men who were regular workers in the previous year, they show a consistent decline in employment with age, regardless of caregiving status. At age 60, approximately 50% remain employed, but by the late 60s this figure drops to less than 10%. The proportion of non-regular workers who become unemployed rises from 30% at age 60 to around 40% at age 61. This figure then drops slightly after age 65, falling to just under 30% by age 70. The category of "other workers" shows a slight increase between the ages of 60 to 70. By their late 60s, they account for just over 10% of the total.

When comparing employment rates between men with and without caregiving responsibilities, both regular and non-regular employment are slightly higher among those without caregiving duties. The largest gap for regular workers occurs at age 64, where 21.3% of men without care responsibilities remain employed, compared to 14.3% of those with caregiving duties. Among non-regular workers, the greatest disparity is at age 66, with 36.7% of non-caregivers employed versus 26.2% of caregivers.

Looking at employment patterns of those who were full-time workers the previous year, they show the proportion of full-time employees stood at around 70% at age 60. But this figure drops to 30% at age 65 and 15% at age 70. By contrast, part-time employment rose from around 15% at age 60 to 25-30% in the early 60s and remained stable thereafter.

When comparing men with and without caregiving responsibilities across all age groups, those without caregiving duties are more likely to work full-time. However, there appears to be no significant difference in the proportion of men working part-time regardless of caregiving status. This pattern suggests that caregiving responsibilities primarily influence whether a man works full-time or not at all, rather than pushing men toward part-time employment.

Impact of Nursing Care on the Transition to Unemployment

Table 2 shows the results of estimating the impact of providing care on employment status using a fixed-effects binary logit model.

TABLE 3

Effects of caregiving on the shift from regular employment to other work

(fixed-effects multinomial logit model)

	Model 3						Model 4					
	Non-regular		Other		Unemployed		Non-regular		Other		Unemployed	
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
Provides nursing care	-0.030	0.189	0.348	0.303	0.627	0.379	0.421	0.255	0.259	0.384	0.293	0.450
Large company × Provides nursing care							-0.978 *	0.383	0.224	0.632	1.008	0.803
Age	0.306 ***	0.029	0.208 ***	0.042	1.547 ***	0.096	0.311 ***	0.029	0.206 ***	0.042	1.554 ***	0.097
Marital status	1.552 *	0.722	0.022	1.051	1.460	1.260	1.569 *	0.725	0.014	1.049	1.575	1.267
Retirement age (ref. Age below company retirement age at age 59 / No retirement age)												
Respondent's age (59) matches the company's mandatory retirement age	1.950 ***	0.371	-0.377	0.562	1.638 *	0.779	1.919 ***	0.370	-0.374	0.563	1.662 *	0.773
Respondent's age (59) exceeds the company's mandatory retirement age	4.634 ***	0.436	1.965 **	0.598	4.813 ***	1.121	4.613 ***	0.436	1.974 **	0.599	4.906 ***	1.121
Savings (ref. 0 yen)												
1-9.99 million yen	0.438	0.223	0.434	0.416	-0.192	0.449	0.449 *	0.224	0.443	0.416	-0.198	0.449
10 million yen or more	0.772 **	0.270	1.160 *	0.504	0.127	0.538	0.773 **	0.271	1.175 *	0.506	0.132	0.538
Outstanding debt	-0.073	0.267	-0.339	0.399	0.153	0.447	-0.056	0.267	-0.330	0.399	0.133	0.450
Home ownership	1.083	0.661	-0.546	0.866	2.233	1.228	1.051	0.663	-0.525	0.864	2.270	1.228
Carries a mortgage	-0.750 *	0.350	0.840	0.542	-0.006	0.665	-0.747 *	0.350	0.844	0.542	0.001	0.666
Lives with children	-0.327	0.184	-0.069	0.299	-0.576	0.436	-0.340	0.185	-0.075	0.298	-0.551	0.440
Lives with siblings	0.753	1.051	-1.584	1.172	-0.209	2.471	0.756	1.057	-1.588	1.167	-0.443	2.183
Subjective health	0.119	0.079	0.125	0.134	-0.166	0.142	0.129	0.079	0.125	0.134	-0.167	0.142
N	7050						7050					
Log likelihood	-1489.96						-1485.55					

