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An empirical analysis of young carers in Japan: “care burden” versus “awareness” and the role of external support

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Abstract

A high number of youths in Japan have responsibilities beyond their years, due to their role of caring for family members. This study uses cross-sectional data of young carers in Japan to empirically investigate the burden on them. We use different measures and examine its contributing factors. We examine the relationship between “care burden” and “awareness,” with specific focus on the external support received by the family members looked after by these young carers. We found that their care burden was a heavy one, albeit varying in magnitude. There was also a large gap between the actual care burden and young carers' awareness of being carers. Receiving external support was important, as it had a positive effect on improving awareness and mitigating their care burden. It is important to investigate and understand the actual burden on young carers and to provide support that meets their needs.

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1. Introduction

About 30 years ago, the first fact-finding survey of young carers was conducted in the UK, and the issues facing them are now internationally recognized. Many countries promote social support and academic research regarding them, but there are large differences between countries in terms of social awareness and support efforts (Leu and Becker 2017).

In recent years, the prevalence of young carers in Japan, children under the age of 18 has also attracted attention. They undertake the burdens and responsibilities that adults should bear, such as general household chores, caring for young siblings, nursing and long-term care, and financial support.

The Ministry of Health, Labour and Welfare conducted the first national survey in 2021 to clarify their status. It was found that 1 in 17 second-year junior high school students and 1 in 24 second-year high school students were taking care of their family members, and more than 30% of these were doing so almost daily.

In addition to the national survey, local governments have also conducted surveys after 2020; however, the implementation of these surveys vary from region to region, and nearly 70% of the municipalities have not yet decided to conduct a survey. Due to the lack of individual data in Japan, few empirical studies have examined the burden on young carers, the impact of care burden on their lives and health, or other outcomes.

Watanabe *et al.* (2019) use a pooled data set of a national survey (Comprehensive Survey of Living Conditions) and present descriptive statistics on 91 young carers and 97 care recipients under their care. They find that most young carers are from single-parent and three-generation households with a poor economic situation. Regarding health, 12.8% of young carers have poor subjective health and 35.6% have a K–6 [1]score (an indicator of psychological stress) of 5 or higher. Meanwhile, Miyakawa and Hamashima (2021) examine the impact of the care role on the life satisfaction and subjective health of young carers by applying an individual high school student data set in Osaka, Japan. According to their logistic regression analyses, odds ratios for life dissatisfaction in the two care groups, taking care of younger siblings or family members with disabilities or illness, are significantly higher than those in the non-care group. In addition, the coefficients of wellness impairment estimated regarding various subjective symptoms are significantly higher in these two care groups than in the non-care group, based on a multiple regression analysis.

By contrast, research on young carers has been increasing internationally since the year 2000,

[1] The Kessler Psychological Distress Scale (K–6) is used as a measure to assess risk for serious mental distress. The index has a total score ranging from 0 (no mental health problem) to 24 (very severe mental health problem). Respondents were identified as having mental distress at a moderate level or above with a total score of 5 or higher.

with qualitative research being the main focus. The studies observed negative effects of caring such as, higher health risks (Cluver *et al.* 2013), economic and social disadvantages (Kaiser and Schulze 2015, Kettell 2020, and Barry 2011), and problems with health and well-being for young carers (Moore *et al.* 2009, and Hamilton and Adamson 2013). However, positive effects have also been observed, such as increasing maturity (Fives *et al.* 2013), closer relationships with parents, feeling of being well prepared for life (Hunt *et al.* 2005), and fostering qualities of compassion and empathy (Stamatopoulos 2018). These previous studies also have limitations as most of them are small-scale studies with sample selection, and the observed effects might not actually be attributed to caring. Hence, larger-scale longitudinal studies are required to explore more evidence on these effects (Joseph *et al.* 2020, and Kavanaugh *et al.* 2016). Joseph *et al.* (2020) highlight some directions for future studies in this field, for example, defining the target population according to the degree of burden, using different dimensions to measure care, developing locally based research and international comparisons, and applying theoretical frameworks.

This study applies cross-sectional data of young carers in Japan to conduct an empirical analysis that clarifies the care burden on young carers using different measures and examines the factors that affect the burden. We also focus on the issue of low awareness of being carers and clarify the gap between the actual burden and awareness across young carers. Based on our results, we further discuss the role of external support in reducing the burden and raising awareness.

Our study has several features that are distinct from those of previous studies. First, after reviewing previous research and surveys in Japan and worldwide, we create our own questionnaire and collect individual data. Second, we apply Becker's (1981) theory on the division of labor in households to analyze the specialization of family members either in the market sector or household sector, including young carers, and formulate our hypotheses for estimation. Third, we use various indicators to measure the actual burden of young carers and quantify the factors that affect their burden. Finally, we focus on the issue of support for young carers (actual burden versus awareness) and discuss the role of external support.

