Obstacles to the use of complementary and alternative medicine by primary care physicians: Preliminary study

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ABSTRACT
Aim: Complementary and alternative medicine is increasingly being used by primary care physicians in Japan, although this usage has not been studied in detail, and the barriers in the way of its use by physicians have not been explored. The aim of this study was therefore to clarify the factors that interfere with the use of complementary and alternative medicine, from the perspective of the primary care physicians.

Methods: We conducted interviews with primary care physicians who use complementary and alternative medicine in their practice. Transcripts of interviews were analyzed qualitatively using the Steps for Coding and Theorization method.

Results: Four categories and 15 concepts were extracted. The categories generated were 'Awareness of health-care providers', 'Characteristics of complementary and alternative medicine', 'Medical system and organization' and 'Regional factors'.

Conclusion: Various factors interfere in the use of complementary and alternative medicine by primary care physicians. Approaches to overcome lack of education and insufficient collaboration among regional health professionals need to be developed. Future studies are needed to generalize the present findings in order to enhance integrative medicine and the utilization of complementary and alternative medicine in primary care settings.

KEY WORDS: complementary and alternative medicine, kampo medicine, obstacle, primary care physician, qualitative research

INTRODUCTION
Complementary and alternative medicine (CAM) is increasingly being used in primary care with Western medicine, and Japanese physicians also often prescribe CAM, such as kampo (Chinese herbal) medicine. In recent years, the integration of Western medicine and CAM has resulted in the establishment of the concept of 'integrative medicine', and CAM is increasingly being accepted by Western medicine doctors.

In Japan, 50–76% of the population uses at least one type of CAM each year [1–3]. The use of CAM involves various elements. Patients use CAM for various reasons, such as to treat health conditions; the pursuit of happiness; social environment (CAM availability); as a complement to Western medicine; and personal preference [4]. In addition, the characteristics of patients who tend to use CAM are as follows: advanced age, female, employed and residing in large cities. Orally available CAM include herbs, supplements, and kampo medicine; some CAM requires physical treatment, such as acupuncture, moxibustion, and massage [5].

Although the background of patients using CAM has been extensively studied, the background of primary health-care providers prescribing CAM has not been thoroughly investigated. Some clinics offer integrative medicine that incorporates CAM, but the introduction of CAM at major hospitals including academic hospitals is being delayed in Japan [6]. Enabling factors in the incorporation of CAM by general practitioners have been well investigated. In Australia it was found that general practitioner referral to massage therapy or naturopathy was increased when they believed in the efficacy or had previously experienced positive results or prescribed CAM [7,8]. Another study in the UK showed that general practitioners were more confident in discussing acupuncture rather than other CAM therapies with their patients because of the greater belief in its theoretical validity.
and due to medical insurance coverage for acupuncturists [9]. Barriers to the prescription of CAM by primary care physicians have been primarily reported thus far. One study on collaboration between physicians and osteopaths in Canada noted that barriers include the absence of common language, the organizational and legal context, and limited scientific evidence [10]. Another study in Israel suggested that organizational factors such as health insurance or limitation of time and space were predominant obstacles to the utilization of CAM by family physicians [11]. Despite such shortcomings, the number of studies focusing on the factors preventing primary care physicians from using CAM are extremely limited.

The aim of this study was therefore to clarify the factors that interfere with the use of CAM from the perspective of the primary care physicians. We conducted semi-structured interviews with primary care physicians who use CAM in their treatment strategies, and carried out qualitative analysis of the interview data to generate the preliminary hypothesis.

**METHODS**

In January 2014, we conducted one-to-one semi-structured interviews with three primary care physicians who incorporate CAM into their medical care. The participants were selected from acquaintances of the second author (DS) and they were invited to participate by email. Only those who agreed to the research purpose and protocol took part in the study. The interviews included the following questions: ‘If you are using a specific CAM, what is the reason?’, ‘How often do you use CAM in treatment?’, and ‘What do you find difficult about using CAM?’. The interviews lasted for approximately 30–60 min.

