

Having a Primary Care Physician: Individual and Community Characteristics in Japan

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ABSTRACT

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Primary care is vital for disease prevention, but factors influencing access to primary care physicians (PCPs) in Japan are not well understood. Using data from 28,481 respondents in the 2023 JACSIS survey, we analyzed demographic, health, and community characteristics associated with having a PCP. The proportion of individuals with a PCP was lowest in the early thirties and increased with age. Employment demands, child-rearing responsibilities, living alone, and weak community ties were associated with a lower likelihood of having a PCP, while older age, chronic conditions, health-conscious behaviors, and strong community relationships increased PCP access. Mental health issues and a history of drug use were associated with lower PCP proportions. Our findings suggest that improving PCP access in vulnerable groups requires attention to health literacy, time availability, and community support, rather than focusing solely on income or education. Targeted efforts may help increase PCP utilization among those most in need.

Keywords

Cross-Sectional Survey

Gender Difference

Health Behavior

Living Environment

Primary Health Care

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Introduction

Primary care serves as a cornerstone for disease prevention and mortality reduction, playing a critical role in mitigating health disparities [1]. Primary care physicians (PCPs), often acting as personal or family doctors, provide accessible environments for patients to discuss health concerns and deliver longitudinal, consistent medical care that contributes to both mental and physical health as well as improved quality of life [1], [2]. In Japan, the Japan Primary Care Association (JPCA) defines a certified family physician as a doctor who, valuing ties with local residents, can provide continuous and comprehensive health, medical, and welfare care, together with related academic activity, so that people can lead healthy lives [3]. In everyday practice, however, this role is most often filled by a patient's self-identified regular or family physician ('kakaritsuke-i'), who is not necessarily JPCA-certified [3]. Recent research has highlighted the evolving roles and competencies expected of generalists in Japan. For instance, a nationwide survey found that Japanese PCPs are increasingly expected to demonstrate evidence-based practice in addition to traditional outpatient responsibilities [4]. This trend toward professionalization and clearer role definition is likely to influence both the accessibility and quality of primary care.

Although previous studies have identified associations between healthcare-access disparities and factors such as gender, age, marital status, socioeconomic status, and health behaviors, only a few studies have comprehensively examined the comparisons or interactions among these determinants, and such evidence is particularly scarce in the Japanese context [5]. Japan currently lacks a standardized primary care system that is fully integrated into the broader health system [6]. The board certification system for PCPs was introduced only recently, in 2009, and the gatekeeping function remains weak. Consequently, the factors associated with access to PCPs in Japan remain poorly understood.

To address this gap, the present study analyzes data from a large-scale cross-sectional survey to determine the proportion of respondents who have a PCP ("PCP proportion") by gender, age, health conditions, health behaviors, time availability, and living environment, to investigate salient social and health-related factors associated with PCP proportion in Japan.

Material and Methods

A. Study Population and Data Sources

This cross-sectional study utilized data from the 2023 JACSIS (Japan COVID-19 and Society Internet Survey), which assessed health status and social determinants in Japan during the COVID-19 pandemic [7]. Participants were selected from panel members of Rakuten Insight, a Japanese internet survey company, using random sampling to ensure representation by age, sex, and prefecture of residence [8].

JACSIS is the academic research survey program/study itself, designed and conducted by the research team. Rakuten Insight is a commercial internet-survey company that maintains a large, registered research panel. JACSIS does not maintain its own panel; instead, the JACSIS 2023 recruited its respondents from the Rakuten Insight panel. Respondents were drawn from the cumulative panel of a related internet-survey series—the JASTIS study (since 2015) and the JACSIS study (since 2020, fielded annually through 2023). A follow-up survey was administered from September 25 to November 17, 2023, to the 46,840 panel members of this 2015–2023 respondent pool who were reachable by the survey company; the present analysis is based on this 2023 follow-up wave. Of these, 30,598 responded, and after excluding inappropriate or invalid responses, the final analytic sample consisted of 28,481 respondents.

