

Postgraduate Education of Traditional Japanese (Kampo) Medicine: A Current Survey on the Training Hospitals in Kanagawa Prefecture

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Objective: There is no precise survey of postgraduate Kampo education in Japan. We aimed to survey the current status of postgraduate Kampo education and to identify major problems and suggest solutions to promote Kampo education during internship.

Methods: The questionnaire, for the 58 training hospitals, including the 4 university hospitals, in Kanagawa prefecture, was mailed to the director of each hospital and the instructors responsible for clinical training.

Results: There were 49 responses (84%): 84% of the instructors recognized clinicians' need to prescribe Kampo medicine; 63% thought Kampo education should be introduced into the clinical training; 55% thought a standardized form of education was necessary; 14% had Kampo education programs; 69%, 13%, and 9% of instructors at hospitals without Kampo educational programs noted the lack of Kampo instructors, time, and need to teach Kampo medicine, respectively; 82% had no plans for Kampo education; 44%, 29%, 24%, and 5% of hospitals permitted future Kampo instruction through voluntary study, lectures sponsored by Kampo manufacturers, study sessions with other hospitals, and independent study, respectively.

Conclusions: Kampo education should be introduced into large training hospitals, where qualified Kampo instructors are more easily found, and where many interns and residents work.

Key words: Postgraduate education, Kampo medicine, Survey, Training hospital, Kanagawa prefecture

INTRODUCTION

To become a clinician in Japan, a two-year clinical internship is required in training hospitals after passing the National Medical Licensing Examination after graduating from the 6-year course in medical schools. In both under- and post-graduate courses in Japan, Kampo education is not yet well established although most Japanese physicians have clinically used Kampo formulas at some time in their practices [1]. Regarding the undergraduate Kampo education in Kanagawa prefecture, which is located adjacently south west of Tokyo and has a population of approximately 9 million, there are 4 medical schools: Tokai, Kitasato, St. Marianna, and Yokohama City universities, that have collaborated and worked on faculty development to promote Kampo education since 2008, resulting in an advanced undergraduate Kampo education program. However, regarding postgraduate Kampo education, it basically depends on each training hospital individually because there are no standardized Kampo programs for interns or residents.

Recently there have been some undergraduate Kampo education surveys reported in the literature [2–4], but regrettably there have yet to be any comprehensive surveys of postgraduate Kampo education. The aim of the present study was, therefore, to survey the current status of postgraduate Kampo education from the viewpoint of clinical training hospitals to

identify major problems and to suggest possible solutions toward promoting Kampo education during the Japanese medical students' 2-year internship and beyond into their clinical practice.

SUBJECTS AND METHODS

We conducted a questionnaire survey of postgraduate Kampo education in 58 training hospitals including the 4 university hospitals in Kanagawa prefecture, from May through August of 2013. The questionnaire was mailed to the director of each hospital and to all the instructors responsible for clinical training. The questionnaire consisted of 10 items: 1) the number of clinical residents, 2) the degree of necessity to learn Kampo clinical skills, 3) the degree of necessity to introduce Kampo education into the clinical training, 4) the degree of necessity of having a standardized Kampo curriculum, 5) an introduction about Kampo medicine during clinical training, 6) the organizer of the Kampo education, 7) the participation rate of residents to the Kampo study sessions, 8) any reasons not to teach Kampo medicine, 9) the plans to introduce Kampo education in the future, and 10) Kampo educational methods (Table).

Preparing the questionnaires, we used the semantic differential method to assure their validity [5]. To ensure an adequate response rate, for any hospitals that did not return their responses, we asked them again for their completed questionnaires. The appropriate

Table Questionnaire on the current Kampo education in clinical training

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- 1) How many clinical interns and residents are there in your hospital?
 N = _____ interns (first-year physicians)
 N = _____ residents (second-year physicians)
 - 2) Is it necessary for physicians to learn clinical skills regarding Kampo medicine?
 1. Very necessary
 2. Slightly necessary
 3. Hardly necessary
 4. Not necessary at all
 - 3) Is it necessary to introduce Kampo education into the clinical training?
 1. Very necessary
 2. Slightly necessary
 3. Hardly necessary
 4. Not necessary at all
 - 4) Are standardized educational curricula necessary for Kampo education in clinical training?
 1. Very necessary
 2. Slightly necessary
 3. Hardly necessary
 4. Not necessary at all
 - 5) Do you teach Kampo medicine during clinical training?
 1. YES → Go on to Question 6.
 2. NO → Go on to Question 8.