The interviews were audio-recorded with the participants’ consent and the data were transcribed. The transcripts were qualitatively analyzed using the Steps for Coding and Theorization (SCAT) method [12]. We select the SCAT method because its background is based on the grounded theory approach, and the method consists of generative coding and theorization. In this analytical process, initial concepts were extracted by the first author (RS), followed by a review by the second author (DS). Hence, these researchers collaborated to integrate the concepts, correct the concept names, and generate categories. Member-checking was conducted by the participants after the interviews and analyses. The interviews were primarily conducted by the first author (RS), who was a medical student at the time of the interviews and who was meeting the participants for the first time. The second author (DS) is an academic family physician and already knew the participants, but he was mainly engaged in coordinating the sampling and analyses of the data. Thus, we believe that the interviews and subsequent qualitative analysis were effective in exploring the subjective participant epistemology.

Informed consent was obtained from all participants prior to data collection. Anonymity and confidentiality were ensured. The study was conducted according to the principles of the declaration of Helsinki.

**RESULTS**

Interview subject characteristics and types of CAM are listed in Table 1. Based on the analysis of the interview transcripts, four categories and 15 concepts were extracted (Table 2).

**Awareness of health-care providers**

This category consists of the following three concepts: Bias toward Western medicine; Lack of knowledge and understanding about CAM; and Superficial understanding of the combined use of CAM. The definitive difference between Western medicine and CAM is that Western medicine has an evidential mechanism. Therefore, despite the underlying mechanisms being unknown at the beginning of introducing Western medicine in Japan at the end of 19th century, ‘Bias toward Western medicine’ has become established among health-care providers.

As an example of the concept ‘Lack of knowledge and understanding about CAM’ by primary health-care providers, some patients have undergone inappropriate treatment, or team medicine is not smoothly executed.

Examples of the concept ‘Lack of knowledge and understanding about CAM’:

‘Physicians can prescribe Chinese medicines as long as they have a medical license; this means they can prescribe medication without knowledge. Chinese medicine is relatively safe; however, some people manifest side effects if it is taken at a high dose, such as thrice a day for a month.’ (Subject 1)

| Table 1 | Characteristics of interview subjects |
|---|---|
| ID | Age | Sex | PGY | Specialty | Work place | Types of CAM used mainly |
| 1 | 30s | Male | 10 | Family medicine | Tokyo | Kampo medicine |
| 2 | 30s | Female | 13 | Family medicine | Nagoya | Yoga, kampo medicine, herbal medicine etc. |
| 3 | 30s | Male | 8 | Internal medicine | Tokyo | Kampo medicine, acupuncture and moxibustion |

CAM, complementary and alternative medicine; PGY, postgraduate years.
CAM are said to be the experience and opinions of practitioners, treatments in medical system and regional factors. Characteristics of CAM: Fundamental mechanism is unknown; Treatment at one’s discretion; Insufficient evidence for therapeutic effects; Complexity of the CAM system; Difficulty in learning and conveying empirical and subjective skills; Existence of exclusive and dogmatic therapists.

Medical system and organizations: Lack of CAM education; Incompatibility with the current medical system; Lower profitability than Western medicine.

Regional factors: Difficulty accessing superior therapists; Insufficient cooperation between experts in the region.

CAM, complementary and alternative medicine.

Table 2 | Barriers to the use of CAM: Extracted concepts and categories

| Categories                  | Concepts                                                                 |
|-----------------------------|--------------------------------------------------------------------------|
| Awareness of healthcare providers | Bias toward Western medicine, Lack of knowledge and understanding about CAM, Superficial understanding of the combined use of CAM |
| Characteristics of CAM       | Fundamental mechanism is unknown, Treatment at one’s discretion, Insufficient evidence for therapeutic effects, Complexity of the CAM system, Difficulty in learning and conveying empirical and subjective skills, Existence of exclusive and dogmatic therapists |
| Medical system and organizations | Lack of CAM education, Disrespect for CAM at the level of medical organizations, Incompatibility with the current medical system, Lower profitability than Western medicine |
| Regional factors             | Difficulty accessing superior therapists, Insufficient cooperation between experts in the region |