*Note: * p<0.05, ** p<0.01, *** p<0.001. The reference group for the explanatory variable is "regular employment".*
Source: Compiled by the author

Model 1 shows that the probability of being unemployed is higher for men who provide care than for men who do not. However, when the interaction term is included in Model 2, the signs of the coefficients for the main effect and interaction effect are exactly opposite.

For men who were employed by a small or medium-sized company at age 59, providing nursing care increases the probability of becoming unemployed. In contrast, for men who worked for large companies, there is no significant difference in the probability of unemployment between those with caregiving responsibilities and those without (0.552-0.501=0.051). Therefore, Hypothesis 1 is supported.

Impact of Becoming a Caregiver on the Transition from Regular Employment to Other Work

Is men's caregiving also influencing transitions from regular employment to other forms of employment? *Table 3* shows the results of Analysis 2, conducted using a fixed-effects multinomial logit model. The reference group for the dependent variable is regular workers.

Model 3 indicates that caregiving has no significant impact on employment transitions. However, after controlling the interaction term, Model 4 shows a significant negative correlation between caregiving and transitioning from regular to non-regular employment among men who previously worked for large companies. In other words, men who were working for a large company at age 59 are less likely to shift to non-regular employment even after becoming caregivers. Instead, they tend to maintain their status as regular employees.

Therefore, Hypothesis 2 is not supported. In fact, the results suggest the opposite of what was initially hypothesized.

Impact of Caregiving on the Transition from Full-time to Part-time Work

Table 4 presents the results of Analysis 3, which estimated the effects of caregiving and other factors on changes in working hours. The reference group for the dependent variable is full-time workers. The estimation is carried out using a fixed-effects multinomial logit model.

TABLE 4

Effects of becoming a caregiver on transitioning from full-time to part-time work or unemployment (fixed-effects multinomial logit model)

	Model 5				Model 6			
	Part-time		Unemployed		Part-time		Unemployed	
	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.	Coef.	s.e.
Provides nursing care	0.015	0.157	0.365	0.186	0.002	0.216	0.425	0.245
Large company × Provides nursing care					0.026	0.314	-0.142	0.379
Age	0.342 ***	0.020	0.778 ***	0.037	0.342 ***	0.020	0.778 ***	0.037
Marital status	0.274	0.596	0.157	0.683	0.275	0.596	0.153	0.683
Retirement age (ref. Age below company retirement age at age 59 / No retirement age)								
Respondent's age (59) matches the company's mandatory retirement age	0.002	0.315	0.740 *	0.363	0.002	0.316	0.738 *	0.363
Respondent's age (59) exceeds the company's mandatory retirement age	2.316 ***	0.333	2.591 ***	0.449	2.317 ***	0.334	2.587 ***	0.449
Savings (ref. 0 yen)								
1-9.99 million yen	0.034	0.186	0.222	0.240	0.034	0.186	0.227	0.240
10 million yen or more	0.358	0.227	0.537	0.280	0.358	0.227	0.540	0.281
Outstanding debt	0.048	0.192	-0.660 *	0.287	0.048	0.192	-0.656 *	0.287
Home ownership	0.881	0.469	1.049	0.543	0.879	0.470	1.050	0.543
Carries a mortgage	0.155	0.255	0.085	0.389	0.155	0.255	0.086	0.390
Lives with children	-0.100	0.156	-0.014	0.206	-0.101	0.156	-0.016	0.206
Lives with siblings	0.307	0.725	-0.564	0.882	0.304	0.726	-0.547	0.882
Subjective health	-0.021	0.062	-0.144	0.077	-0.021	0.062	-0.144	0.077
N	10173				10173			
Log likelihood	-2319.15				-2319.07			

*Note: * p<0.05, ** p<0.01, *** p<0.001. The reference group for the explanatory variable is "full-time".*
Source: Compiled by the author

The results from Model 5 show that providing care does not have a significant effect on transitions from full-time to part-time work or non-employment. Similarly, this trend remains unchanged in Model 6, even after controlling the interaction term. In other words, the transition to caregiving among men is not associated with a shift from full-time to part-time work, regardless of the company size where they were employed at age 59. Therefore, Hypothesis 2 is not supported.