There are only a few studies in Asia on young carers, and this study aims to fill the gap in research particularly in regard to young carers in Japan. This will facilitate future international comparative analysis and could have social policy implications in designing future support efforts for young carers in Japan.

2. Theoretical Hypotheses

We apply Becker 's (1981) theory on the division of labor in households and families to analyze specialization in households with young carers. Becker 's theorem states: "if all members of an

efficient household have different comparative advantages, no more than one member would allocate time to both the market and household sectors. Everyone, with a greater comparative advantage in the market than this member would specialize completely in the market, and everyone with a greater comparative advantage in the household would specialize completely here." (Becker 1981, p17) Based on this theorem, we consider different cases depending on the number of potential care givers, including cases with at least one young carer in the household, as shown in Table I (Details of Becker's theory are summarized in the supplementary material).

Table I.

Division of Labor among Young Carers in the Family

Number of carers	Case	Comparative advantage / Trade-off	Division of labor among young carers
3 potential carers	Adult carers and young carer	carer 1: market sector if $\frac{\hat{H}_{c1}^{1}}{\hat{H}_{c2}^{1}} > \frac{\varphi(\hat{H}_{c1}^{2})}{\varphi(\hat{H}_{c2}^{2})}$ carer 2: both sectors if $\frac{\partial Z}{\partial t_{w_{c2}}} = \frac{\partial Z}{\partial t_{h_{c2}}}$ young carer: household sector if $\frac{\hat{H}_{yc}^{1}}{\hat{H}_{c2}^{1}} < \frac{\varphi(\hat{H}_{yc}^{2})}{\varphi(\hat{H}_{c2}^{2})}$	Labor in the household domain is shared with carer 2
	Adult carer and young carers	carer: market sector if $\frac{\hat{H}_{c}^{1}}{\hat{H}_{yc1}^{1}} > \frac{\varphi(\hat{H}_{c}^{2})}{\varphi(\hat{H}_{yc1}^{2})}$ young carer 1: both sectors if $\frac{\partial Z}{\partial t_{w_{yc1}}} = \frac{\partial Z}{\partial t_{h_{yc1}}}$ young carer 2: household sector if $\frac{\hat{H}_{yc2}^{1}}{\hat{H}_{yc1}^{1}} < \frac{\varphi(\hat{H}_{yc2}^{2})}{\varphi(\hat{H}_{yc1}^{2})}$	Labor in the household domain is shared between young carers
2 potential carers	Adult carer and young carer	carer: market sector young carer: household sector if $\frac{\hat{H}_{c}^{1}}{\hat{H}_{yc}^{1}} > \frac{\varphi(\hat{H}_{c}^{2})}{\varphi(\hat{H}_{yc}^{2})}$	Young carer is specialized in the household domain
1 potential carer	Young carer	A trade-off between $\frac{\partial Z}{\partial t_{w_{yc}}}$ and $\frac{\partial Z}{\partial t_{h_{yc}}}$ Be involved in at least one sector	Three cases of division of labor: market, household, or both

For example, we consider a case in which there are three potential carers in the household: two adult carers (carers 1 and 2) and a young carer. Assume that carer 2 allocates time for chores in both the market and household domains and carer 1 has a comparative advantage in the market domain, relative to carer 2. Then, carer 1 would specialize completely in the market domain, and the young carer would specialize in the household domain if they have a greater comparative advantage in that domain. Hence, the labor in the household domain is shared by the young carer and carer 2. If the three potential carers are one adult and two young carers, the labor in the household domain would be shared between the two young carers.

We also consider the case where there are two potential carers in the household: an adult carer and a young carer. The adult carer would specialize in the market domain because they have a greater comparative advantage than the young carer in that domain, and the young carer specializes in the household domain.

In the last case, there is only one potential carer, a young carer, in the household. The domain in which the young carer would allocate time depends on a trade-off of marginal products between domains; however, they would be involved in at least one sector.

Based on the above theoretical analyses, we formulate the following hypotheses for the estimation:

1) The household structure, number of family members living together, and number of siblings of young carers are significant to understand the way young carers divide their labor; thus, these factors would affect their care burden in the family.
2) External support (financial support or substantive support that focuses on time and content of care) that is provided to the family would decrease the burden on young carers via a re-division of labor among family members toward the market and household domains. First, if financial support is provided, an increase in the non-labor income would decrease the hours allocated to the market domain (t_{w_i}) of member i, who has a comparative advantage in that domain, and more time would be allocated to the household domain (t_{h_i}would increase); thus, labor in the household domain would be shared. Second, if substantive support would decrease the total hours of care provided by the family members, the hours allocated to the household domain (t_{h_j}) of member j, who specializes in the household domain, would decrease, and instead, more time would be allocated to the market domain (t_{w_j}would increase). In the case of young carers, they can allocate more time to invest in human capital for output in the market domain in the future.