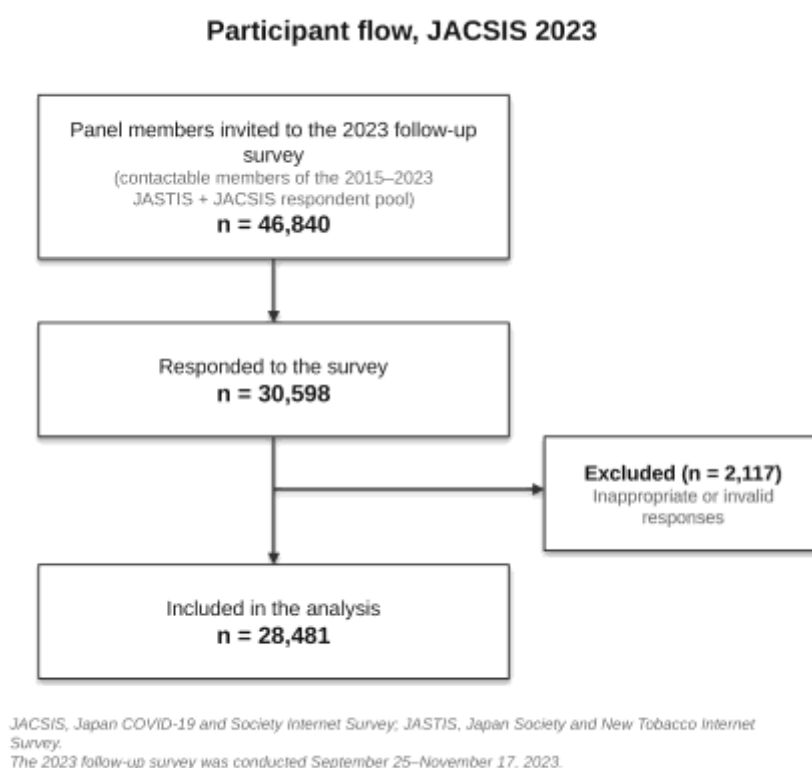


Fig. 1. Participant Flow

B. Measurements

Because the JPCA definition applies specifically to certified family physicians whereas most patients' regular doctors hold no such certification, PCP status was operationalized more broadly, on the basis of respondents' self-report of having a regular physician consulted periodically, rather than requiring board certification or any specialty. Regular care by a primary care physician was assessed with the question: "Do you have a regular physician with whom you consult periodically?" Respondents answered "Yes" or "No," and the PCP proportion was defined as the proportion answering affirmatively. The question did not stipulate a specific

consultation frequency (e.g., monthly or quarterly). Accordingly, the term ‘periodically’ was interpreted by each respondent and was intended to capture the presence of an ongoing relationship with a regular physician rather than a fixed visit interval.

Data were collected on sex, age, equivalent household income, educational level, employment status, working hours per week, number of cohabiting children, health conditions, chronic diseases, number of chronic physical symptoms, body mass index (BMI), psychological distress (Kessler 6 scale) [9],[10], history of childhood abuse, health behaviors (International Physical Activity Questionnaire (IPAQ) [11], cancer screening, handwashing, vegetable-rich diet, vaccination status, COVID-19 vaccine, risky drinking habits, smoking history, non-medical drug use), life purpose (ikigai), home ownership, marital status, number of cohabitants, relationships with neighbors, and outpatient physician maldistribution index.

Chronic disease status was determined by self-report of 20 specified conditions (e.g., hypertension) and current outpatient care. Chronic physical symptoms were classified by the number of symptoms persisting for more than three months, out of 26 listed. The Kessler 6 scale was used to assess psychological distress, with cutoffs of 5 or more for psychological stress, 9 or more for mood/anxiety disorders, and 13 or more for severe mental disorders [9],[10]. The IPAQ was used to assess physical activity levels, validated for older Japanese adults [11].

Cancer screening was assessed for colorectal, lung, or gastric cancer within the past year. Recommended ages for screening were 40 years or older for colorectal and lung cancer, and 50 years or older for gastric cancer, based on national guidelines. Screening for breast, cervical, and prostate cancer was excluded as these targets only one gender.

Risky drinking was classified using the Ministry of Health, Labour and Welfare (MHLW) definition of alcohol consumption that raises the risk of lifestyle-related disease, namely a pure-alcohol intake of ≥ 40 g/day for men and ≥ 20 g/day for women. Respondents who currently or formerly drank reported their usual amount per drinking day in sake-gō equivalents (1 gō = 180 mL of sake at 15% alcohol, ≈ 20 g of pure alcohol), and those reporting ≥ 2 gō/day (men) or ≥ 1 gō/day (women) were classified as risky drinkers.