If “YES” in Question 5), please answer the following questions.

- 6) Who organized the Kampo education? (multiple responses allowed)
 1. One hospital working independently
 2. Hospitals working in cooperation with other hospitals
 3. Kampo manufacturers
 4. Volunteer physicians
 5. Other (Specify: _____)
- 7) What is the rate of participation of residents to the Kampo study sessions?
 1. 0–20%
 2. 20–40%
 3. 40–60%
 4. 60–80%
 5. 80–100%

If “NO” in Question 5, please answer the following questions.

- 8) Why have you not introduced Kampo education? Please select one main reason.
 1. No necessity to teach Kampo medicine
 2. Lack of time
 3. Lack of qualified Kampo instructors
 4. Lack of funds
 5. Other (Specify: _____)
 - 9) Do you intend to introduce Kampo education in the future?
 1. YES
 2. NO
 - 10) How do you want to develop Kampo education in your hospital? (multiple responses allowed)
 1. Study sessions given by the hospital independently
 2. Study sessions given in cooperation with other hospitals
 3. Lectures sponsored by Kampo manufacturers
 4. Voluntary study sessions given by physicians
 5. Other (Specify: _____)
- This is the end of the questions.

Name: _____

Affiliation: _____

responsible persons from all the clinical training hospitals gave written informed consent to participate in this study. For statistical analyses, the Mann-Whitney *U* test was used to examine the relationship between the number of interns and residents in each training hospital and the implementation of Kampo education. This survey was approved by the Institutional

Review Board for Clinical Research of Tokai University and conformed to the principles of the Helsinki Declaration.

RESULTS

Study population

There were 49 (84%) effective responses from 58

hospitals, which represented 999 (87%) of all the 1148 interns and residents who were working in those hospitals.

Necessity for Kampo clinical skills

Of the responses from the 49 instructors from the hospitals that were surveyed: 11 instructors (22%) generally thought that it was "Very necessary" for physicians to learn clinical skills of Kampo medicine, 30 (62%) thought it was "Slightly necessary," 8 (16%) thought it was "Hardly necessary," and no one thought it was "Not necessary at all." Therefore, 84% of the instructors thought that clinical physicians ought to be required to have some degree of Kampo clinical skills (Fig. 1).

Awareness of Kampo education

Seven instructors (14%) thought that it is "Very necessary" to introduce Kampo education into the clinical training, 24 (49%) thought that it was "Slightly necessary," 17 (35%) thought that it was "Hardly necessary," and only 1 (2%) thought that it was "Not necessary at all." In other words, 63% of all the instructors had positive opinions for the introduction of Kampo education (Fig. 2).

Moreover, 8 instructors (16%) thought that a standardized form of education was "Very necessary" for Kampo education during clinical training, 19 (39%) thought that it was "Slightly necessary," 21 (43%) thought that it was "Hardly necessary," and only 1 (2%) thought that it was "Not necessary at all," which suggests that more than half of the instructors thought that there was a need for a standardized educational curriculum for Kampo medicine (Fig. 3).

Current status of postgraduate Kampo education

Only 7 (14%) of 49 hospitals teach Kampo medicine during clinical training, which translates to 169 (17%) of 999 interns and residents who are working in those hospitals. The number of interns and residents (first- and second-year physicians) that each training hospital accepted was from 1 to 116 (median 13), and there was no correlation between the number of interns and residents and the implementation of Kampo education (Fig. 4). The 4 hospitals accepting more than 60 interns and residents were all university hospitals, and they accepted a total of 358 interns and residents, which represented 31% of all 1,148 interns and residents in Kanagawa prefecture.

