

Impact of Cancer on the Burden of Caregiving in China, Japan, and EU5: National Health and Wellness Survey

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Background

Caregivers often face a substantial burden, yet their own well-being is frequently overlooked, especially when they are experiencing a serious illness themselves. Studies exploring the impact of caregiving while being a patient is limited and few.

Objective

This study aims to estimate the additional burden experienced by caregivers with cancer compared to caregivers without any self-reported condition across China, Japan, and EU5.

Methods

Study Design and study population:

- This cross-sectional, web-based survey used existing data from the National Health and Wellness Survey (NHWS) conducted in 2025 China (n=20,001), 2024 Japan (n=30,001), and the 2024 5EU (France, Germany, Italy, Spain, United Kingdom) (n=62,022) among adults aged ≥18 years. NHWS has a demographically representative sample, mirroring age and sex distribution of adults in each country; in China NHWS is representative of the urban population.
- Eligible respondents who cared for any adult and/or children with a condition were included if they have self-reported cancer diagnosis (caregivers with cancer) or do not have any self-reported condition (caregivers without conditions).
- Study population :**

China		Japan		5EU	
Caregivers with cancer (n=68)	Caregivers without conditions (n=89)	Caregivers with cancer (n=178)	Caregivers without conditions (n=87)	Caregivers with cancer (n=1,024)	Caregivers without conditions (n=252)

- Measures :**
 - EQ-5D-5L¹ (range: 0 to 1.0), EQ visual analog scale (VAS) (range: 0 to 100), higher scores indicate better HRQoL
 - Patient Health Questionnaire (PHQ-9)²: score 0 - <10 = none to mild depression and score ≥10 = moderate to severe depression
 - General Anxiety Disorder-7 (GAD-7)³: score 0 - <10 = no GAD and score ≥10 = moderate to severe GAD
 - Work Productivity and Activity Impairment (WPAI)⁴ : higher scores indicate greater impairment

Data analysis:

- Demographics and outcomes were summarized descriptively using percentages, mean and standard deviation (SD).

Results

Demographics and health characteristics

- Caregivers with cancer were older and female. The average age of a caregiver with cancer / without conditions was the highest in Japan across all regions.
- In both China and Japan, higher proportion of caregivers with cancer were married or living with partner.
- In the 5EU, caregivers with cancer had lower rate of higher education level than caregivers without conditions.
- Employment rate was lower amongst caregivers with cancer than caregivers without condition across the regions, and in Japan employment rate was the lowest for both cohorts compared to China and 5EU.
- Overweight / obese (BMI ≥25 kg/m²) rates were the highest amongst caregivers with cancer, and they were also more likely to smoke than caregivers without conditions. (Table 1).

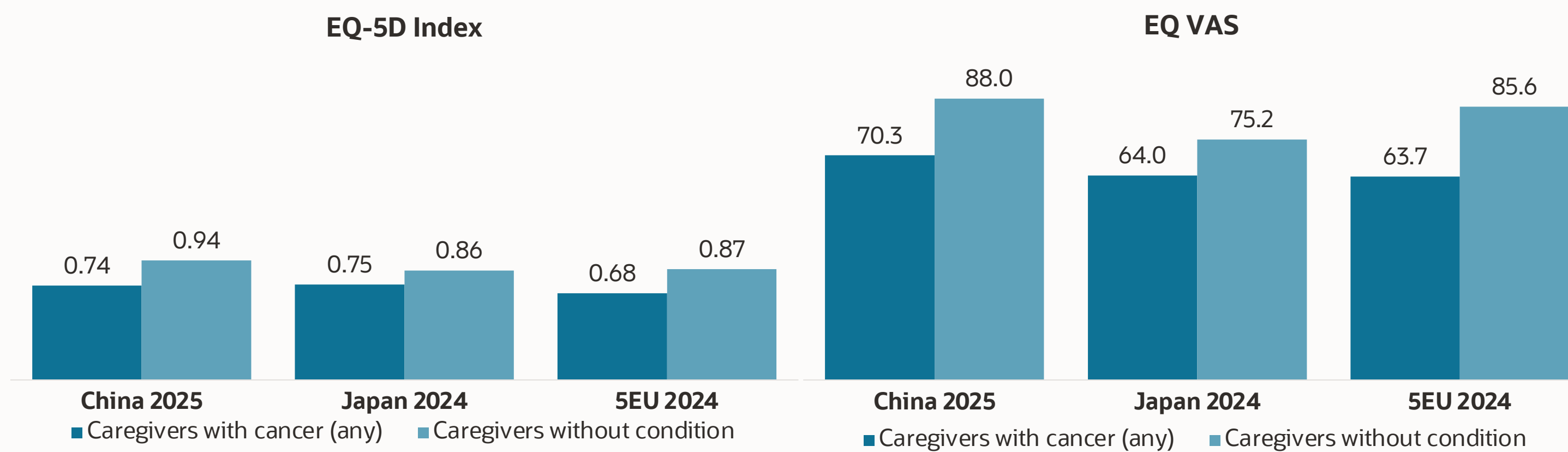
Table 1: Demographics and health characteristics