Non-medical drug use included current use of non-prescribed narcotics, organic solvents for non-work purposes, cannabis, stimulants, cocaine, or heroin. The Outpatient Physician Maldistribution Index quantified the supply of outpatient physicians relative to local demand, with respondents classified into three groups based on secondary medical area rankings [12].

Vaccination status was assessed by agreement with the statement, “I reliably get the most important vaccinations.” Life purpose (ikigai) was measured on an 11-point scale and categorized into three groups: no (0–3), ambiguous (4–7), and yes (8–10).

C. Statistical Analyses

To adjust for the selectivity of the internet-based sample, inverse probability weighting (IPW) was applied, using weights calibrated against a population-based sample representative of the Japanese population from the 2016 Comprehensive Survey of Living Conditions of People on Health and Welfare, conducted by the Ministry of Health, Labor and Welfare [13]. PCP proportion was reported both with and without IPW adjustment. For group comparisons, a z test accounting for partial dependence was used to compare PCP proportion in each group to all respondents. Statistically significant groups with deviations exceeding 5 percentage points from the national mean were highlighted. Given 93 comparisons, a significance threshold of $P < .0001$ was used, corresponding to a Bonferroni-adjusted level of approximately $P < .01$.

Relationships between age-specific PCP proportion and sex, chronic condition, marital status, or cohabitation status were examined. PCP proportion by number of cohabiting children and regional differences by area of residence were also analyzed. All post-weighting analyses were conducted using Microsoft 365 Excel.

Results

A. Proportion of Having a Primary Care Physician

A total of 28,481 valid respondents were included in the analysis, categorized according to a range of demographic, health, and socioeconomic characteristics (Table 1). The difference between the adjusted and unadjusted proportion of individuals with a primary care physician (PCP) was minimal. Approximately half of the respondents reported having a PCP, with the proportion slightly higher among women and slightly lower among men compared to the national mean.

Table 1. Unadjusted and Adjusted Proportion of Having a Primary Care Physician (PCP proportion)

	n (%)	PCP proportion* (%)	
		Unadjusted	Adjusted
Total	28481 (100)	50.5	49.4
Demographics			
Sex			
Men	14071 (49.4)	48.0	45.6
Women	14410 (50.6)	53.0	53.1
Age			
15–29	6261 (22.0)	37.3[†]	37.6[†]
30–49	8757 (30.7)	39.0[†]	36.8[†]
50–64	6635 (23.3)	52.5	50.4
65–74	4641 (16.3)	71.7[†]	70.6[†]
75 ≤	2187 (7.7)	83.6[†]	83.5[†]
Equivalent household income			
<2.75 million JPY	8190 (28.8)	54.6	54.2
2.75–4.5 million JPY	6283 (22.1)	50.6	47.4
>4.5 million JPY	7307 (25.7)	45.1[†]	45.7
Did not know/Did not want to respond	6548 (23.0)	51.0	47.4