In 7 training hospitals that taught Kampo medicine, the training was organized by Kampo medicine manufacturers in 4 hospitals, and in 2 hospitals each by the hospital independently, or in cooperation with other hospitals, and by volunteer physicians. Only 1 hospital teaching Kampo medicine independently was a university hospital with more than 60 interns and residents. One miscellaneous answer was that Kampo medicine education was organized by each medical department. Multiple responses were allowed for this question on the questionnaire. The participation rate of residents in the Kampo study sessions was 0–20% in 1 hospital, 20–40% in 3 hospitals, 40–60% in 1 hospital, 60–80% in no hospitals, and 80–100% in 2 hospitals.

Regarding the reasons for not teaching Kampo

medicine, among 32 of 41 instructors at the hospitals without Kampo education, the lack of qualified Kampo instructors was pointed out by 22 instructors (69%), lack of time by 4 (13%), no necessity to teach Kampo medicine by 3 (9%), and lack of funds by none (Fig. 5). Miscellaneous answers included that it would be better to teach Kampo medicine to senior residents by 2 instructors (6%), and it is possible to teach Kampo medicine at other hospitals by 1 instructor (3%).

Kampo education in the future

Only 1 (2%) of 41 hospitals without Kampo education planned to teach it in the clinical training program. That was a medium-sized hospital with 18 interns and residents. However, 40 (82%) of 49 hospitals, had no Kampo education programs and no plans to introduce it, i.e., only 9 (18%) of the training hospitals taught Kampo medicine.

Regarding the Kampo educational methods the participants wanted to develop in their hospitals, "Voluntary study sessions given by physicians" was selected most by 18 hospitals (44%) and "Lectures sponsored by Kampo manufacturers" by 12 hospitals (29%). This suggests a negative attitude toward Kampo education. However, several hospitals showed positive inclinations, including: "Study sessions given in cooperation with other hospitals" by 10 (24%) and "Study sessions given by the hospital independently" by 2 (5%) (Fig. 6). Miscellaneous answers included: "Lectures given by medical associations," "Training in other hospitals," "Introduction to the training program," "Trend of other hospitals considered," and "Looking for qualified instructors."

DISCUSSION

In recent years, Kampo therapy, a part of traditional Japanese medicine, has become increasingly popular among a great number of Japanese physicians in the clinical setting [6–8], and almost all physicians actually involved in community health care prescribe Kampo formulae to some of their patients. However, since no national standardized programs for Kampo education are currently available in Japan, most physicians have no opportunity of taking any Kampo classes in their regular medical education but rather learn Kampo medicine by self-study [1]. Physicians are not likely to prescribe Kampo formulae based on Kampo theory but rather based on westernized biomedicine [9]. Physicians' lack of knowledge and personal experience with Kampo medicine may limit their ability to help patients who use Kampo medicine [10]. Recently, a few questionnaire survey reports were published on the status of undergraduate Kampo education offered at a number of Japanese medical schools [2–4]. They revealed that most medical students were only offered a relatively short time to study Kampo medicine, mainly because of the non-standardization of the Kampo medicine curricula and the lack of qualified instructors [2]. Regarding the awareness of medical students about Kampo medicine, we reported that almost all students were interested in Kampo medicine to some degree and wanted to have the opportunity to learn more about it, even after graduation if it came to that [11]. There are two major problems to train physicians