	China		Japan		5EU	
	Caregivers with cancer (n=68)	Caregivers without conditions (n=89)	Caregivers with cancer (n=178)	Caregivers without conditions (n=87)	Caregivers with cancer (n=1,024)	Caregivers without conditions (n=252)
Demographics						
Mean Age (SD)	45.59 (15.75)	40.18 (13.14)	61.27 (15.39)	48.90 (14.43)	51.57 (17.59)	40.18 (13.5)
Female	55.88%	44.94%	53.93%	44.83%	48.24%	37.70%
Married or living with partner	88.24%	79.78%	80.90%	55.17%	70.90%	74.21%
University degree	70.59%	64.04%	51.12%	45.98%	43.75%	59.92%
Current employed (FT/PT/SE)*	61.76%	85.39%	44.94%	71.26%	55.08%	82.14%
Not employed	38.24%	14.61%	55.06%	28.74%	44.92%	17.86%
Health Habits						
Underweight (BMI <18.5)	13.24%	5.62%	16.29%	17.24%	4.88%	9.92%
Normal (BMI ≥18.5 & <25)	48.53%	60.67%	61.80%	60.92%	38.28%	49.21%
Overweight / Obese (BMI ≥25)	36.76%	30.34%	19.66%	14.94%	48.34%	28.97%
Decline to answer	1.47%	3.37%	2.25%	6.90%	8.50%	11.90%
Mean BMI, (SD)	25.41 (10.43)	26.14 (8.97)	22.03 (3.96)	22.09 (3.86)	26.21 (6.5)	24.61 (8.4)
Currently Smoke	36.76%	17.98%	23.03%	17.24%	30.96%	27.78%
Drink alcohol	69.12%	58.43%	64.61%	65.52%	79.69%	71.03%
Mean number of days exercised (past month)	9.65 (8.79)	4.84 (6.62)	6.66 (9.41)	5.67 (9.49)	7.92 (8.59)	9.14 (9.55)
Mean CCI Score	4.59 (5.4)	0	3.48 (5.3)	0	3.42 (2.86)	0
Caregivers...						
of adults with conditions	91.18%	64.04%	76.40%	67.82%	81.45%	59.92%
of children with conditions	67.65%	53.93%	46.07%	42.53%	52.34%	67.06%

Full time, part time, self-employed Abbreviations: BMI, body mass index; CCI, Charlson Comorbidity Index, SD, standard deviation

