

Medical Students' Views on Family Medicine in Japan: Insights from an International Comparison

Yuki Takeuchi, MD | Qi Chen, PhD | Michael D. Fetters, MD, MPH, MA (deceased)

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Abstract

Introduction: Promoting family medicine (FM) among medical students is essential for strengthening future primary care systems. This study examines Japanese medical students' perspectives on FM and compares them with findings from an identical study conducted in China to identify effective strategies for promoting FM.

Methods: A cross-sectional, self-administered, online survey was conducted from November 2020 to February 2021, involving 438 medical students across 28 medical schools in Japan. The survey, modeled after an identical study in China, assessed career decision factors, perceptions of FM careers and lifestyles, and attitudes toward FM, using a 5-point Likert scale.

Results: Of the 363 respondents who indicated a preferred specialty, 19.8% selected FM, making it the second most popular choice. Japanese medical students valued social commitment, manageable work hours, and career stability but perceived FM as less prestigious compared to medical students in China. Both groups recognized the importance of FM in rural health care and the role of government support. However, Japanese medical students were less optimistic about FM careers offering good income and work-life balance.

Conclusion: While FM is relatively popular among medical students in Japan, challenges such as perceptions of low prestige and poor work-life balance remain. Addressing these issues might enhance interest in FM. Study limitations include response bias, cultural differences affecting generalizability, and differences in timing of the survey and participant grade levels between studies. Future research should address these limitations and further explore cultural influences on medical students' career decisions.

Introduction

The issue of medical students' attitudes toward pursuing a career in family medicine (FM) is critical in addressing current and future health care challenges such as aging populations, complex health care needs, and the shortage of health care professionals.¹ Previous research has identified several factors influencing medical students' specialty choices, including rural background, interest in underserved care, lower income expectations, and exposure to FM clerkships.² Conversely, aspirations for higher income, prestige, and a research-oriented career have been negatively associated with interest in FM.² In Japan, factors such as interest in clinical reasoning, community-oriented practice, and involvement in preventive care have been linked

to a preference for FM.³ However, there is limited research on Japanese medical students' views on FM careers and the barriers to choosing FM as a career. This study aims to fill this gap by identifying Japanese medical students' perspectives on FM and comparing them with those of medical students in China where FM has successfully been promoted by major primary health care reform. We believe that comparing two countries with similar cultures and circumstances yet demonstrating different outcomes regarding the promotion of FM could provide insights that are applicable to the promotion of FM on an international scale.

Family Medicine in Japan and China

In Japan, primary care has traditionally been provided by hospital-trained physicians.⁴ FM was recently recognized as an independent discipline, with the Japan Primary Care Association introducing the first family medicine board certification in 2009. As of December 31, 2022, there were 1,126 board-certified family physicians (FPs), representing 0.3% of all registered medical doctors (339,623) in Japan.^{5,6} In contrast, the Chinese government implemented extensive primary health care reforms, rapidly increasing the number of FPs from 32,400 to 309,800 between 2009 and 2018. These reforms included the establishment of 559 hospital-based and 1,660 community-based training programs, the creation of multiple pathways to becoming an FP, and the integration of FM curricula into medical education.⁷

Methods

Study Design

We conducted a cross-sectional, self-administered, online survey from November 2020 to February 2021. The survey aimed to elucidate the characteristics of Japanese medical students by comparing results with an identical study conducted in China in 2016.⁸ The study received approval from the research ethics committee of Teine Keijinkai Hospital (ID 4-019182-00), and all participants provided online consent before starting the survey.

Participants

The study sample consisted of 438 medical students, ranging from first to sixth year, from 28 medical schools across Japan. The survey was distributed via the mailing lists of each medical school, making it impossible to accurately calculate the response rate. In the online survey, all mandatory questions, except for the optional question regarding preferred specialties, were required to be answered prior to submission. Consequently, all submitted responses were included in the analysis without the application of any exclusion criteria. By contrast, the identical online survey conducted in China by the senior authors (Q.C. and M.D.F.) in 2016 (during the "Introduction to Medicine" lecture for 347 first-year students at Peking University Health Science Center), required all questions including the one regarding preferred specialties, to be answered prior to submission. A total of 335 students completed the Chinese survey.

Data Collection Tools

We used a survey instrument initially administered to medical students in China in 2016,⁸ developed based on Wright et al's research.⁹ Our survey included one question about preferred specialty and 45 items with 5-point Likert-scale responses, covering career decision factors, FPs' lifestyle and career, and attitudes toward FM. To improve response quality by reducing completion time, we excluded 14 questions related to preferred medical settings and patient age groups from the Japanese survey. Additionally, we removed two lifestyle-related questions that could suggest gender role stereotypes. Both the Chinese and the Japanese surveys were administered online, using Google Forms in Japan and the university's original online application in China. Participation was voluntary and anonymous in both studies.

Translation

The original English-language survey was translated into Japanese by bilingual investigators, with translation difficulties resolved through discussions among the translators and two other bilingual family physicians. The same method was used for translation from English to Chinese in the identical study. The instrument was pilot tested with three medical students.