	n (%)	PCP proportion* (%)	
		Unadjusted	Adjusted
Public assistance	153 (0.5)	75.2 [†]	76.7 [†]
Educational level			
Junior high school/high school	8025 (28.2)	54.5	50.9
Vocational/technical/junior college	5922 (20.8)	52.3	50.4
Senior college/graduate school	14355 (50.4)	47.8	46.0
Did not know/Did not want to respond	179 (0.6)	35.8 [†]	37.7 [†]
Health conditions			
Chronic diseases			
No history	4233 (14.9)	29.8 [†]	25.7 [†]
Treated	6668 (23.4)	39.9 [†]	40.1 [†]
Currently chronic condition but not in outpatient care	5769 (20.3)	33.9 [†]	35.6 [†]
Currently receiving outpatient care	11811 (41.5)	72.1 [†]	72.8 [†]
Number of chronic physical symptoms			
0	10799 (37.9)	43.4 [†]	39.6 [†]
1	5697 (20.0)	51.1	51.7
≥2	11985 (42.1)	56.7 [†]	59.5 [†]
BMI			
<18.5	4059 (14.3)	44.9 [†]	47.3
18.5–25	19481 (68.4)	49.5	47.8
≥25	4941 (17.3)	59.2 [†]	56.4 [†]
Score of Kessler 6 scale			
0–4	18343 (64.4)	54.1	52.1
5–8	4041 (14.2)	48.3	47.8
9–12	3112 (10.9)	40.3 [†]	41.6 [†]
13–24	2985 (10.5)	42.3 [†]	41.3 [†]
Experienced childhood abuse			
Yes	2362 (8.3)	38.3 [†]	35.6 [†]
No	26119 (91.7)	51.7	50.6
Working and childcare			
Working hours in a week			
0h	9264 (32.5)	63.7 [†]	62.3 [†]
1–39h	7758 (27.2)	50.4	47.4
≥40h	11459 (40.2)	40.0 [†]	38.8 [†]
Employment status			
Self-employed	1858 (6.5)	52.6	46.8
Regular employment	11579 (40.7)	40.2 [†]	39.0 [†]
Non-regular employment	4874 (17.1)	50.7	47.7
Homemaker	3982 (14)	62.3 [†]	61.8 [†]
Student	1605 (5.6)	47.4	47.4
Retired	1215 (4.3)	74.0 [†]	75.9 [†]
Unemployed	3368 (11.8)	64.0 [†]	61.1 [†]
Number of cohabiting children			
0	20057 (70.4)	49.1	49.1
1	4723 (16.6)	56.3 [†]	54.4 [†]
≥2	3701 (13.0)	50.8	44.7
Health behaviors			
International Physical Activity Questionnaire (IPAQ)			
Low	16814 (59)	47.2	45.7
Moderate	7794 (27.4)	56.1 [†]	58.0 [†]
High	2700 (9.5)	54.9	55.9 [†]
Invalid response	1173 (4.1)	51.4	49.3
Cancer screening at least one year			
No	6427 (22.6)	46.9	45.3
Yes	11549 (40.5)	64.6 [†]	65.1 [†]
Aged <40 years old	10505 (36.9)	37.4 [†]	35.8 [†]
Handwashing for at least 15 seconds			
Always	13694 (48.1)	55.7 [†]	55.6 [†]
Sometimes	9774 (34.3)	49.3	48.8
Rarely	3269 (11.5)	43.3 [†]	43.9 [†]
Not at all	1744 (6.1)	30.2 [†]	23.4 [†]
Eating a vegetable-rich diet			

	n (%)	PCP proportion* (%)	
		Unadjusted	Adjusted
Always	9623 (33.8)	60.5[†]	59.7[†]
Sometimes	11348 (39.8)	51.0	50.8
Rarely	4511 (15.8)	40.5[†]	41.4[†]
Not at all	2999 (10.5)	32.1[†]	29.5[†]
Administration of important vaccinations			
Not agree	3937 (13.8)	38.9[†]	39.3[†]
Ambiguous	17438 (61.2)	45.5[†]	44.0[†]
Agree	7106 (24.9)	69.3[†]	71.5[†]
COVID-19 vaccine			
Received at least one dose	24722 (86.8)	53.2	53.6
Never received due to health reasons	236 (0.8)	58.5 [†]	62.1[†]
Never received due to other reasons	3523 (12.4)	31.3[†]	27.3[†]
Risky drinking habits			
No	25569 (89.8)	50.5	49.3
Yes	2912 (10.2)	50.9	51.5
History of Smoking			
Current	4736 (16.6)	45.9	45.0
Former	7648 (26.9)	55.8[†]	57.4[†]
Never	16097 (56.5)	49.4	47.8
Non-medical drug use			
Current	450 (1.6)	23.1[†]	27.0[†]
Former	946 (3.3)	40.7[†]	35.2[†]
Never	27085 (95.1)	51.3	50.1
Sense of life purpose (<i>ikigai</i>)			
No	4805 (16.9)	38.7[†]	38.0[†]
Ambiguous	14213 (49.9)	48.1	47.7
Yes	9463 (33.2)	60.2[†]	58.7[†]
Home and living environment			
Home ownership			
Owens	18847 (66.2)	57.1[†]	53.3
Rents	9110 (32)	37.7[†]	38.8[†]
Other	524 (1.8)	39.5[†]	32.9[†]
Good relationships with neighbors			
Strongly agree	2374 (8.3)	73.8[†]	71.6[†]
Somewhat agree	11393 (40.0)	60.1[†]	60.4[†]
Somewhat disagree	8973 (31.5)	43.7[†]	42.0[†]
Strongly disagree	5741 (20.2)	32.8[†]	32.2[†]
Marital status			
Married	16014 (56.2)	56.2[†]	52.7
Never married	9848 (34.6)	38.4[†]	38.1[†]
Widowed/separated	2619 (9.2)	61.3[†]	62.6[†]
Number of cohabitants			
0 (living alone)	6616 (23.2)	40.2[†]	43.9[†]
≥1	21865 (76.8)	53.7	50.5
Outpatient physician uneven distribution index			
<92.5	6013 (21.1)	50.3	48.4
92.5–107.9	7263 (25.5)	52.4	51.2
>107.9	15162 (53.2)	49.8	48.7
Unknown	43 (0.2)	48.8	50.3