3. Data

We collected data from an Internet survey conducted with operational support from JMA Research Inc. (Tokyo, Japan) between June and July 2021.[2] This survey was specifically designed to target young people aged 15–19 years who care for their grandparents, parents, and siblings living together.

To collect the data for our study, we used the following sampling method. First, in order to avoid gender and residence bias,[3] men and women aged 15–19 years registered as monitors at JMA Research Inc. were systematically randomly sampled to answer the screening survey. The screening question asked respondents about the care they provided for their family members living with them. Those who answered "not providing any care" were not included in the main survey that only targeted young carers. Only those who answered "providing at least one type of care" were included in the main survey. The individual data obtained by this survey method are representative of the whole of Japan.

Our study sample consisted of 800 young carers from across the country. We asked them about (1) their individual and household characteristics, (2) the conditions of family members who are in need of care, (3) the type and frequency of care provided by them, (4) their health condition, (5) their school life and employment, (6) their own thoughts on family care, (7) the support they need, and (8) utilization of long-term care services and external support.

4. Methodology

4.1 Measurement

We used three indicators to measure the care burden on young carers. First, as a general indicator, we used the "number of types of care provided to family members." This is a quantitative variable that summarizes the types of care given by young carers. Regarding the types of care, there are 11 items, such as meal care and household chores, and the specific content of each item is shown in Fig. 1. The distribution of young carers by the number of types of care is shown in a pie chart. Approximately 70% of young carers provide two or fewer types of care, but nearly 30% of young carers are currently in charge of three or more types of care.

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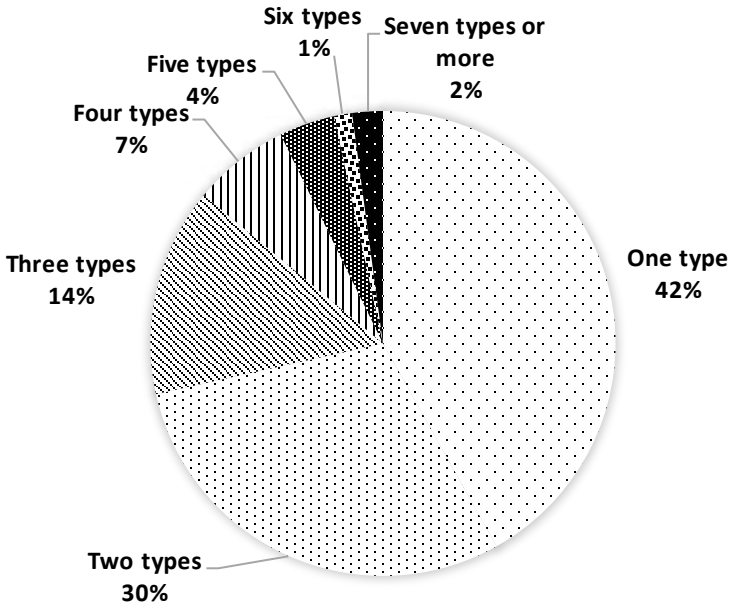
[2] Before conducting the social survey, we applied for a research ethics review at the Graduate School of Economics, Osaka Prefecture University, and it was reviewed by the research ethics committee. As a result of the review, it was recognized that ethical considerations had been taken for the titled research directly targeting humans, and the research was approved on January 14, 2021.

[3] A total of 247,831 men and women aged 15–19 years were registered as monitors.

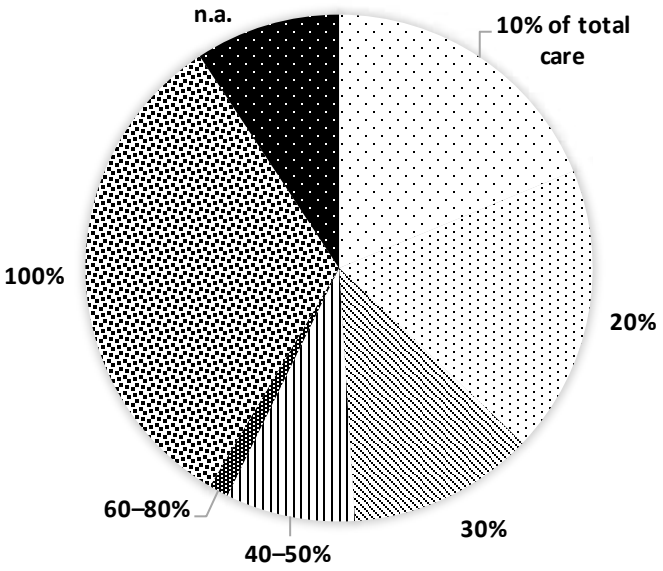
Fig. 1.
Distribution of Young Carers by the Number of Types of Care Provided (N=800)



Source: Survey of young carers in Japan 2021.

