



Original Article

# Healthcare-seeking behavior and awareness of physical therapy among Japanese residents in Thailand: a descriptive study

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**Abstract.** [Purpose] This descriptive study examined healthcare-seeking behavior and awareness of physical therapy among Japanese residents of different age groups in Thailand. [Participants and Methods] The study included 145 Japanese residents in Thailand. An online questionnaire was used to collect data on the participants' sociodemographic characteristics, healthcare-seeking behavior, and awareness of physical therapy. Participants were categorized into three groups based on age, such as young adults, middle-aged adults, and older adults. The  $\chi^2$  test and Fisher's exact test were used in the data analysis. [Results] The results showed that compared with the older groups, the youngest group was more likely to visit pharmacies, physical therapy clinics, osteopathic clinics, and Thai massage shops to receive healthcare services for injuries or diseases. The participants learned about healthcare services in Thailand through word-of-mouth. Additionally, more than 50% of all participants knew about physical therapy. [Conclusion] There are some differences in health-seeking behavior and awareness of physical therapy among the groups. The youngest group visited physical therapy clinics and 50% of all participants knew about physical therapy.

**Key words:** Thailand, Japanese residents, Physical therapy

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## INTRODUCTION

In 2014, the Japanese government promulgated the Promote Health and Medicine Strategy Act and established the Asia Health and Wellbeing Initiative (AHWIN) in Japan's cabinet secretariat. It promotes the Sustainable Development Goals established by the United Nations in 2015 and advocated universal health coverage<sup>1)</sup>. Based on this policy, advanced Japanese technology and healthcare knowledge, including rehabilitation, will be developed in Asian countries.

Thailand is one of the most important partners of Japan among Asian countries. Economic development in Thailand has been remarkable in recent years, and the economic relationship between Thailand and Japan have tightened. There were over 72,000 Japanese residents in Thailand in 2017, the second-highest among Asian countries. Furthermore, the number of Japanese companies and residents in Thailand is expected to rise continuously<sup>2)</sup>.

Overseas Japanese residents need to maintain their health conditions for better economic activities. However, they often suffer from physical and psychological illnesses as they are forced to live in different environments with varying climate, life-

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style, and language. According to a cross-sectional survey of 1,275 Japanese residents overseas, more than 60% complained of physical and psychological symptoms while living in foreign countries<sup>3</sup>. A previous study examined that the factors related to psychological distress in young and middle-aged Japanese residents in Thailand and clarified that their mental distress was likely to worsen than those who lived in Japan. Moreover, sociodemographic factors and physical exercise habits were significant factors related to psychological distress<sup>4</sup>. In Ookubo's report<sup>5</sup> on healthcare support for Japanese residents in Thailand, few companies considered providing healthcare support and healthcare knowledge to support their staff, even though Japanese residents in Thailand demanded more healthcare support. Therefore, further healthcare support is required to maintain Japanese residents' health in Thailand.

In the last decade, based on the vision of AHWIN, Japanese healthcare providers, including hospitals, pharmacies, and physical therapy (PT) clinics have entered Thailand to resolve this situation<sup>6</sup>. Physical therapy is an effective healthcare service to maintain physical condition using exercise training and it is nationally licensed in Thailand. Additionally, Thailand allows direct access to PT; people can take PT under health insurance<sup>7-9</sup>. However, healthcare-seeking behavior and recognition of PT among Japanese residents in Thailand are unclear: the healthcare services they utilize, their understanding of the current healthcare environment, including PT, and how they seek healthcare services to maintain their health. There is no data on healthcare-seeking behavior and recognition of PT among Japanese residents in Thailand. Clarity in these aspects might promote access to good healthcare services for Japanese residents in Thailand. According to a report in 2016 by the Ministry of Foreign Affairs in Japan, 36% of Japanese residents in Thailand are 50 years or older<sup>10</sup>. Generally, older people often require several healthcare services compared to younger people. Therefore, this descriptive study examines the healthcare-seeking behavior and recognition of PT among Japanese residents of different age groups in Thailand.

## PARTICIPANTS AND METHODS

This descriptive study was conducted between July 2018 and December 2019. All measured parameters were collected using an online questionnaire through the SurveyMonkey application (SurveyMonkey Inc., CA, USA). Convenient sampling was used in this study. The QR code of this questionnaire was distributed among the participants through the Japanese Association in Thailand, and participants answered the questions themselves.