* Bold values indicate a statistically significant difference ($P < 0.0001$) from the PCP proportion of all respondents (total). Values marked with an obelisk (†) represent a deviation of more than five percentage points from the total. "Adjusted" refers to estimates calculated using inverse probability weighting (IPW) to account for internet survey participation, based on a nationally representative sample in Japan. BMI categories are defined as underweight (<18.5), normal (18.5–25), and overweight (>25). JPY, Japanese yen.

B. Age and Gender Differences

PCP proportion increased with age, except for a slight decline among individuals aged 30–49 years. Detailed analysis revealed that PCP proportion was lowest in the early thirties for both men and women, then increased with age and remained relatively high among those aged

60 years and older (Fig. 2A). There was little gender difference among those younger than 25 and those 60 or older. However, among adults aged 30–49 years, notable gender differences were observed, with men in their early thirties having a much lower PCP proportion than women (male-to-female ratio minimum of 0.54) (Fig. 2A).

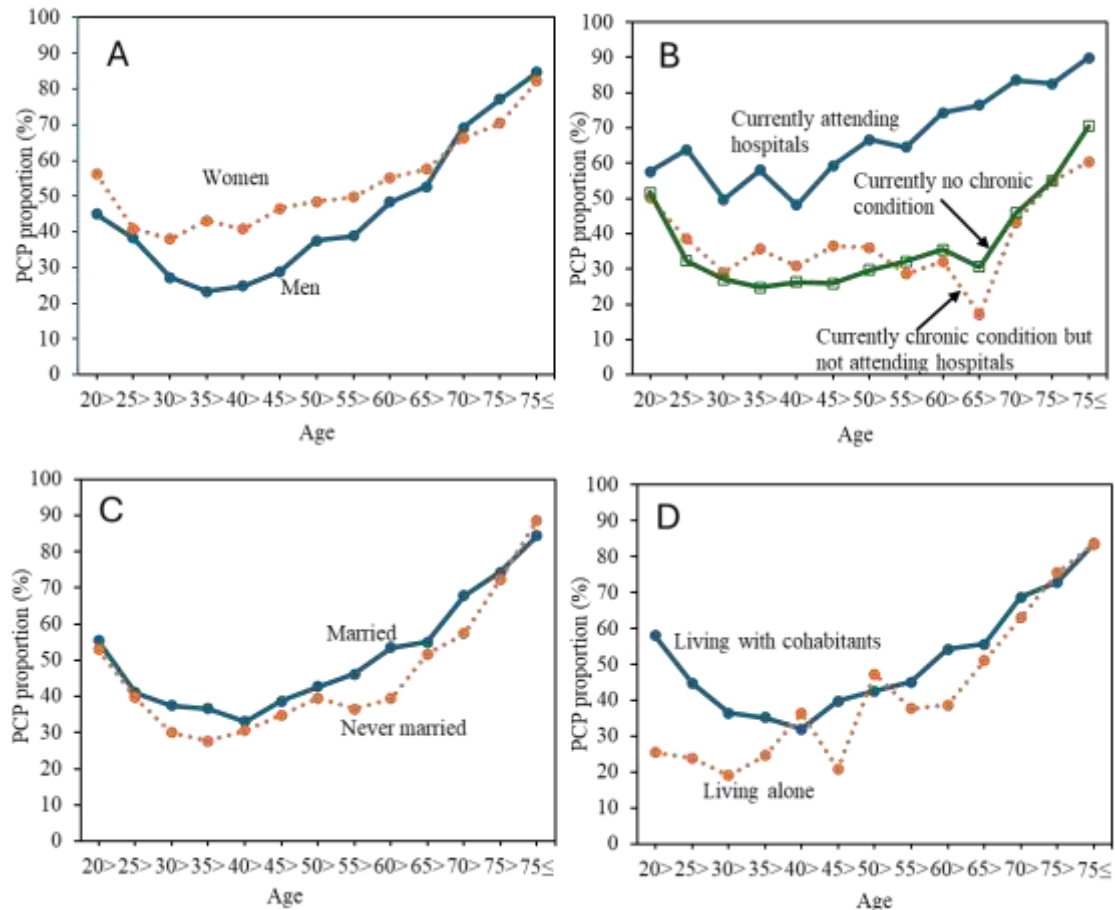


Fig. 2. Age-Specific Proportion of Individuals Having a Primary Care Physician (PCP), Stratified by: (A) Sex, (B) Presence of Chronic Condition, (C) Marital Status, (D) Cohabitation Status. Proportions are Adjusted Using Inverse Probability Weighting (IPW) to Account for Internet Survey Participation, Based on a Nationally Representative Sample in Japan

C. Group Comparisons

Statistical tests comparing subgroup PCP proportions with the national mean (50.5% adjusted, 49.4% unadjusted) revealed significant differences for most variables (Table 1). Groups with PCP proportions more than 5 percentage points higher than the national mean included those receiving public assistance, currently receiving medical treatment, having two or more chronic physical symptoms, being overweight, unemployed (excluding students), having exactly one child living with them, engaging in at least moderate physical activity, undergoing recent cancer screening, performing regular handwashing, consuming a vegetable-