‘Experts of Eastern medicine and those from the different cultures are ultimately different. Thus, even if they passionately explain Meridian therapy or diagnosis based on Eastern medicine and insist on how important it is, such explanation makes no sense to those from the different culture.’ (Subject 2)

Characteristics of CAM

This category consists of the following six concepts: Fundamental mechanism is unknown; Treatment at one’s discretion; Insufficient evidence for therapeutic effects; Complexity of the CAM system; Difficulty in learning and conveying empirical and subjective skills; and Existence of exclusive and dogmatic therapists. In contrast to Western medicine with its known mechanisms, CAM has the disadvantage of the absence of the concept (i.e. the concept ‘Fundamental mechanism is unknown’). Given that most therapy relies on the experience and opinions of practitioners, treatments in CAM are said to be ‘at one’s discretion’.

Examples of the concept ‘Treatment at one’s discretion’.

‘Western medicine determines a disease on the basis of pathology, making the diagnosis clearly defined and groups of diseases can be identified with ease. Conversely, grouping in Chinese medicine depends on the practitioners’ experiences and senses...’ (Subject 3)

In ‘one’s discretion’ treatment that relies on the opinion of practitioners, treatment varies notably with each practitioner. In addition, even with the same disease, treatment for each patient may be different. Therefore, there is an increase in the complexity of the CAM system. Such therapeutic decision making is accumulated through many years of experience; thus, there is difficulty in learning and conveying, and, hence, the emergence of the concept ‘Difficulty in learning and conveying empirical and subjective skills’. In addition, experts in CAM believe that their treatment is absolute and would not accept others’ approaches, which is an illustration of the concept ‘Existence of exclusive and dogmatic therapists’.

Illustration of the concept ‘Complexity of the CAM system’:

‘What is difficult about CAM is that it has no consistency. When self-studying Kampo medicine, I found that every book says something different. Hence, Chinese and Japanese medicines are completely different. Fundamentally, it is an art, and it is extremely different among different practitioners.’ (Subject 3)

Examples of the concept ‘Difficulty in learning and conveying empirical and subjective skills’:

‘Treatment methods for patients can be quite different depending on each region, and each physician has his/her best treatment method. Under such circumstances, patients are treated with CAM through the rule of thumb or impractical theories, which is extremely challenging. Every book tells you something different and it is even difficult because it is not completely different. A slight difference is really challenging.’ (Subject 3)

Examples of the concept ‘Existence of exclusive and dogmatic therapists’:

‘At times, a disagreement exists between someone who believes in Ayurveda and someone who believes in Eastern medicine regarding nutritional therapy. They criticize each other because of differences or are close-minded about just one method;
in other words, someone with dogmatic thinking is not suited for CAM.’ (Subject 2)

Medical system and organizations
This category consists of the following four concepts: Lack of CAM education; Disrespect for CAM at the level of medical organizations; Incompatibility with the current medical system; and Lower profitability than Western medicine. The concept 'Lack of CAM education' is reflected in the absence of questions on kampo medicine in the national exam and a lack of trustworthy guidelines owing to the complexity of the CAM system. In addition, bias toward Western medicine and disrespect for CAM are present at the medical organization level beyond the individual level, and hence the emergence of the concept 'Disrespect for CAM at the level of medical organizations'.

Illustrations of the concept 'Disrespect for CAM at the level of medical organizations':

'You often hear that when Chinese medicine works, people are clueless on why it worked. However, when any side effect is observed, people blame it on Chinese medicine. For example, when someone is admitted, Chinese medicine is the first thing to be discontinued. Additionally, if someone cannot take medications, physicians stop Chinese medicine. However, would it be restarted when being discharged? It is not always the case. Such barrier definitely exists in health-care providers. Some people are more understanding of Chinese medicine and some are not.' (Subject 1)

CAM treatments covered by insurance are limited. The majority of CAM cannot be used in the medical field, hence, the concept 'Incompatibility with the current medical system'. In addition, when CAM is used, it has lower profitability than Western medicine.