Second, we devised a comprehensive index to measure the overall percentage of care burden on young carers. This indicator comprehensively includes the time, financial, and labor aspects of the burden of care. In the survey, we asked about the percentage of care that is provided by young carers, and by all other carers in the family (the ratio of each carer is added up to 100%). Fig. 2 shows the distribution of responses regarding the percentage of care that is provided by young carers. Nearly half of the respondents answered that the total ratio of their care was 30% or less, but nearly 30% of the respondents answered that their care burden was 100%, which means that about 30% of young carers bear the entire care burden of the family.

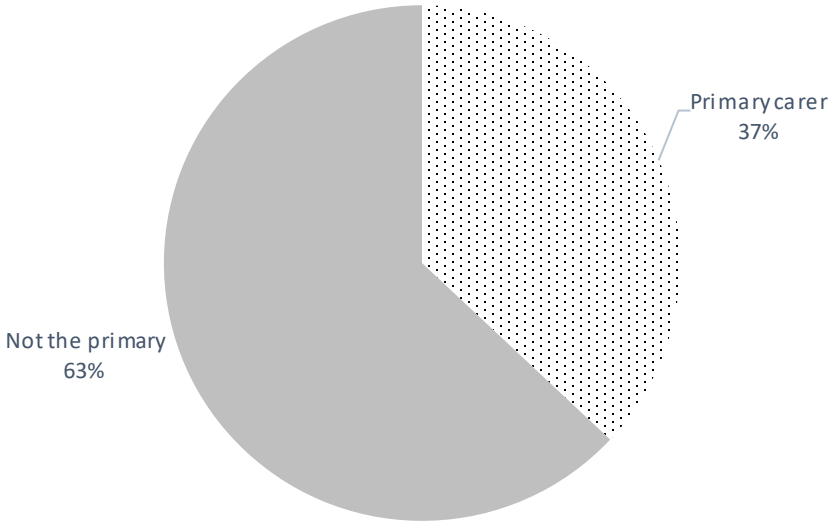
Fig. 2.
Distribution of Young Carers by the Overall Percentage of Care Burden (N=726)



Source: Survey of young carers in Japan 2021.

Finally, we applied a substantive indicator to measure the care burden by inquiring about who is the primary carer in the family. We used this as a qualitative variable in the analysis. Fig. 3 shows that 37% of young cares are the primary carers of the household. In addition, cases where the mother is the primary carer are frequently reported (49%).

Fig. 3.
Distribution of Young Carers being the Primary Carer in the Household (N=800)



Source: Survey of young carers in Japan 2021.

4.2 Estimation

We controlled for the following variables as covariates in the estimation of care burden of young carers: the grade (high school, college, or others), household structure (both parents, single-parent household, three-generation household, or others), number of family members living together, economic situation (whether the main source of income is parental income), status of independent living of the care recipient (the number of types of ADL (activities of daily living)), young carers' perspective on parental care (whether or not they agree with the idea that it is one's responsibility to care for a parent if the parent needs care), and extent of external support that is actually received (e.g., help from relatives, neighborhood and volunteers, home help service, home-visit medical care/long-term care, day service/short-stay service, and help from child welfare facility/family support).

Regarding the dependent variable of care burden, we applied ordinary least squares for the quantitative variable (first two indicators) and the probit model for the qualitative variable (the third indicator).

Model for quantitative indicators of care burden:

$$\mathrm{Y} = \mathrm{X}\beta + u, \tag{4.1}$$

where Y is an $N \times 1$ vector of dependent variables measured by either the number of types of care or the overall percentage, X is an $N \times K$ regression matrix of covariates, and u is an $N \times 1$ error vector.

Model for qualitative indicator of care burden:

$$\Pr(\mathrm{Y} = 1|\ \mathrm{X}) = \Phi(\mathrm{X}\beta), \tag{4.2}$$

where $\Phi(\cdot)$ is the standard normal cumulative distribution function. We estimate the conditional probability of being the primary carer in the family given the covariates ($p \equiv \Pr(\mathrm{Y} = 1|\ \mathrm{X})$), and report the marginal effect of change in a regressor K on the conditional probability that $\mathrm{Y} = 1$.

$$\frac{\partial \Pr(\mathrm{Y}=1|\ \mathrm{X})}{\partial \mathrm{X}_k} = \varphi(\mathrm{X}\beta)\beta_k, \tag{4.3}$$

where $\varphi(\cdot)$ is the standard normal probability density function.

