



Original Article

Lifetime use of complementary and alternative medicine therapies among community-dwelling older people in Japan

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Abstract. [Purpose] Three complementary and alternative medicine (CAM) therapies: “Judo therapy”, “acupuncture and moxibustion”, and “Japanese traditional massage and finger pressure” have been partially covered by the national health insurance in Japan. The lifetime prevalence of the use of these CAM therapies is not well known. The aim of the present study was to report the prevalence of the lifetime use of these CAM therapies. [Participants and Methods] We conducted a mailed self-administered questionnaire survey among community-dwelling older people in Japan in 2015. They were asked whether they had undergone any treatments with the 3 CAM therapies. The answers obtained were classified into 3 categories: current, ever, or never. We defined lifetime prevalence as the proportion of individuals who are currently using or have ever used any of these 3 therapies in the population. [Results] Overall, we approached 1051 individuals and 983 agreed to participate. Lifetime prevalence of Judo therapy, acupuncture and moxibustion, and Japanese traditional massage and finger pressure use was 28.0%, 17.8% and 15.8%, respectively, among males, and 44.5%, 18.4%, and 27.3%, respectively, among females. [Conclusion] These results showed that not only Western medicine but also CAM therapies are common among older people in Japan.

Key words: Judo therapy, Acupuncture and moxibustion, Japanese traditional massage and finger pressure

(This article was submitted Feb. 18, 2020, and was accepted Apr. 3, 2020)

INTRODUCTION

Complementary and alternative medicine (CAM) therapies have long been used for treatment of several diseases and disorders^{1,2)}. Many studies reported the prevalence of such CAM therapy use^{3–11)}. For example, the last 12-month prevalence of any CAM therapy use was 88% in the US⁸⁾, 74.8% in 2006 and 71.3% in 2011 in South Korea^{3,9)}, 55.7% in Puerto Rico¹⁰⁾, 38.2% in Qatar⁶⁾, 26.3% in the UK⁷⁾, and 21.2% in Australia¹¹⁾. In this way, the prevalence of CAM therapy use has varied by country. To obtain the exact prevalence of CAM therapy use, descriptive studies are needed in each country.

CAM therapies can be categorized into 2 major categories; natural products or mind and body practices¹²⁾. “Judo therapy,” “acupuncture and moxibustion,” and “Japanese traditional massage and finger pressure” belong to mind and body practices. These 3 CAM therapies have been partially covered by national health insurance in Japan. Judo therapists were called bonesetters, and the used manipulation to treat bone fractures, dislocation and soft tissue damage. Treatments for only these injuries have been covered by national health insurance in Japan. Facilities providing Judo therapy number about 46,000 in Japan¹³⁾. Acupuncture and moxibustion therapies are also common in Japan¹⁴⁾. Treatments of acupuncture and moxibustion practitioners for neuralgia, rheumatoid arthritis, cervico-brachial syndrome, frozen shoulder, low back pain and traumatic cervical syndrome are also covered by national health insurance in Japan. Japanese traditional massage and finger pressure

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(therapeutic touch), *Anma-Massage-Shiatsu* in Japanese, is one of the most popular types of CAM therapy in Japan¹⁵. Practitioners use touch and manual therapies¹⁶. Treatment with Japanese traditional massage and finger pressure for muscle paralysis and arthrogyrosis has been covered by national health insurance. There are now about 25,000 facilities in Japan providing acupuncture and moxibustion, while 19,000 specialize in Japanese traditional massage and finger pressure¹³. Practitioners of these 3 CAM therapies receive education of over 3 years and must pass a national examination. In 2017, National medical care expenditure for these 3 CAM therapies was about 540 billion yen in Japan¹⁷. It is important to decrease the national medical care expenditure in Japan. However, the status of use of the 3 CAM therapies has not been reported, not to mention their prevalence. The aim of the present study is thus to determine the lifetime prevalence of the use of these 3 CAM therapies.