The inclusion criteria were as follows: Japanese born who had lived in Thailand for more than 30 days, and who were older than 25 years. Participants were excluded if they did not complete the questionnaire or did not comply with the stipulated length of residence in Thailand. The Ministry of Health, Labour and Welfare in Japan promotes the "Health Japan 21", a national health promotion movement in the 21st century<sup>11</sup>. Under this policy, people aged 25 years and older are grouped into three categories to reflect the current Japanese lifestyle and health: 25 to 44 years (Group A), 45 to 64 years (Group B), and over 65 years (Group C). The participants were similarly categorized in our study.

The sample size was calculated from the alpha value, beta value, and effect size. The alpha value was set at 0.05, and the power was set at 0.80. The hypothesized effect size of Cramer's V was set at 0.30 (medium effect size)<sup>12</sup>. The contingency table was 2 × 3. Consequently, it was estimated that a total of 108 cases were required.

This study complied with the principles of the Declaration of Helsinki and was approved by the institutional review board of the authors' affiliated institutions. The approval reference number is 71-9. The purpose of this study was explained to the participants on the website. All participants consented to participate in the study.

This study was conducted anonymously to avoid information bias. The questionnaire consisted of sociodemographic data such as age, gender, height, body weight, and length of stay in Thailand, including five questions related to healthcare-seeking behavior and three questions concerning the recognition of PT. The answers to the questions were replaced with categorical variables and used for statistical analyses.

Descriptive statistics were calculated for the variables. The frequency, percentage, mean, and standard deviation were described for each question related to healthcare-seeking behavior and recognition of PT. Moreover, the  $\chi^2$  test and Fisher's exact test were used to compare the differences among the groups. Data were analyzed using SPSS version 25.0 (SPSS Inc., Chicago, IL, USA), and values of  $p < 0.05$  were considered to indicate statistical significance.

## RESULTS

A total of 178 participants were included in this study. Based on the criteria, 33 participants were considered ineligible, resulting in 145 participants' data finally included. The mean values and percentages for all variables in each group are presented in Table 1. Females comprised 55.2% (80 of 145), and the average age of all participants was 50.8 years. The average length of stay in Thailand was 43.1 months for Group A (25–44 years), 110.7 months for Group B (45–64 years), and 305.1 months for Group C ( $\geq 65$  years).

The results of the  $\chi^2$  tests and Fisher's exact tests are shown in Table 2. A total of 138 participants (95%) answered "yes" to the question, "Have you ever visited a hospital in Thailand?" Furthermore, 117 participants (81%) answered "yes" to the question, "Have you ever used Japanese in hospitals in Thailand?" Answers to these questions did not differ among the groups. Moreover, overseas travel insurance was the most used medical insurance in each group. However, the health insurance used varied.

**Table 1.** Descriptive results for each group

	All participants (n=145)	Group A (25–44 years) (n=60)	Group B (45–64 years) (n=49)	Group C (over 65 years) (n=36)
Gender (female), n (% of the number in each group)	80 (55.2)	32 (53.3)	22 (44.9)	26 (72.2)
Age (years)	50.8 ± 15.4	36.5 ± 5.4	51.9 ± 5.5	72.9 ± 5.1
Height (cm)	163.4 ± 8.3	165.7 ± 7.6	164.0 ± 8.0	158.8 ± 8.2
Body weight (kg)	58.1 ± 9.4	58.4 ± 9.7	60.0 ± 10.2	54.8 ± 6.8
Length of stay (months)	130.9 ± 168.2	43.1 ± 55.8	110.7 ± 123.6	305.1 ± 212.6

Mean ± SD.

Regarding healthcare-seeking behavior in Thailand, “hospitals” were utilized by all groups; however, there was a significant difference regarding pharmacies (in Group C). Additionally, there were age differences in usage of “PT clinic”, “osteopathic clinic”, and “Thai massage shops” among the groups: more participants from the younger groups used these healthcare services when they had an injury or disease while living in Thailand as compared to the oldest group. “Word-of-mouth” was the most frequent mode of learning about healthcare services in Thailand among the participants. Furthermore, there was an age difference in the use of the “internet”: the youngest group used the “internet” significantly more frequently to learn about healthcare services in Thailand compared to the older groups. Group C, the oldest group, responded with “close to home” as the second-highest answer among the items.

Conversely, more than 50% of all participants were aware of PT. It was included for “rehabilitation” and approximately 95% of all participants answered “yes”, although there was no difference among the groups in the statistical analysis. The percentage of those in Group C who answered “yes” to the question, “Do you want to take PT to prevent injury or disease during your stay in Thailand?” was 50%. For the question, “Do you want to take PT for your shoulder or lower back pain due to daily lifestyle in Thailand?” 56.7% in Group A answered “yes”.