5. Results

Table II presents the descriptive statistics for both the dependent and independent variables.

Table II.

Descriptive Statistics

	N	Mean	Standard Deviation	Min	Max
Dependent variables					
Number of types of care provided	800	2.17	1.54	1	11
Overall percentage of care burden	726	50.8	38.25	10	100
Being the primary carer	800	0.37	0.48	0	1
Awareness of being a young carer					
Be aware	800	0.11	0.31	0	1
Not aware	800	0.34	0.47	0	1
Not sure	800	0.56	0.50	0	1
Independent variables					
Grade					
High school	800	0.75	0.44	0	1
College	800	0.15	0.36	0	1
Other type of school or working status	800	0.1	0.3	0	1
Household structure					
Both parents	800	0.65	0.48	0	1
Single-parent	800	0.18	0.38	0	1
Three-generation	800	0.14	0.35	0	1
Others	800	0.03	0.17	0	1
Number of family members living together	800	3.03	1.09	1	8
Main source of income: parental income	800	0.84	0.37	0	1
Number of types of ADL of the care recipient	800	0.34	0.76	0	4
Perspective on parental care	800	0.27	0.44	0	1
Extent of external support actually received	800	0.39	0.76	0	6

Source: Survey of young carers in Japan 2021.

Notes: ADL: activities of daily living.

Table III presents the marginal effects of the independent variables on young carers' care burden. First, the household structure and number of family members living together had significant effects on all the three indicators of care burden. As the number of family members increased, the number of types of care required also increased slightly by 0.2–0.3 points, but the overall percentage of care and probability of being a primary carer decreased significantly. Compared to young carers in two-parent households, the overall percentage of care burden on those in single-parent households increased by 8.1 percentage points, and they were 12.7% more likely to be the primary carer in the family. As the number of family members increased, the overall percentage of care burden decreased by 7.1 percentage points, and the probability of being the primary carer reduced by 11.7%; this indicates that care responsibilities could be shared among the family members.

Table III.

Marginal Effects on Care Burden

	Number of types of care provided	Overall percentage of care burden	Being the primary carer
	OLS	OLS	Probit
Grade			
High school	0.172	-4.724	-0.081
	(0.138)	(3.737)	(0.051)
Other type of school or working status	0.280	4.587	0.010
	(0.216)	(5.304)	(0.072)
Household structure			
Single-parent	0.254 *	8.073 *	0.127 **
	(0.153)	(4.234)	(0.056)
Three-generation	-0.347 **	-0.46	0.003
	(0.166)	(4.226)	(0.062)
Others	0.620	2.026	0.224 *
	(0.568)	(8.016)	(0.127)
Number of family members living together	0.234 ***	-7.126 ***	-0.117 ***
	(0.070)	(1.652)	(0.025)
Main source of income: parental income	-0.240	-7.658 *	-0.074
	(0.182)	(3.912)	(0.054)
Number of types of ADL of the care recipient	0.416 ***	-0.046	0.033
	(0.084)	(1.609)	(0.025)
Perspective on parental care	0.389 ***	-2.461	-0.033
	(0.128)	(3.081)	(0.040)
Extent of external support actually received	0.366 ***	-3.550 **	-0.043 *
	(0.102)	(1.718)	(0.025)
Constant	1.101 ***	82.110 ***	
	(0.315)	(7.193)	
VIF	1.37	1.38	
N	800	726	800
R-squared	0.134	0.094	0.097

Source: Survey of young carers in Japan 2021.

Notes: *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. OLS: ordinary least squares. ADL: activities of daily living. VIF: variance inflation factor.

Second, compared to other sources of income, if the household's main source of income was parental income, the overall percentage of the care burden on young carers decreased by 7.7%.

Third, the number of types of ADL of the care recipient and young carers' perspective on parental care had positive effects on the number of types of care required, but the effects were small in magnitude. However, there was no significant effect on the overall percentage of care burden or the probability of being the primary carer in the household.

Fourth, the status of the external support that was received had significant effects on care burden. The greater the extent of support received, the greater the number of types of care required (e.g., accompaniment, pick-up, and conversation assistance); however, the overall percentage of care burden decreased by 3.6 percentage points, and the probability of being the primary carer also decreased by 4.3%.

Based on these estimation results, we verified the theoretical hypotheses formulated in Section 2.

6. Discussion

6.1 Issues with Young Carers

Based on these results, we addressed two issues with young carers. First, the burden on young carers was not uniform. There were groups with a small burden and groups with an extremely large burden among the young carers. Therefore, it is important to measure this burden from different dimensions, as pointed out in previous study (Joseph *et al.* 2020). Besides focusing on "what kind of care," it is also necessary to quantify the amount of burden by using various measures from different aspects.