rich diet, adhering to recommended vaccine schedules, being former smokers, having a sense of purpose in life, having good relationships with neighbors, or being widowed or divorced.

Conversely, groups with PCP proportions more than 5 percentage points lower than the national mean included individuals in good health or with untreated illnesses, those with mental health conditions, a history of childhood abuse, regular employment, working 40 hours or more per week, not undergoing recent cancer screening, not performing regular handwashing, not consuming vegetable-rich diets, not adhering to important vaccinations, a history of drug use, lacking a sense of purpose in life, not owning their home, poor relationships with neighbors, never married, or living alone (Table 1).

D. Chronic Conditions and Marital Status

PCP proportion was consistently higher at all ages among those currently receiving outpatient care. Even among individuals with a diagnosis but not receiving outpatient care, as well as those who were healthy or had recovered from illness, PCP proportions increased after the late 60s (Fig. 2B). Never-married individuals had lower PCP proportions than married individuals at almost every age, and marriage was associated with a marked increase in PCP proportion, narrowing the gender gap (Fig. 2C, Fig. 3).

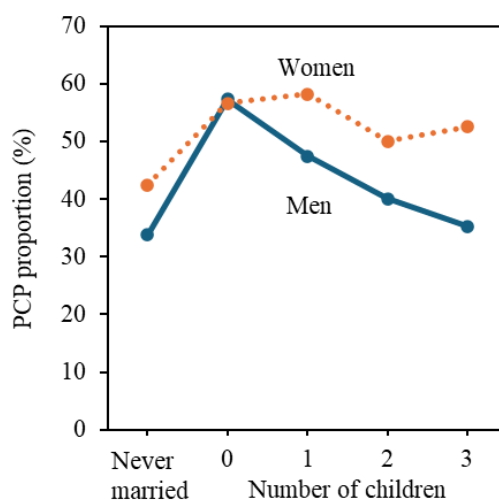


Fig. 3. Proportion of Individuals Having a Primary Care Physician (PCP) by Number of Cohabiting Children. A value of “0” for Children Indicates Married Respondents with no Cohabiting Children. Proportions are Adjusted using Inverse Probability Weighting (IPW) for Internet Survey Participation, based on a Nationally Representative Sample in Japan

E. Living Arrangements and Regional Differences

Individuals living alone had lower PCP proportions than those living with others, and this trend persisted across most age groups (Fig. 2D, Table 1). Geographic disparities were observed, with PCP proportions exceeding 54.4% in 11 of the 47 prefectures and falling below

44.4% in 5 prefectures (Fig. 4). Most prefectures with higher PCP proportions were located in central and western Japan, while those with lower proportions were mainly in eastern Japan. However, there was no relationship between the outpatient physician maldistribution index and PCP proportion (Table 1).