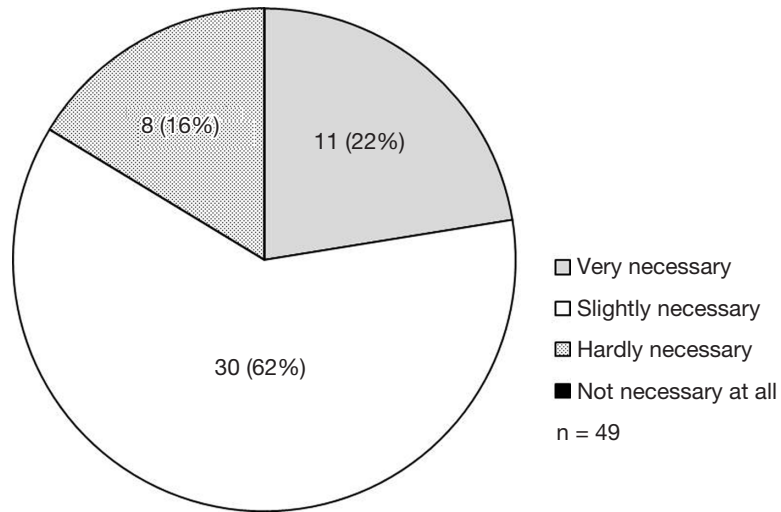


Fig. 1 Necessity for physicians to learn clinical skills regarding Kampo medicine

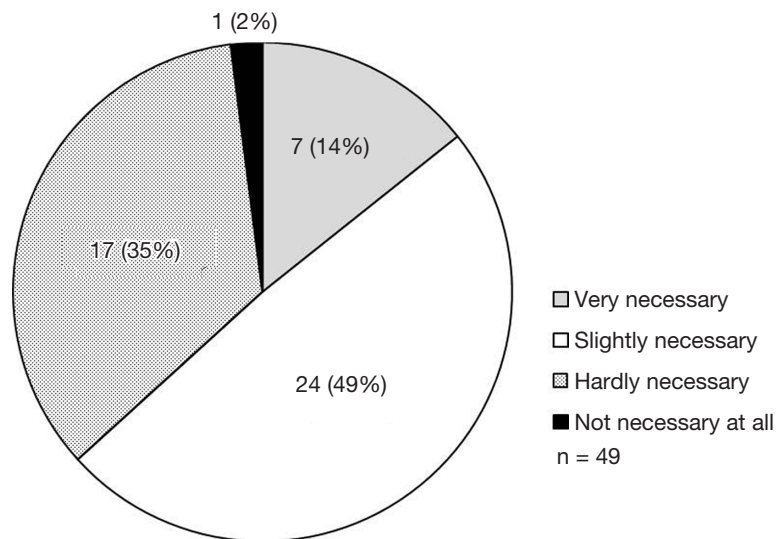


Fig. 2 Necessity to introduce Kampo education into the clinical training

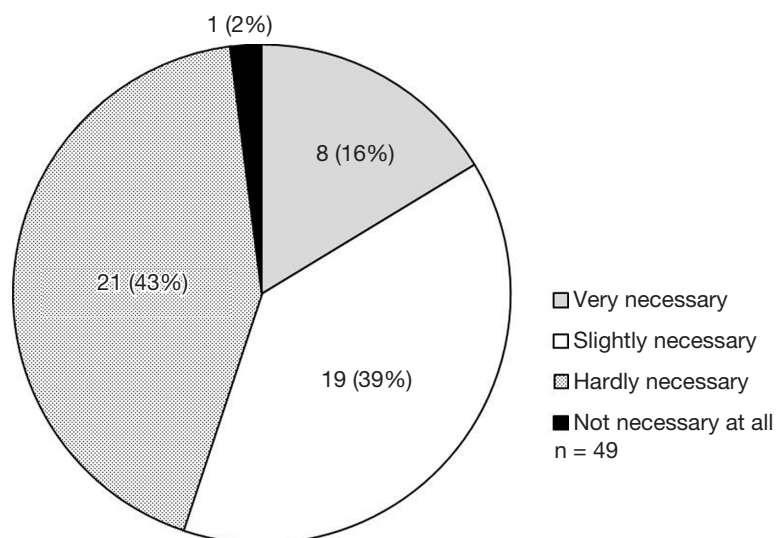


Fig. 3 Necessity of a standardized educational curriculum for Kampo education in clinical training