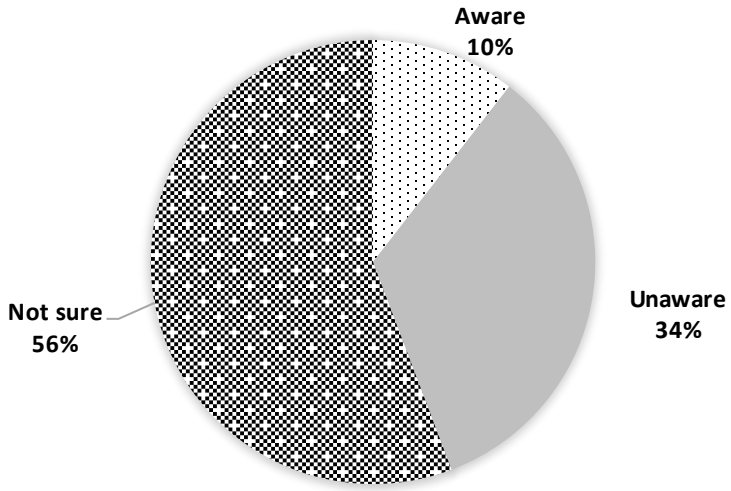
Second, external support reduced burden, but the effect was small. First of all, at the national level, awareness of young carers is low and efforts to support them are not sufficiently advanced (Leu and Becker 2017). In addition, awareness among young carers themselves is low. Of the young carers, 70% responded that they had never received support other than from their family members (26.2%) or if they did, were not aware of it (46.7%). Moreover, 69% of young carers stated that they did not know about the support groups and facilities that provided care. The underutilization of external support might be related to the issue of "awareness" among young carers in Japan.

6.2 The Gap between Burden and Awareness as a Carer

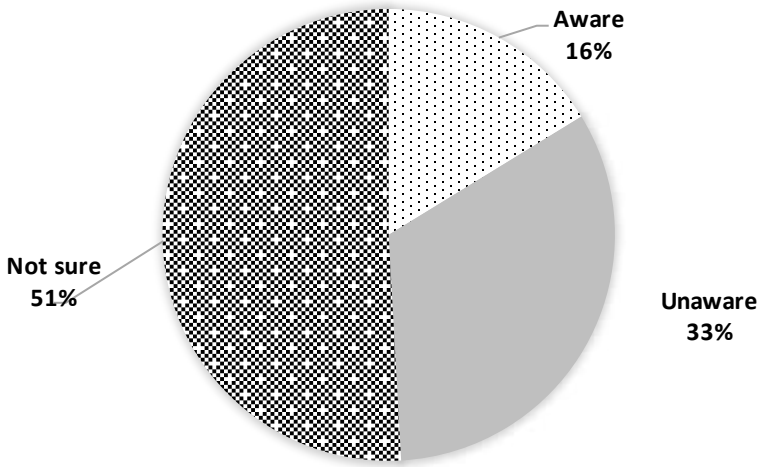
In the survey, we first presented a definition of "young carers" to the respondents and asked if they were aware that they are young carers. As shown in Fig. 4, in the overall sample, only 10% of the young carers were aware, 34% were unaware, and 56% were not sure.

Fig. 4.
Distribution of Young Carers by Awareness

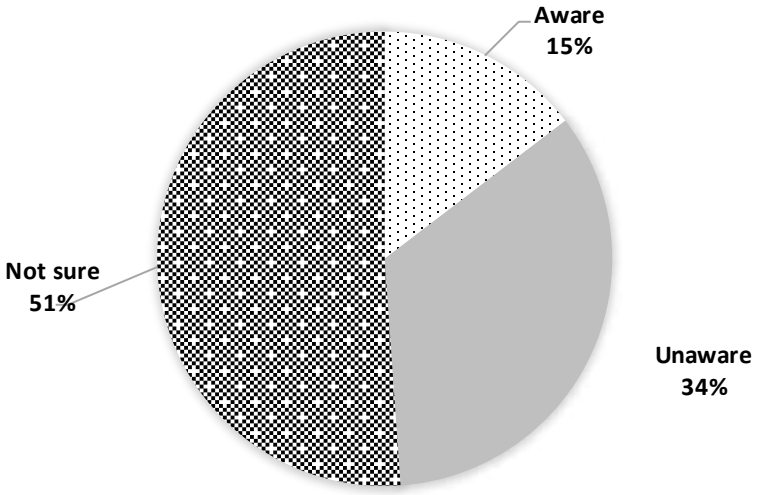
Panel A: Overall sample (N=800)