## DISCUSSION

This study examined age differences in healthcare-seeking behavior and the recognition of PT among Japanese residents in Thailand. In this study, 95% of all participants had visited a hospital in Thailand, and 81% had utilized Japanese in the hospital. All groups visited hospitals when they had injuries or diseases while residing in Thailand. However, there were differences in the age groups in the use of pharmacies, PT clinics, osteopathic clinics, and Thai massage shops: Groups A and B utilized them more frequently as healthcare services when they had an injury or disease compared to Group C. Regarding how the Japanese residents learned about healthcare services, word-of-mouth was the most used communication channel. More than 50% of the participants knew about PT. Although there were no significant differences, Group C (the oldest group) scored highest among those who wanted to take PT to prevent injury or disease. Group A (the youngest group) scored high among those who wanted to take PT for shoulder or lower back pain due to daily lifestyle in Thailand.

Generally, language is one of the barriers to accessing healthcare services in foreign countries. Awano et al.<sup>13)</sup> examined the problems when 72 foreigners utilized healthcare services in Japan, and language differences caused problems in patients’ understanding of instructions and explanations during treatment. Kohno et al.<sup>14)</sup> reported issues in healthcare services in Malaysia, where language barriers made it difficult for residents to access healthcare. However, this study clarifies that more than 90% of all participants visited a hospital in Thailand, and approximately 80% utilized Japanese in the hospital. Hence, the participants in this study could access hospital services in their mother tongue, and Thailand’s healthcare services were enhanced. Ookubo<sup>5)</sup> reported in 2003 that the healthcare environment was not favorable for Japanese residents in Thailand. Therefore, this study contributes to updating such information.

This survey revealed that the younger groups used pharmacies, PT clinics, osteopathic clinics, and Thai massage shops as healthcare services when they had injury or disease compared to the oldest group. These healthcare services are cheaper than those provided in hospitals: generally, 200 baht/hour for a Thai massage and 2,000 baht/hour for PT in Thailand. This difference in cost may be related to age differences. Thai massage shops are widely used techniques and are currently accepted by the local Thai Ministry of Public Health. This local healthcare service is promoted but is not internationally accepted as a healthcare service<sup>15)</sup>. The effectiveness of Thai massages has been examined in previous studies. Laosee et al.<sup>16)</sup> performed a randomized controlled trial to clarify the difference in effectiveness between Thai massages and herbal compression massages among elderly patients with lower back pain. There were no statistically significant differences in outcomes such as pain intensity, disability, and quality of life. Moreover, Juntakarn et al.<sup>17)</sup> compared the effectiveness of Thai massages and joint mobilization on lower back pain and showed that the effectiveness of these techniques was equal to pain intensity. The older groups have understood these limitations of effectiveness through their long-term residence in Thailand, which may be related to age differences.