Data Analysis

Using Easy R software (EZR V. 1.55), we conducted a Mann-Whitney U test for scores on the 5-point Likert scale to compare the Japanese and Chinese groups. In the identical survey, we used SPSS 21.0 software (IBM Corp, Armonk, NY) for independent-sample *t* test between the scores of Chinese and international students. However, given that the Likert scale data in this study were ordinal and their distribution was unknown, we chose the Mann-Whitney U test as the method of analysis.

Results

Participants

We received responses from 438 Japanese medical students and compared them with responses from 335 first-year medical students who participated in the identical survey conducted in China in 2016.⁸ The demographics of participants are shown in Table 1.

Preferred Specialty

Among the 363 Japanese medical students who indicated their preferred specialty, 73 (19.8%) chose FM as their first choice, making it the second most popular specialty. In contrast, FM ranked third in popularity among medical students in China (Table 2).

General Factors Influencing Career Decision

Both Japanese and Chinese students valued "social commitment," "acceptable hours of practice," "stable/secure future," "flexibility outside medicine," "keeping all options open," and "long-term relationship with patients." Japanese students also valued "acceptable on-call schedule," "wide variety of patients' problems," and "patient population is interesting/stimulating." Chinese students valued "interest in research," "high-income potential," and "flexibility within medicine" (Table 3).

Attitudes Toward FPs

Students in both countries agreed on the need for FPs in rural areas and the necessity of government support for FPs. Chinese students perceived FPs as more respected by society, nurses, and other specialists compared to Japanese students. Japanese students viewed FPs as specialists in primary care, valuing them equally to specialists in other fields, but they assigned lower scores to the level of respect FPs receive from other specialists (Table 4).

Perspectives on FM Career and Lifestyle

Both groups rated FM career highly in terms of requiring broad knowledge and providing continuous and comprehensive care. However, they were less positive about FPs' careers offering good income and personal time. Japanese students were more likely to disagree with the statement "FM career has too much simple and repetitive work" (Table 5).

Conclusions

Our study provides valuable insights into the attitudes of Japanese medical students toward FM compared to medical students in China. While FM is a relatively popular specialty among Japanese students, they might be hesitant to choose FM due to negative perceptions, such as low respect for FPs from others and poor work-life balance. This lack of respect for FPs was particularly pronounced in Japan compared to China. Therefore, increasing the prestige of FM and improving work-life balance through flexible working arrangements and enhanced support systems might be effective strategies to attract more medical students to FM. Additionally, we should emphasize the significant contributions of FPs to society, including their broad knowledge and continuous, comprehensive care, as these factors align with the career attributes valued by medical students.

Our study found some students hold the misconception that FM career is too simple and repetitive; however, it is, in fact, highly complex due to the variety of issues addressed during patient visits.¹⁰ This complexity may also appeal to students who prioritize factors such as a "wide variety of patients' problems," and an "interesting/stimulating patient population," both of which rank among the top 10 factors influencing career decision-making in Japan.

The promotion of FM is a common challenge faced by many countries. Insights derived from the comparison of two countries with similar cultures and circumstances, but differing outcomes might potentially be applied to enhance the promotion of FM in other countries.

This study has limitations. The voluntary nature of the survey and the inability to accurately calculate the response rate may introduce response bias. Additionally, cultural and systemic differences between Japan and China may influence the generalizability of the findings. It is also noteworthy that the Chinese study only included responses from first-year students, whereas our study collected responses from Japanese medical students across all 6 years of their education. The two studies were conducted 5 years apart, specifically comparing the pre-COVID-19 and post-COVID-19 pandemic periods, which limits the ability to make meaningful comparisons. Future research should address these limitations by employing more robust sampling methods and exploring the cultural nuances that affect medical students' career choices.

Tables and Figures

Table 1. Participant Demographics

	Medical students in Japan (N=438) n (%)	Medical students in China (N=335) n (%)
Sex		
Male	240 (54.8)	180 (53.7)
Female	192 (43.8)	155 (46.3)
No answer	6 (1.4)	0 (0)
Grade		
1st	56 (12.8)	335 (100)
2nd	49 (11.2)	0 (0)
3rd	69 (15.8)	0 (0)
4th	111 (25.3)	0 (0)
5th	98 (22.4)	0 (0)
6th	55 (12.6)	0 (0)

Table 2. Medical Students' First-Choice Specialty

Specialty	Medical students in Japan (N=368)		Medical students in China (N=335)	
	Rank	n (%)	Rank	n (%)
Internal medicine	1	76 (20.7)	2	67 (20.0)
Family medicine	2	73 (19.8)	3	42 (12.5)
Surgery	3	64 (17.4)	1	130 (38.8)
Obstetrics and gynecology	4	45 (12.2)	7	5 (1.5)
Pediatrics	5	41 (11.1)	6	14 (4.2)
Emergency medicine	6	21 (5.7)	4	38 (11.3)
Psychiatrics	7	20 (5.4)	5	17 (5.1)
Others		28 (7.6)		22 (6.6)