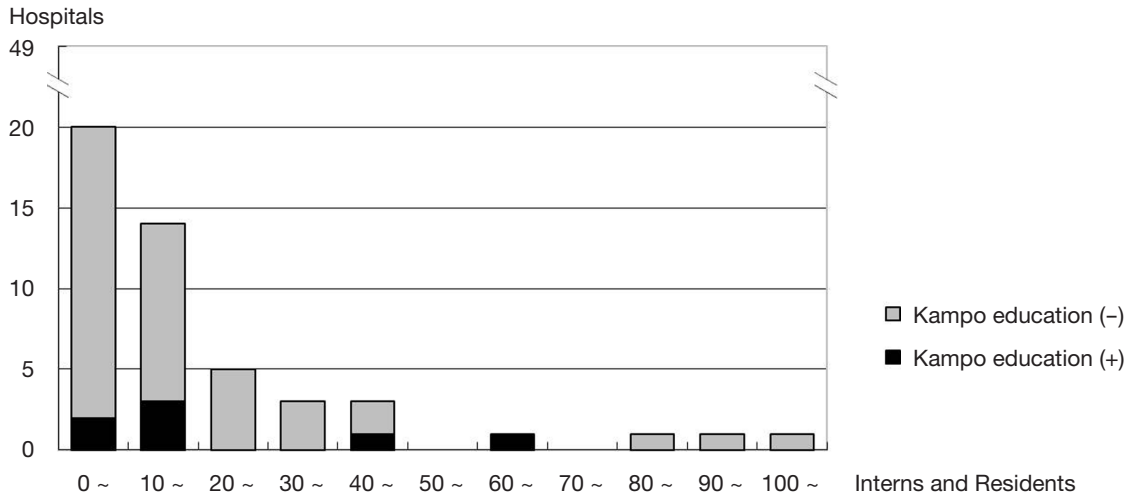


Fig. 4 The number of interns and residents that each training hospital accepted

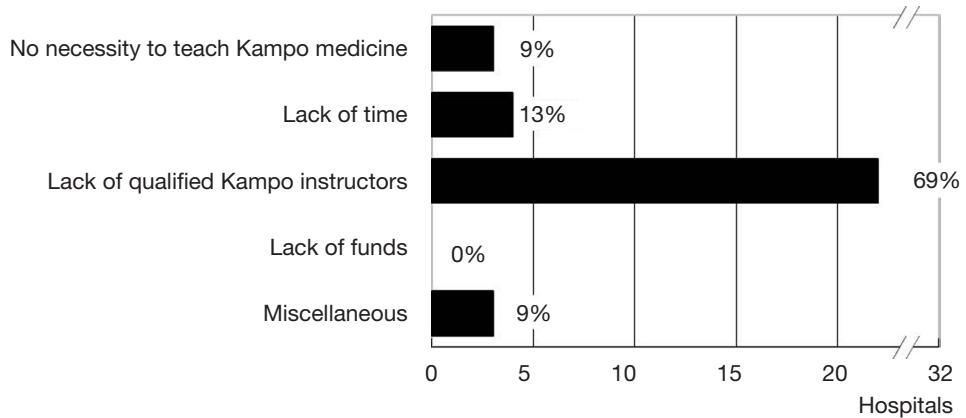


Fig. 5 The reasons not to teach Kampo medicine

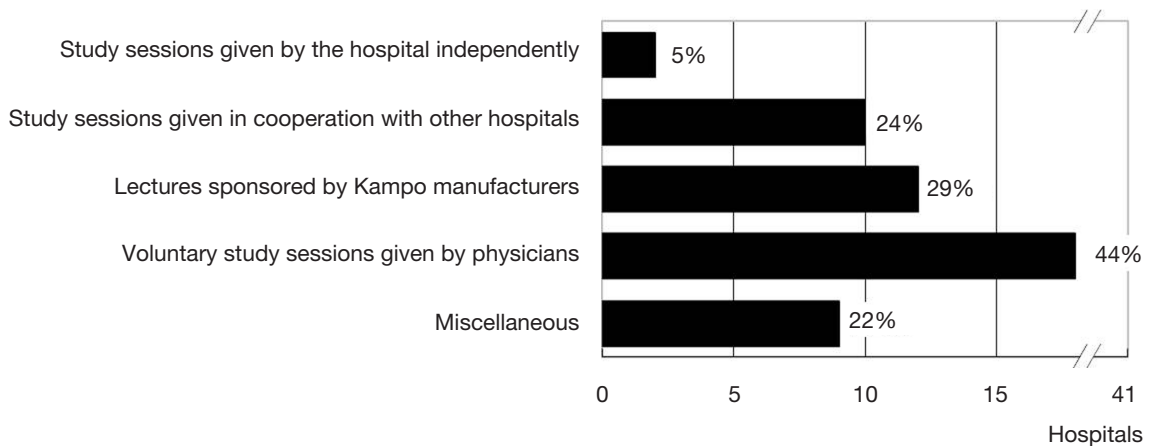


Fig. 6 The kinds of Kampo education methods participants desired to be developed in their hospitals (multiple responses allowed)

to successfully use Kampo medicine in their clinical practices in light of these situations. One is the need for clinical evidence to support the efficacy of Kampo medicine. And the other is the improvement of Kampo education and clinical training [12]. Especially regarding Kampo education, like other complementary and alternative medicine (CAM) education in other

areas [13–15], it should be promoted in undergraduate education, as well as in postgraduate training, to integrate Kampo medicine into conventional Western medicine. However, there are still only a few reports about the present status of Kampo education in the postgraduate clinical training in Japan. Our survey is, therefore, unique and significant because it is the first

extensive investigation of postgraduate Kampo medicine in Japan, even though it is a pilot study limited to training hospitals in Kanagawa prefecture.

We first clarified the current issues of the Kampo educational system in training hospitals. Our survey revealed that 84% of instructors thought it necessary for physicians to learn clinical skills of Kampo medicine, 63% thought it necessary to introduce Kampo education into the clinical training, and 55% thought that a standardized educational curriculum for Kampo medicine was needed. Most instructors recognize that Kampo therapies are needed in clinical practice and should be taught systematically during internship. However, only 14% of the training hospitals teach Kampo medicine, which includes, at most, 17% of the interns and residents. The fact that Kampo education is not widely offered might be the same situation as that of CAM education in other areas [16]. Regarding