**Table 2.** Results of the  $\chi^2$  test and Fisher's exact test

Questions	Answer	Unit	Group A (25–44 years) (n=60)	Group B (45–64 years) (n=49)	Group C (over 65 years) (n=36)	$\chi^2$	p-value	
Have you ever visited a hospital in Thailand?	yes	n (% of 145)	55 (37.9)	48 (33.1)	35 (24.1)	2.245	0.37	
Have you ever used Japanese in hospitals in Thailand?	yes	n (% of 145)	47 (32.4)	40 (27.6)	30 (20.7)	0.403	0.82	
What kind of medical insurance do you use in Thailand?	Overseas travel insurance	n (% of 145)	25 (17.2)	19 (13.1)	12 (8.3)	11.912	0.27	
	Private medical insurance in Thailand		7 (4.8)	6 (4.1)	1 (0.7)			
	Private medical insurance in Japan		7 (4.8)	8 (5.5)	2 (1.4)			
	Overseas medical expenses system		3 (2.1)	2 (1.4)	1 (0.7)			
	Own expense		9 (6.2)	10 (6.9)	14 (9.7)			
	Others		9 (6.2)	4 (2.8)	6 (4.1)			
	Hospital		53 (36.6)	46 (31.7)	34 (23.4)	1.341	0.59	
What kind of healthcare services have you used when you had an injury or disease during your stay in Thailand?	Hospital	n (% of 145)	53 (36.6)	46 (31.7)	34 (23.4)	1.341	0.59	
	Pharmacy		38 (26.2)	34 (23.4)	15 (10.3)	7.119	< 0.05	
	Physical therapy clinic		5 (3.4)	7 (4.8)	0 (0.0)	5.856	< 0.05	
	Acupuncture & moxibustion clinic		3 (2.1)	8 (5.5)	3 (2.1)	3.798	0.12	
	Osteopathic clinic		13 (8.9)	4 (2.8)	0 (0.0)	11.112	< 0.05	
	Thai massage shop		40 (27.6)	33 (22.8)	15 (10.3)	7.269	< 0.05	
	Nothing		2 (1.4)	2 (1.4)	0 (0.0)	1.245	0.58	
	Word-of-mouth information		48 (33.1)	34 (23.4)	24 (16.6)	2.554	0.28	
	Internet	yes	n (% of 145)	32 (22.1)	24 (16.6)	9 (6.2)	7.819	< 0.05
	Advertisement		12 (8.3)	14 (9.7)	3 (2.1)	5.313	0.07	
Magazine advertisement		12 (8.3)	13 (8.9)	6 (4.1)	1.317	0.52		
	Close to home		25 (17.2)	19 (13.1)	11 (7.6)	1.202	0.55	
	Others		5 (3.4)	5 (3.4)	2 (1.4)	0.591	0.75	
Have you ever heard of physical therapy and rehabilitation?	I know the word and content of physical therapy	yes	n (% of 145)	34 (23.4)	27 (18.6)	19 (13.1)	5.635	0.21
	I do not know anything about physical therapy, but I know the word and content of rehabilitation		23 (15.9)	22 (15.2)	13 (8.9)			
	I do not know the word or content of physical therapy and rehabilitation		3 (2.1)	0 (0.0)	4 (2.8)			
Do you want to take physical therapy to prevent injury or disease during your stay in Thailand?	yes	n (% of 145)	25 (17.2)	19 (13.1)	18 (12.4)	1.770	0.78	
	no	n (% of 145)	24 (16.6)	20 (13.8)	14 (9.7)			
	neither	n (% of 145)	11 (7.5)	10 (6.8)	4 (2.8)			
Do you want to take physical therapy for your shoulder or lower back pain due to your daily lifestyle in Thailand?	yes	n (% of 145)	34 (23.4)	26 (17.9)	17 (11.7)	3.578	0.47	
	no	n (% of 145)	13 (8.9)	13 (8.9)	14 (9.7)			
	neither	n (% of 146)	13 (8.9)	10 (6.8)	5 (3.4)			

Word-of-mouth was the most important communication channel for learning about healthcare services in all groups. According to a previous study in Malaysia, 30 Japanese retirees reported that information received through word-of-mouth about healthcare was the most trusted source among the Japanese population, which is crucial for healthcare-seeking behavior<sup>14</sup>. Japanese retirees largely shared the same feelings and cultural values regarding the quality of medical services offered in the hospitals in Malaysia. Our study supports this finding that word-of-mouth is important to access healthcare services regardless of age and residence, with no difference among the groups.

Regarding PT, more than 50% of the participants knew about it. A previous study<sup>18</sup>) surveyed the recognition of PT in Japan, and 75.4% of the public recognized PT. Although it should not be compared, the recognition of PT in our study was low compared to previous studies. A possible reason is that the number of PTs in Thailand is lower than in Japan: PTs per 10,000 people in Thailand is 1.3 and 8.7 in Japan<sup>19</sup>). This discrepancy may be related to the difference in the recognition of PT between Thailand and Japan. Furthermore, Groups A and B were more likely to use PT clinics when they had an injury or disease compared to the oldest group, although Group C preferred PT for prevention. These findings indicate that although Group C did not utilize PT, they desired it. Healthcare providers should consider the effect of age differences in the ease of accessing PT.

This study has two limitations. First, an online questionnaire was utilized to collect data. Selection bias may have occurred because those without access to a computer were not included in this study. Additionally, some subjects may have resided in Bangkok, the biggest city in Thailand, where many Japanese residents live. If we have collected data from rural areas such as the northeastern and southern parts of Thailand, the result might be different because the healthcare environment is different in Bangkok than in rural areas<sup>20</sup>). Second, this study is a descriptive study, and the data are categorical variables. More objective data should be measured, and detailed statistical analyses might be needed in future studies.

### *Funding and Conflict of interests*

The authors declare no conflicts of interest associated with this manuscript.

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