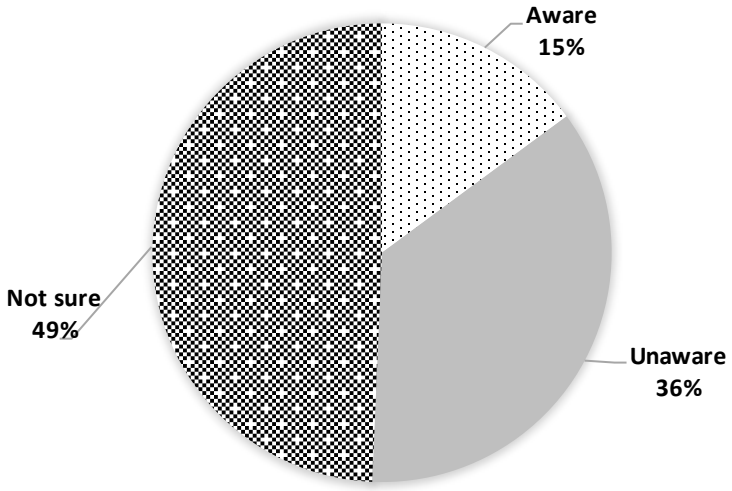
Panel B: Subsample with three or more types of care (N=228)



Panel C: Subsample if the overall percentage of care burden was 50% or more (N=315)



Panel D: Subsample of being the primary carer (N=296)



Source: Survey of young carers in Japan 2021.

We used three indicators to examine the status of awareness among the subsamples that seemed to have a heavy care burden. In each of the following cases, where the number of types of care was three or more, the overall percentage of care burden was 50% or more, and in the case of being the primary carer, only 15–16% of young carers were aware of it.

These data show a large gap between the actual burden and awareness among young carers in Japan. Young carers are providing care, but are not referring to themselves as young carers. These findings have not yet been clarified in a nationally conducted census targeting all children.

6.3 Interaction between Awareness and the Role of External Support

Considering the current situation of low awareness, we examined the role of external support in raising awareness among young carers. Table IV shows the estimation results for the marginal effects on awareness. The dependent variable is a dummy variable for whether young carers were aware of being a carer. We applied a linear probability model and probit model to examine the effects of external support on the probability of being aware, using the overall sample and subsample of main carers.

Table IV.

Marginal Effects on the Probability of Being Aware among Young Carers

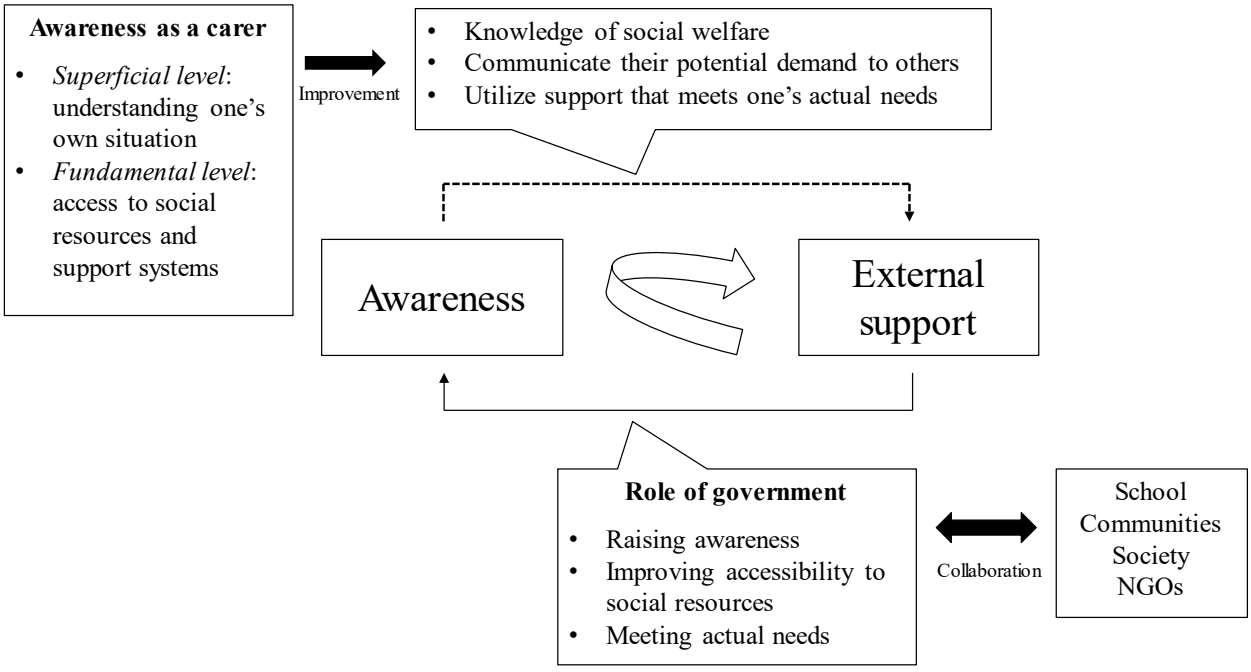
	Overall sample		Subsample: primary carer	
	LPM	Probit	LPM	Probit
Extent of external support actually received	0.061 ***	0.042 ***	0.086 *	0.058 *
	(0.020)	(0.013)	(0.046)	(0.031)
Grade				
High school	0.015	0.011	0.048	0.038
	(0.030)	(0.029)	(0.053)	(0.053)
Other type of school or working status	0.024	0.021	0.039	0.032
	(0.046)	(0.047)	(0.078)	(0.089)
Household structure				
Single-parent	0.023	0.017	-0.033	-0.033
	(0.034)	(0.032)	(0.057)	(0.051)
Three-generation	-0.040	-0.030	0.060	0.068
	(0.038)	(0.031)	(0.104)	(0.105)
Others	0.034	0.011	-0.093	-0.072
	(0.082)	(0.064)	(0.112)	(0.058)
Number of family members living together	-0.006	-0.007	-0.027	-0.028
	(0.014)	(0.013)	(0.029)	(0.028)
Main source of income: parental income	-0.050	-0.049	-0.089	-0.088
	(0.014)	(0.036)	(0.065)	(0.065)
Number of types of ADL of the care recipient	0.040 *	0.030 **	0.044	0.036
	(0.020)	(0.013)	(0.036)	(0.027)
Perspective on parental care	0.101 ***	0.101 ***	0.199 ***	0.206 ***
	(0.028)	(0.028)	(0.057)	(0.059)
Constant	0.087		0.170	
	(0.068)		(0.128)	
N	800	800	296	296
Pseudo R-squared	0.070	0.090	0.133	0.139