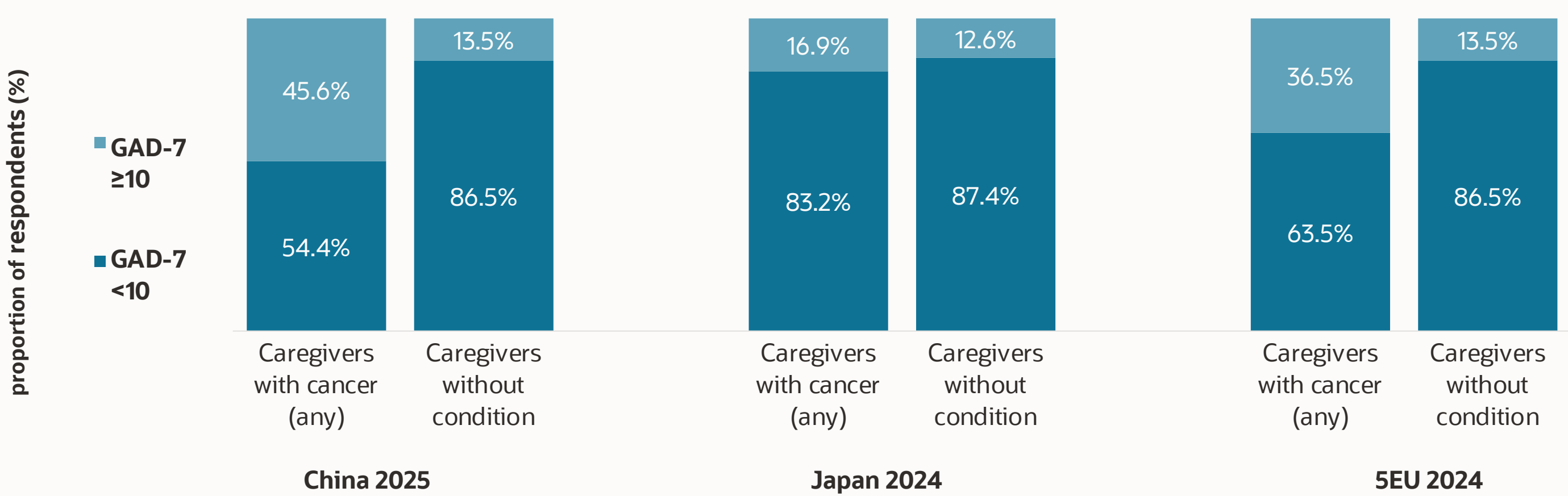
- Caregivers with cancer in China, Japan, and 5EU displayed worse health state than caregivers without conditions (Figure 1).

Figure 1: Health-related quality of life



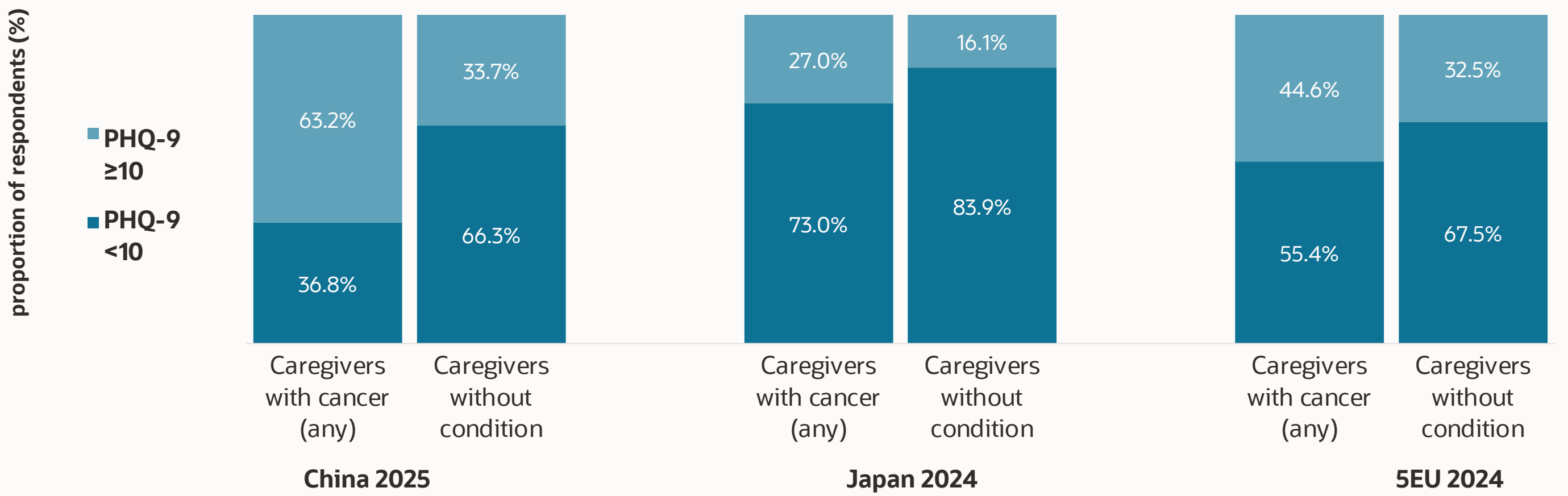
- A higher proportion of caregivers with cancer exhibited symptoms of anxiety GAD-7 score of ≥10: China: 45.6% vs. 13.5%; Japan: 16.9% vs. 12.6%; EU5: 36.5% vs. 13.5% (Figure 2).