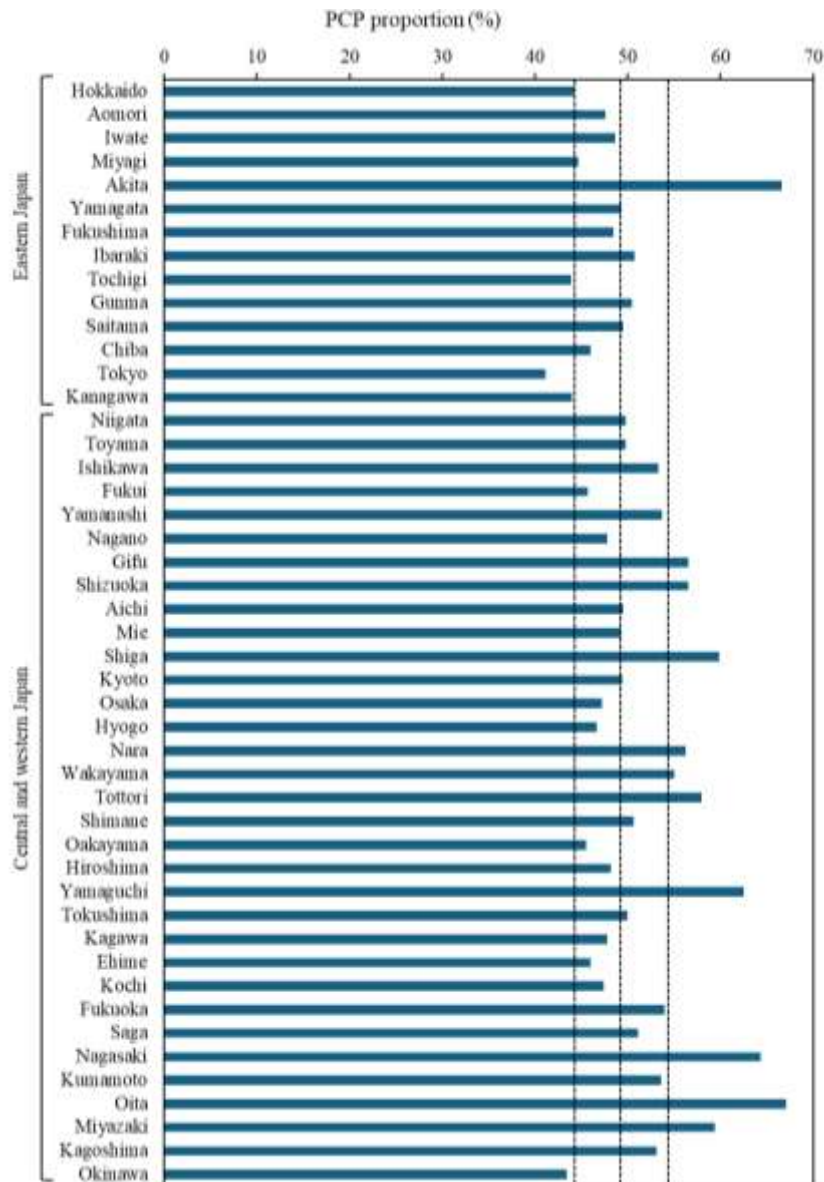


Fig. 4. Proportion of Individuals Having a Primary Care Physician (PCP) by Prefecture of Residence among 28,481 Valid Respondents. Proportions are Adjusted Using Inverse Probability Weighting (IPW) for Internet Survey Participation, Based on a Nationally Representative Sample in Japan. The Dotted Lines Indicate the National Mean (49.4%) as well as values Five Percentage Points Above (54.4%) and Below (44.4%) the National Mean

Discussion

This study found that only about half of adults in Japan have a primary care physician (PCP), with higher rates among women, older adults, and those currently receiving outpatient

care. Having chronic physical symptoms, being unemployed or retired, and engaging in health-conscious behaviors were also linked to higher PCP access. In contrast, people with mental health issues, a history of abuse, those living alone, working long hours, or with weak community ties were less likely to have a PCP [14]–[18].