PARTICIPANTS AND METHODS

This cross-sectional study was conducted in November 2015 in a city in Shizuoka Prefecture in Japan. The city was suburban and older people comprised one-fourth of the population. A survey was conducted with the cooperation of a city office. A self-administered questionnaire was mailed out for assessment of health status and social activity among community-dwelling older people. One thousand fifty-one individuals were randomly selected in their 70s and 80s who were not certified care recipients. Family members completed the questionnaire for those who needed assistance.

Information was obtained by a self-administered survey on the use of judo therapy, acupuncture and moxibustion, and Japanese traditional massage and finger pressure. Answers were obtained from 3 categories; current, ever or never use. Japanese traditional massage and finger pressure, chiropractic and *seitai* were combined in one category in the questionnaire. Data on weight (kg), height (cm), education (< high school, or \geq high school), living status (alone, or not), marital status (married or not), self-rated health (good, relatively good, ordinary, relatively poor, or poor) and medical histories of stroke, heart attack, cancer and diabetes mellitus (yes, or no) were also obtained. Body mass index (BMI) was calculated as weight divided by square of height (kg/m^2). Divorced and widowed persons were included in the non-married status. Self-rated health was defined as good (good and relatively good), ordinary (ordinary) and poor (relatively poor and poor). The lifetime prevalence of CAM therapies was defined as the proportion of total current and ever user in the surveyed population.

χ^2 test or Fisher's exact test for small samples was used for comparison of proportion for variables. All statistics were performed using SPSS version 22.0 for Windows (IBM Japan Inc., Tokyo, Japan) with a significance level of $p < 0.05$.

The institutional review board of Hamamatsu University School of Medicine approved this study (E15-213). Informed consent was obtained from all participants.

RESULTS

Overall, 1,051 older people were approached and 983 agreed to participate in the study; the response rate was 93.5%. Proportion of females was 70.7%. Mean age was 78.4 years. Mean weight was 57.5 and 46.8 kg, and mean height was 160.3 and 147.3 cm among males and females, respectively. Mean BMI was 22.4 and 21.6 kg/m^2 , respectively, among males and females. Approximately 10% of participants were living alone and about 80% of them were in good and ordinary self-rated health (Table 1).

Lifetime prevalence of Judo therapy use was 28.0% and 44.5%, respectively, in males and females. That of acupuncture and moxibustion use was 17.8% and 18.4%, respectively, in males and females, and that of Japanese traditional massage and finger pressure was 15.8% and 27.3%, respectively (Table 2). Lifetime prevalence of the use of any of the 3 CAM therapies was 42.9% and 57.6% among males and females, respectively.

DISCUSSION

The present study reported the lifetime prevalence of Judo therapies (males, 28.0%; females, 44.5%), acupuncture and moxibustion (males, 17.8%; females, 18.4%) and Japanese traditional massage and finger pressure use (males, 15.8%; females, 27.3%) among community-dwelling older people in Japan. It is the first study to report the prevalence of 3 CAM therapies, covered by national health insurance in Japan.

To our knowledge, this is the first study to show the lifetime prevalence of Judo therapy use. Most previous studies about Judo therapy have focused on practitioner aspects such as the number, distribution and techniques of Judo therapists¹⁸⁻²⁰. Additionally, most previous studies on the prevalence of Judo therapy use did not treat Judo therapy separate from other CAM therapies²¹.

The lifetime prevalence of acupuncture and moxibustion was roughly less than 20% in the present study. Several earlier investigations showed a lifetime prevalence of acupuncture at 26% in Sweden²², 11% in Denmark and Norway²², and 7% in the UK²³, respectively. Several reports indicated that the prevalence of acupuncture was higher in Japan than Western countries^{24, 25}. Previous studies on the Japanese population reported that 12-month and lifetime prevalence of acupuncture were 14.1% and 25.4%, respectively^{14, 26}. Our findings were consistent with previous studies, which reflected the influence of different culture.