Examples of the concept 'Incompatibility with the current medical system':

'Insurance coverage for treatments is predetermined in Japan. Hence, a limitation exists in what we can offer in the medical field. A condition has to be named to offer treatment. Thus, patients who are suffering from undiagnosed conditions could not take advantage of insurance-covered treatments.' (Subject 2)

Regional factors
This category consists of the following two concepts: Difficulty accessing superior therapists; and Insufficient cooperation between experts in the region. Information on senior CAM experts is difficult to obtain even for primary healthcare providers, and it is even more difficult for patients, hence, the concept 'Difficulty accessing superior therapists'.

Illustrations of the concept 'Difficulty accessing superior therapists'

'Even if I want to prescribe CAM to a patient, there is little information regarding the experts in the area. Regular pharmacies cannot offer these medications either. Homeopathy is only offered at few locations in Tokyo. Thus, access is poor.' (Subject 1)

DISCUSSION
The present study has identified various factors that interfere with the use of CAM in primary care in Japan. We realize that these factors interact with each other. First, given the awareness level of each primary health-care provider, the concept 'Bias toward Western medicine' was noted. In other words, this observation is regarded as disrespect for CAM, which is derived from a characteristic of CAM, that is, 'Fundamental mechanism is unknown'. Lack of evidence also plays a role, as seen in 'Insufficient evidence for therapeutic effects'. The reason for 'Lack of knowledge and understanding about CAM' might be due to 'Complexity of the CAM system' and 'Difficulty in learning and conveying empirical and subjective skills'. Those factors, in turn, might have led to 'Lack of CAM education'. In fact, 'Lack of CAM education' is the case in the curricula of medical schools in Japan [13].

Characteristics of CAM as obstacles to the incorporation of CAM into primary care have been described in a recent study: the methodological difficulty of double-blind trials of non-medication treatments such as yoga or acupuncture, or variation in therapeutic approach tailored to individual patients, interfere with establishment of evidence and dissemination of CAM [14]. Similarly, barriers in medical system and organizations have also been identified: insufficient training in CAM in medical education and lack of medical insurance coverage for CAM are therefore the prominent barriers preventing physicians from accepting CAM therapies broadly in their practice [11,14,15].

Regional factors, however, such as difficulty in accessing expert therapists by primary care physicians, or difficulty in collaborating with them, were not investigated in detail in previous studies. In Japan, most CAM treatment is not covered by health insurance, and Western medicine and CAM are practiced independently without sharing patient information [16]. Therefore, it is difficult to contact expert CAM therapists, due to the lack of a systematic database of local therapists.

There are two suggestions discussed in the interviews regarding the use of CAM for the future. Based on the
characteristics of CAM identified in the present study, one strategy is to enhance clinical research into CAM, involving the application of evidence-based medicine. Recently, clinical studies of CAM have been increasing, leading to enhanced opportunities for health professionals to learn about CAM and its therapeutic effects and to incorporate them into evidence-based practice.

Another suggestion is to promote the use of CAM in the community health-care system, based on the present findings with regard to the organizational and regional barriers. Lack of CAM training and insufficient interprofessional collaboration are the key barriers. Therefore, collaborative learning opportunities between regional health professionals including CAM therapists must be promoted. This will also be enhanced by the recent emergence of integrative medicine, a field in which Western medicine experts and CAM experts are encouraged to communicate and exchange ideas [17]. These opportunities will promote the understanding of CAM in community health care.

The main limitation of this study is that we interviewed only three primary health-care physicians. In addition, because the present findings are contextualized in the Japanese setting, generalizability to internationally diverse settings is limited.

In conclusion, future studies are needed to generalize the present findings. The present findings will be useful in the promotion of CAM in primary care in Japan.

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CONFLICT OF INTEREST

The authors declare no conflicts of interest.

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