People with mental health conditions may have lower PCP access because stigma, reduced help-seeking, and the fragmentation of mental and physical care undermine continuity with a regular physician [14],[15]. A history of abuse may reduce engagement with primary care through lasting psychological distress and diminished trust in services; consistent with this, adults reporting childhood adversity have lower odds of having a personal physician [16],[19]. Those living alone may have lower PCP access because household members often prompt and facilitate care; socially isolated older adults, particularly those experiencing family isolation, use primary health services less [20],[21]. Long working hours constrain the time available for daytime clinic visits and thereby reduce regular primary care contact [17],[22]. Weak community ties offer fewer informal prompts, referrals, and sources of social support that help people establish and maintain a regular physician [23].

Notably, time constraints due to employment and child-rearing, rather than income or education, were major barriers to PCP access among people in their 30s to 50s [17],[18],[22],[24]–[26]. Strong community relationships and home ownership were associated with higher PCP rates, suggesting that social stability and support play important roles [23]. Regional differences were observed, but the distribution of outpatient physicians did not explain these disparities. Prefectures with higher PCP proportions were concentrated in central and western Japan, whereas lower proportions clustered in eastern Japan. Because the outpatient-physician maldistribution index did not account for this pattern, the east–west gradient is unlikely to reflect physician supply alone. A broadly similar geographic gradient has been described for other Japanese health-system indicators, including regional variation in medical expenditure [27]. Plausible contributors include regional differences in the penetration of clinic-based, continuity-oriented primary care, in population age structure and urban–rural composition, and in the strength of community ties, which were themselves associated with PCP access in our data. This regional finding is exploratory and hypothesis-generating, given the prefecture-level resolution of the analysis.

Health literacy and positive health behaviors—such as regular physical activity, cancer screening, handwashing, and vaccination—were consistently associated with having a PCP [28]–[34],[35]. Conversely, a history of drug use and lack of life purpose (*ikigai*) were linked to lower PCP access, possibly due to stigma or lower health motivation [23],[34].

While universal health insurance in Japan reduces financial barriers, social and behavioral factors remain critical. Improving PCP access will require targeted efforts to

support vulnerable groups, especially those with limited time, weak social ties, or mental health needs. Policies should focus on enhancing health literacy, community engagement, and flexible access to care, rather than solely increasing income or education levels [31]–[34].

This study has some limitations. This study is limited by its reliance on self-reported survey data, which may introduce bias. The cross-sectional design prevents causal inference, and although weighting was used to improve representativeness, some confounding may remain. Exclusion criteria may have omitted vulnerable groups, and certain variables were measured with brief tools. Regional analysis was at the prefecture level, and the absence of qualitative data limits understanding of barriers to PCP access. In addition, the questionnaire did not provide a clear definition of a PCP, which may have resulted in variability in respondents' interpretations of what constitutes a PCP. In addition, although the JPCA provides a formal definition of a certified family physician, our self-reported measure of having a regular physician was broader and did not impose this definition; respondents' interpretations of what constitutes a regular doctor may therefore have varied, which could have affected the estimated PCP proportion. Because the survey item did not define the frequency implied by 'periodically,' respondents may have applied different thresholds when reporting a regular physician, which could have introduced some misclassification in the PCP measure.

Conclusion

The PCP proportion among people in midlife was low in Japan, especially among men. This study suggests that facilitating sufficient time for healthcare access, strengthening community support, and improving health literacy may help increase PCP utilization among midlife adults in Japan. This study also shows that, among people in need of care, older individuals and those with chronic conditions are more likely to have a PCP, but access may not be reaching some of the most vulnerable members of society—those who live alone and without community ties, have poor health habits, and have mental health needs. While considerable progress in facilitating PCP care has been made in some groups, focused targeting of other vulnerable groups may help further increase the nationwide PCP proportion.

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Conflict of Interest

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