the reasons for the infrequent opportunities to learn Kampo medicine in clinical training, it was pointed out that Kampo medicine is not described in the educational goals of any clinical training program and that most instructors have never been trained in Kampo medicine [17]. This opinion supports our suggestion that it is important to develop a basic environment in training hospitals to teach Kampo medicine, such as training qualified Kampo instructors, introducing Kampo medicine into training programs, and setting Kampo educational goals to spread Kampo medicine in clinical training.

We also discussed the size of hospitals suitable for introducing Kampo education. As much as 69% of the hospitals that were not incorporating Kampo education into their clinical training indicated, as the main reason, that there were, in fact, few qualified instructors who could teach it. In undergraduate Kampo education, the small number of medical schools employing full-time, qualified, instructors responsible for teaching Kampo medicine seems to greatly hinder the improvement of Kampo education [18]. Our previous survey also revealed that one problem to be dealt with promptly, for the largest number of medical schools, was that of training qualified instructors who would be responsible for Kampo education [2]. In Kanagawa prefecture, the 4 largest hospitals, where more than 60 residents at each receive clinical training, are all university hospitals. In only these 4 hospitals, there are 358 residents, which is 31% of all the 1,148 residents in Kanagawa prefecture. In addition, there are so many physicians in university hospitals that it may actually be relatively easy to find well-qualified Kampo instructors. Therefore, to effectively include Kampo medicine into postgraduate education, it will be important to introduce it into the training programs of large hospitals such as university hospitals. One of the 4 university hospitals in Kanagawa prefecture has already begun postgraduate Kampo education, and the 3 others are expected to begin it soon.