Table 3. General Factors Influencing Career Choices

Factor evaluated	Medical students in Japan (N=438)		Medical students in China (N=335)		Mean difference (Japan-China)	P value
	Rank	Mean	Rank	Mean		
Social commitment	1	3.99	1	4.06	-0.07	.5582
Acceptable hours of practice	2	3.92	8	3.57	0.36	≤.0001
Stable/secure future	3	3.89	3	3.93	-0.04	.4739
Flexibility outside medicine	4	3.84	5	3.83	0.00	.7899
Acceptable on-call schedule	5	3.83	12	3.42	0.40	≤.0001
Wide variety of patients' problems	6	3.68	21	3.13	0.56	≤.0001
To emulate a physician known to me	7	3.67	16	3.26	0.41	≤.0001
Keep all my options open	8	3.65	9	3.52	0.14	.0204
Patient population is interesting/stimulating	9	3.55	18	3.26	0.29	.0002
Long-term relationship with my patients	10	3.45	9	3.52	-0.08	.5623
High-income potential	11	3.35	4	3.84	-0.49	≤.0001
Flexibility inside of medicine (clinical/research)	12	3.35	6	3.76	-0.41	≤.0001
Health promotion is important	13	3.32	7	3.75	-0.43	≤.0001
Focus on patients in the community	14	3.26	23	2.85	0.40	≤.0001
Supervisors recommended this career	15	3.01	15	3.26	-0.25	.0060
Focus on urgent care	16	2.99	20	3.14	-0.15	.0519
Results of interventions immediately available	17	2.94	13	3.29	-0.36	≤.0001
Focus on nonurgent care	18	2.87	19	3.20	-0.33	≤.0001
More narrow variety of patient problems	19	2.75	22	2.86	-0.11	.1254
Interest in research	20	2.74	2	4.00	-1.26	≤.0001
Focus on in-hospital care	21	2.70	16	3.26	-0.56	≤.0001
Don't like uncertainty (in medical diagnosis, management, and prognosis)	22	2.68	14	3.28	-0.60	≤.0001
Status among my colleagues	23	2.53	11	3.50	-0.97	≤.0001

Table 4. Medical Students' Attitudes About FPs

Family physicians...	Medical students in Japan (N=438)		Medical students in China (N=335)		Mean difference (Japan-China)	P value
	Rank	Mean	Rank	Mean		
are needed in rural areas	1	4.57	1	4.27	0.30	≤.0001
should be supported by the government	2	4.18	2	4.15	0.04	.3670
are specialists in primary care	3	4.05	8	3.16	0.89	≤.0001
are needed in urban areas	4	3.82	7	3.90	-0.08	.4516
are respected by patients	5	3.81	3	4.13	-0.32	≤.0001
are respected by society	6	3.49	4	4.11	-0.63	≤.0001
are respected by nurses	7	3.41	5	4.10	-0.69	≤.0001
are respected by other specialists	8	2.99	6	4.06	-1.07	≤.0001

Table 5. Medical Students' Attitudes About FM Career and Lifestyle Attributes

An FM career...	Medical students in Japan (N=438)		Medical students in China (N=335)		Mean difference (Japan-China)	P value
	Rank	Mean	Rank	Mean		
Needs broad knowledge	1	4.72	1	4.25	0.47	≤.0001
Can provide continuous and comprehensive care	2	4.22	3	4.10	0.12	.0004
Has a good physician–patient relationship	3	4.18	6	3.76	0.43	≤.0001
Provides a sense of accomplishment	4	4.02	5	3.80	0.22	≤.0001
DOES NOT have too much simple and repetitive work*	5	3.63	14	2.69	0.94	≤.0001
Allows being a good parent	6	3.45	7	3.75	-0.30	≤.0001
Can allow a healthy lifestyle	7	3.45	4	3.83	-0.38	≤.0001
Is a respected professional	8	3.38	8	3.71	-0.32	≤.0001
Allows good career advancement	9	3.30	9	3.67	-0.37	≤.0001
Allows enjoyment of personal time	10	3.27	11	3.58	-0.31	≤.0001
Has good working hours	11	3.22	12	3.57	-0.35	≤.0001
Fits with my personality	12	3.18	2	4.20	-1.02	≤.0001
Provides a good income	13	2.98	10	3.60	-0.62	≤.0001
DOES NOT have a low level of research*	14	2.83	13	2.97	-0.14	.0148

* Negative items reversed in questionnaire scoring, and added "DOES NOT" on the top of items on the table.
Abbreviation: FM, family medicine.

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Conflicts of Interest: The authors have no conflicts of interest to disclose in this study.

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Corresponding Author

Yuki Takeuchi, MD

University of Rochester Medical Center, Department of Family Medicine, Rochester, NY; Teine Keijinkai Hospital, Teine Family Medicine Clinic

ytakeuchi1016@gmail.com

Author Affiliations

Yuki Takeuchi, MD - University of Rochester Medical Center, Department of Family Medicine, Rochester, NY | Teine Keijinkai Hospital, Teine Family Medicine Clinic

Qi Chen, PhD - School of Health Humanities, Peking University, Beijing, China

Michael D. Fetters, MD, MPH, MA (deceased) - Department of Family Medicine, University of Michigan, Ann Arbor, MI

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