Conclusion

This study investigated how caregiving responsibilities affect the employment patterns of men aged 60 to 70. It analyzed how their socioeconomic status at age 59 (as measured by company size) moderated the relationship between caregiving and employment. In addition to analyzing transitions from employment to unemployment due to caregiving, the study also investigated changes in employment type and working hours associated with providing care. The following summarizes the analysis results according to the hypothesis.

Hypothesis 1 – men who provide caregiving are more likely to become unemployed. However, this effect varies by previous employment. Specifically, men who were employed at large companies just before turning 60 have a relatively lower probability of transitioning to unemployment compared to caregivers from smaller companies. Hypothesis 1 was supported.

When company size at age 59 is not considered, becoming a caregiver is generally associated with a higher probability of unemployment. However, the relationship varies significantly based on company size. Among men who were employed by small or medium-sized companies at age 59, caregiving responsibilities increased the likelihood of transitioning into unemployment. In contrast, for those employed by large companies, taking on caregiving duties did not affect their probability of becoming unemployed.

Hypothesis 2 – men who provide care are more likely to choose non-regular or part-time work (less than 40 hours per week.), and this probability would be relatively higher for those who had worked for a large company just before turning 60. Hypothesis 2 was not supported.

However, contrary to this hypothesis, the findings indicate that men who had worked for a large company at age 59 were less likely to shift to non-regular work when taking on caregiving duties. Instead, they were more likely to continue working as regular employees. Additionally, providing care did not significantly influence the transition from full-time to part-time work, regardless of the size of the company at age 59.

These results suggest that socioeconomic status just before age 60 not only determines career trajectories after the age of 60 but also influences the range of options available when facing unexpected life challenges, such as caregiving responsibilities. This indicates that the Japanese social security system, which is characterized by stratified systems based on company size, remains effective not only up to age 60 but also beyond that age. Consequently, men who worked for small and medium-sized companies face greater disadvantages compared to their counterparts from large companies when attempting to balance employment with elder care responsibilities in their later years.

From a policy perspective, emphasizing continued employment or facilitating smooth job transitions for those in relatively disadvantaged positions would likely reduce the risk of individuals leaving the workforce despite their willingness to work. However, what emerges from this study's analysis is that when men become caregivers after age 60, they often face a stark binary choice between maintaining full-time, regular employment or becoming unemployed. This study cannot determine whether men actively avoid non-regular or part-time work, or if such options are simply unavailable to them. Further research is needed to understand the underlying reasons for this trend and to explore ways to support more flexible working arrangements that accommodate caregiving responsibilities.

Finally, two key research questions remain. First, it is essential to clarify the characteristics of men who become caregivers. In Japanese society, caregiving responsibilities typically fall to women. Therefore, men who assume a caretaking role may share certain distinctive traits. Related to this, we must clarify how the relationship between providing care and employment differs by marital status. The risk of leaving employment when caregiving becomes necessary, as well as the possibility of being forced to change work arrangements, would likely differ between married and unmarried men. Future research should analyze the impact of providing care on employment while considering variations in family structure. We must clarify the actual conditions of groups that require more targeted policy support.

Secondly, while we have discussed how company size just before age 60 affects options for avoiding the risk of being laid off after 60, we have not fully examined why such differences arise. Although we suggest that these reflect differences in social security systems, the questions in the *Longitudinal Survey of Middle-aged and Elderly Persons* alone are not sufficient. We are unable to identify which institutional factors create these differences in available options. Therefore, this information should be supplemented with additional research to clarify this point in more detail.

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