Figure 2: Generalized Anxiety Disorder (GAD-7)



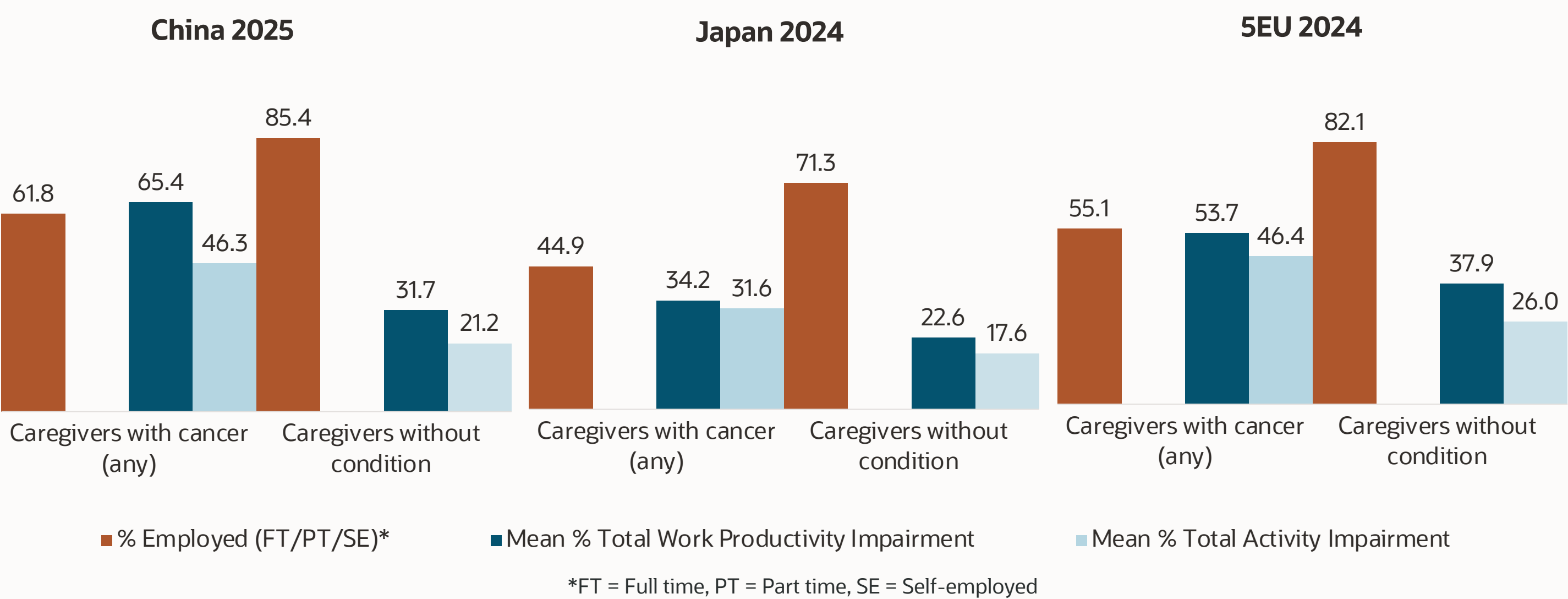
- A higher proportion of caregivers with cancer exhibited symptoms of depression PHQ-9 score of ≥10: China: 63.2% vs. 33.7%; Japan: 27.0% vs. 16.1%; 5EU: 44.6% vs. 32.5% (Figure 3).

Figure 3: Patient Health Questionnaire-9 (PHQ-9)



- Employment among caregivers with cancer was lower than caregivers without conditions (China: 61.8% vs.85.4%; Japan: 44.9% vs. 71.3%; EU5: 55.1% vs. 82.1%). Total work productivity impairment among caregivers with cancer was ~2-times higher in China, 1.3-1.8 times in Japan, and ~1.4-1.8 times in EU5, than caregivers without conditions (Figure 4).

Figure 4: Work Productivity and Activity Impairment (WPAI)



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Conclusion

This study highlighted the amplified burden of having cancer while being a caregiver with notable variations across China, Japan, and 5EU. The findings indicate an urgent need for targeted and robust support systems to mitigate this dual burden and improve the well-being of this vulnerable population.

References

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