Reasonable educational forms of Kampo medicine for interns and residents should likewise be discussed. Postgraduate Kampo education is currently conducted in many different forms [19]. Regarding the Kampo education methods of 6 training hospitals, only one was a university hospital with more than 60 residents.

All of the small- and medium-sized hospitals with fewer than 60 residents had passive forms of Kampo education such as lectures sponsored by Kampo manufacturers and voluntary study sessions given by physicians. These educational forms were preferred, as possible choices, among the training hospitals currently without Kampo education.

Additionally, our survey revealed that only one hospital actually planned to introduce Kampo education in the near future, and 82% of the surveyed training hospitals had no plans for it at all. These passive attitudes toward the introduction of Kampo education might be caused by the difficult circumstances of not being able to find qualified instructors in small hospitals, even though Kampo education could be introduced into their training programs. Therefore, it must be difficult for the small- to medium-sized hospitals, where almost 70% of interns and residents work, and most of which currently have no Kampo education at all, to introduce Kampo education into their curricula to be provided by the hospitals themselves.

To solve the major problem of the limited availability of qualified Kampo instructors, we suggest that relatively small hospitals cooperate with larger hospitals for Kampo education [20]. This method has already been begun in 2 hospitals and will soon be introduced in 9 others. Therefore, it ought to become a feasible model of postgraduate Kampo education. If the inter-hospital Kampo education system is difficult to organize, establishment of web-based training courses [21, 22] and joint training facilities such as that at the Kampo Medicine Training Institute might be possible solutions.

The intern and resident participation rate to the Kampo study sessions was considerably different in each training hospital. A low participation rate suggests that the concepts of Kampo training should be made more attractive to interns and residents if Kampo education is introduced into the training program. Some previous reports showed that the introduction of experience-based learning is effective to teach CAM including Kampo medicine [23, 24], and most interns and residents are very interested in Kampo medicine, Kampo case studies, and the Kampo-style of the abdominal examination [25].

Moreover, Kampo medicine is clinically unique compared to other kinds of CAM, in terms of its being prescribed by physicians practicing Western medicine, sometimes even in combination with Western medicine in Japan [26, 27]. Considering these aspects, more attractive Kampo training programs, such as learning practical techniques and clinical applications, will be required to strengthen the interns' and residents' motivation to prescribe Kampo medicine because they will mainly practice Western medicine. To spread postgraduate Kampo education nationwide, therefore, the establishment of standard programs and guidelines of Kampo education is an issue that must be resolved at the same time as locating and training qualified Kampo instructors.

These 4 medical schools in Kanagawa prefecture collaborated and worked on faculty development to promote Kampo education since 2008, and we conducted this series of questionnaire surveys from 2008

to date; therefore, this study may be considered a pilot study of postgraduate Kampo education.

The present study has 4 limitations: (1) none of the respondents were the hospital directors, who actually manage each hospital, but the chief instructors responsible for postgraduate education in the hospitals, which could be interpreted as a selection bias; (2) the actual contents of the curricula and instructional methods of Kampo education were not examined; therefore, we need to continue the discussion of what ought to be taught to the interns and residents in postgraduate Kampo educational programs; (3) another survey of interns and residents, comparing the changes in awareness of Kampo medicine before and after internship, should also be done, (4) thereafter, a follow-up nationwide survey will be needed because the present study is a pilot study limited to the 58 training hospitals in Kanagawa prefecture. Further studies are, therefore, warranted after re-examining these issues to establish an adequate basis for proficient Kampo education.

CONCLUSIONS

Most instructors of the training hospitals recognize the necessity for Kampo clinical skills and education, but only a few of them actually teach Kampo medicine during clinical training. Therefore, at first, Kampo education should be introduced into large training hospitals, where qualified Kampo instructors are most likely to be more easily found, and where many interns and residents work and can, therefore, directly benefit from standardized, comprehensive Kampo education.

COMPETING INTERESTS

We have no competing financial or non-financial interests in this study; however, the Department of Oriental Medicine, Tokai University School of Medicine, did receive a grant from Tsumura, a Japanese manufacturer of Kampo medicine.

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