Source: Survey of young carers in Japan 2021.

Notes: *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. LPM: linear probability model. ADL: activities of daily living.

As the number of types of external support that was actually received increased, the probability of being aware increased by 4–6% in the overall sample and by 6–9% in the subsample of main carers. Based on these positive and statistically significant effects of external support, we discuss the interaction between "external support" and "awareness" to raise awareness among young carers through support and to create a positive loop that leads to future support, as shown in Fig. 5. As the first step, the government will play a role in raising awareness, improving accessibility to resources, and helping in meeting the actual needs of young carers and their families through external support. It is important to collaborate with schools attended by young carers, communities, the society, and NGOs. In Japan, NGOs play an active role in the frontlines of actual support sites.

Fig. 5.
Interaction between "External Support" and "Awareness"



However, regarding awareness as a carer, it is important for young carers to improve their fundamental awareness, such as being aware of the possibility of accessing social resources and support systems and not being limited to superficial awareness of only understanding their own situation. By raising awareness, young carers can improve their knowledge of social welfare (e.g., what systems can be used and how to use them), communicate their potential needs to support systems and utilize support that meets one's actual needs.

7. Conclusion

In this study, we used cross-sectional data of young carers in Japan to analyze their care burden and examine the factors that affect this burden. Based on the survey and empirical analyses, we obtained the following results. First, the care burden on young carers was heavy, and there was a gap in the magnitude of burden among them. The household structure, number of family members living together, and external support received had significant effects on the burden. Second, there was a large gap between the actual care burden on young carers and their awareness of being carers. Receiving external support had a positive effect on improving awareness among young carers.

Based on these results, we present the following policy implications. External support plays a significant role in reducing the care burden on young carers and raising their awareness, but its impact and effectiveness are still insufficient. It is important to investigate and understand the actual burden on young carers by collaborating with schools and communities to determine their potential needs and to provide support that meets their needs.

As for limitations, in this study, we used our own indicators to estimate the burden of young carers in Japan. However, in future research, it is important to use an index that can be applied for international comparison. In addition, although this study clarified the importance of external support, it is necessary to further examine exactly what kind of support young carers seek, (for example, economic aspects, mental aspects, etc.) in order to make more concrete policy recommendations in the future.

List of Abbreviations

ADL: activities of daily living
LPM: linear probability model
OLS: ordinary least squares
VIF: variance inflation factor

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Figure captions

Fig. 1.
Distribution of Young Carers by the Number of Types of Care Provided (N=800)

Fig. 2.
Distribution of Young Carers by the Overall Percentage of Care Burden (N=726)

Fig. 3.
Distribution of Young Carers being the Primary Carer in the Household (N=800)

Fig. 4.
Distribution of Young Carers by Awareness

Fig. 5.
Interaction between “External Support” and “Awareness”