Table 1. Study characteristics

	Male	Female
n	288	695
Age		
70–79 years	199 (69.1)	424 (61.0)
80–89 years	89 (30.9)	271 (39.0)
BMI ^a		
Normal	217 (80.4)	480 (75.9)
Underweight	17 (6.3)	84 (13.3)
Obesity	36 (13.3)	68 (10.8)
Education		
< High school	118 (41.7)	369 (54.4)
≥ High school	165 (58.3)	309 (45.6)
Living		
Not alone	261 (92.6)	585 (85.8)
Alone	21 (7.4)	97 (14.2)
Marital status		
Not married ^b	50 (17.8)	374 (56.0)
Married	231 (82.2)	294 (44.0)
Self-rated health ^c		
Good	125 (44.6)	329 (49.0)
Ordinary	100 (35.7)	200 (29.8)
Poor	55 (19.6)	142 (21.2)
Medical history		
Stroke		
No	247 (93.9)	579 (95.9)
Yes	16 (6.1)	25 (4.1)
Heart attack		
No	225 (85.6)	547 (90.6)
Yes	38 (14.4)	57 (9.4)
Cancer		
No	250 (95.1)	587 (97.2)
Yes	13 (4.9)	17 (2.8)
Diabetes mellitus		
No	232 (88.2)	537 (88.9)
Yes	31 (11.8)	67 (11.1)

BMI: body mass index.

Data are shown as a percentage in parentheses.

^aUnderweight, normal and obesity defined as BMI ≤18.5, 18.5–25.0 and 25.0≤, respectively.

^bNot married including divorced and widowed.

^cFive categoris of answers were distinguished: good (good and relatively good), ordinary (ordinary) and poor (relatively poor and poor).

Table 2. Lifetime prevalence of 3 CAM therapies

	Male	Female
Judo therapy		
Current	9 (8.4)	36 (14.2)
Ever	21 (19.6)	77 (30.3)
Never	77 (72.0)	141 (55.5)
Acupuncture and moxibustion		
Current	4 (4.0)	8 (3.7)
Ever	14 (13.9)	32 (14.7)
Never	83 (82.2)	177 (81.6)
Japanese traditional massage and finger pressure		
Current	6 (5.9)	19 (8.4)
Ever	10 (9.9)	43 (18.9)
Never	85 (84.2)	165 (72.7)

CAM: complementary and alternative medicine.

Data are shown as a percentage in parentheses.

Lifetime prevalence of CAM therapies was defined as the proportion of total current and ever user in the surveyed population.

The lifetime prevalence of Japanese traditional massage and finger pressure, chiropractic and *seitai* use was similar to that of acupuncture and moxibustion. Moreover, the lifetime prevalence of manual therapy such as chiropractic and massage was 30% in Sweden²²), 13.1% in the UK⁷), 13% in Norway²²), 4.9% in Malaysia²⁷) and 3.3% in Ireland²⁸), respectively. However, the lifetime prevalence was not well reported in Japan. Last 12-month prevalence of chiropractic or massage that was reported in 2 systematic reviews ranged from 1.5 to 16.2%²⁹) and 0.04 to 17.8%²⁴). Last 12-month prevalence of “chiropractic or osteopathy” and “massage or acupuncture” among the Japanese population was 5.9% and 14.1%, respectively²⁶). Prevalence of Japanese traditional massage and finger pressure is perhaps similar to that of manual therapies in Europe.

The present study has several strengths. First, a high response rate was obtained because of the cooperative attitude from the beginning among participants in a given city. Second, community-dwelling older people were the focus in our study. Most previous studies on a Japanese population were hospital-based^{21, 30}). However, several limitations must be considered. First, data were obtained from self-reports, which involved recall bias. Second, information on CAM therapies was obtained using an original questionnaire. Although the International CAM Questionnaire was developed to measure use of CAM therapies³¹), it does not include Judo therapy and Japanese traditional massage and finger pressure.

In conclusion, the lifetime prevalence of Judo therapy use was 28.0% and 45.4% among males and females, respectively; that of acupuncture and moxibustion use was 17.8% and 18.4% among males and females, respectively, while that of Japanese traditional massage and finger pressure use was 15.8% and 27.3% among males and females, respectively. These results showed that not only Western medicine but also these 3 CAM therapies were common among community-dwelling older people in Japan.

Funding

This research was a part of the survey entitled “Questionnaire survey on the relationship between social participation and health status among active older people”, and supported by the grant from “Fujinokuni-consortium” (grant number: 40).

Conflict of interest

None.

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