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Survey of Current Status for Kampo Education to Nursing Students at Public Universities and Colleges in Japan

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Abstract

Objective: Kampo education has been part of the curriculum in medical universities and colleges since 2001. However, it has not been the part of nursing university/college curriculum. The purpose of this study is to identify and follow the trend of Kampo education in Japanese nursing universities and colleges. We also gathered the opinion of beneficiaries of Kampo education, i.e. nursing students and teachers.

Subjects and methods: The implementation status of Kampo education was investigated at departments of nursing in 90 schools of all Japanese public universities and colleges (n=90) in 2012 and 2016 using mail and web surveys. The recovery rate indicated 100%. In addition, questionnaire surveys concerning Kampo education were conducted among nursing students (n=208) and nursing teachers (n=365).

Results: Although number of performing Kampo education increased from 27 in 2012 to 38 in 2016 significantly (p=0.04), it was smaller portion compared with medical courses (100%). In the consciousness survey on Kampo education, 75.5% of the nursing students and 88.8% of the nursing teachers responded that Kampo education was necessary.

Conclusions: The present results indicated the necessity of Kampo education to nursing students. Because Kampo education was introduced into the nursing curriculum by the Japanese government recently, educational program should be arranged in the near future.

Keywords: Complementary and alternative medicine; Education; Kampo; Nursing student

Introduction

Kampo is one of traditional medicines, which was originally developed in Japan from Chinese medicine, since 6th century [1]. However, Kampo was gradually abolished at the middle of 19th century because western medicine was introduced by Japanese government [2]. Since chemical antagonism by the western medicine was reported increasingly in 1960s, Kampo raised concerns again as a Complementary and Alternative Medicine (CAM) [3], and the need for clinical Kampo medication was reviewed. In 1976, 33 Kampo extract formulations were listed in the drug price standard.

The clinical use of modern Kampo medicine was applied to maternal and women's care at first. For example, nausea and vomiting of pregnancy is treated with Go-rei-San [4] because western medicine might have adverse side-effects for fetal growth, which is similar to the use of ginger as a CAM [5]. Women with postmenopausal syndrome who cannot receive hormonal replacement therapy due to some reasons are also treated with several Kampo medicines [6]. Some Kampo medicines are very effective for patients with premenstrual syndrome for long-term management [7]. At present a lot of Kampo drugs are available and used as the standard treatments not only in obstetrics and gynecology but also in very many other medical fields [8-14].

Therefore, Kampo was officially introduced into the education model core curriculum to medical students by the Japanese Ministry of Education, Culture, Sports, Science, and Technology (MEXT) in 2001 [15] as "It can be an overview of features and current state of use of oriental medicines (Kampo medicine)". In 2016, the statement was revised with some additions as "It can be an overview of features, indications and pharmacological actions of major oriental medicines (Kampo medicine)".

Although the medical education of oriental and Kampo medicines have been progressing, education related to those medicines in nursing have been inherited little. Since Kampo is also useful for nursing care, nursing students may need to learn the correct usage of Kampo and be educated on appropriate medical instructions.

In 2010, we established the Society for Kampo Education in Nursing (SKEN) by authors as organizers (K.O., M.N., K.T. and N.S. who are obstetricians and gynecologists) and a secretary (K.Y.), who have been working to highlight the necessity of Kampo education for nursing students. To emphasize the importance that nurses acquire knowledge on Kampo, the current state of Kampo education in department of

nursing at universities and colleges in Japan, and the opinions of nursing students and faculty members for Kampo education were analyzed through the SKEN.

Subjects and Methods

Status for Kampo education to nursing students in 2012

Present status of Kampo education at the department of nursing in universities and colleges was analyzed as a descriptive epidemiological study. Although more than 250 schools related to nursing education exist in Japan, this survey was restricted to public universities and colleges because private schools have wide variations in the educational levels. All 90 Japanese public universities and colleges (43 national and 47 prefectural/city) having nursing departments with 4-year program were subjected to the study (Shown in Supplementary Table 1).

In 2012, the questionnaire for Kampo education was mailed to the department deans and offices with explanation of our study purpose in 2012. At the case where the respondent answered that Kampo education was performed at its school, it was designed to check the teacher's sex, license held by the teacher, subject name of the lecture course or title, academic year, kind of the subject, and style of the class. A survey on educational curriculums and syllabuses on the school and/or department websites were also screened to obtain data on the presence of Kampo education accurately.

Consciousness survey for nursing students and teachers on Kampo education

A consciousness survey regarding Kampo medicine was conducted in 2013 to nursing students of Kyoto, Osaka, Okayama and Nagoya Universities where the founding members of SKEN were belonged. Questionnaires consisting of "Experience of Kampo medicine and feeling of its effectiveness", "Interest for Kampo medicine", "Necessity of Kampo education to nursing students", and "Type of educational contents desired" were applied (Shown in Supplementary Table 2).

Additionally, surveys to nursing teachers were also performed at the seminars in 23rd and 24th Congresses of the Japan Academy of Nursing Education (JANE) held on August, both 2013 and 2014. Some additional questions were added such as "Possibility to put Kampo in educational program" and "The reasons for the impossibility" (Shown in Supplementary Table 3).

Status for Kampo education to nursing students in 2016

The same survey for the educational status to reveal the change of Kampo education in universities and colleges was performed again in 2016 to compare with the results of the previous one in 2012.

Statistical analysis

Statistical analyses were performed according to the chisquare test using the JMP Pro version 11.2.0 (SAS Institute Inc., Cary, NC, USA) statistical software package to compare outcome variables in 2012 and 2016. A p-value of <0.05 was considered to indicate significance.

Compliance with ethical standards

The Ethics Committee of Kyoto University School of Medicine and Hospital approved these studies (No. E1444, June 4, 2012 and No. R0194, September 14, 2015).

Results

Status for Kampo education to nursing students in 2012 and 2016

From 90 public universities and colleges, the recovery rate of the mailing survey was 88.9% (80 schools of 41 national and 39 prefectural/city) in 2012, and 53.3% (48 schools of 25 national of 23 prefectural/city) in 2016. In order to compensate for a lack of information on the mailing survey, the syllabuses on the websites of each school and/or department were reviewed. Resultantly information for Kampo education among all public universities and colleges were obtained as 100% of the recovery rate (Table 1). The number of schools performing Kampo education to nursing students significantly increased from 27 (30.0%) in 2012 to 38 (42.2%) in 2016 (p=0.04) (Table 1).

		Kampo education performed	
	No.	**2012**	**2016**
National	43	15 (34.9%)	21 (48.8%)
Prefectural/City	47	12 (25.5%)	17 (36.2%)
Total	90	27 (30.0%)	38 (42.2%)*
*p<0.05			

Table 1: Public universities and colleges giving Kampo education to nursing students.

For Kampo education in these schools, the teachers were mainly medical doctors and pharmacists, and the most education style was lectures on "Pharmacology" (Table 2). The number of classes was only 1 per semester by a large majority.

	2012 (n=27)	**2016 (n=38)**
Sex of teachers		
Male	25 (92.6%)	36 (94.7%)
Female	2 (7.4%)	2 (5.3%)
Licenses of teachers		
Medical doctor	11 (40.7%)	15 (39.5%)
Pharmacist	12 (44.5%)	17 (44.7%)
Nurse	2 (7.4%)	4 (10.5%)
Others	2 (7.4%)	2 (5.3%)
Courses		
Pharmacology	22 (81.5%)	32 (84.2%)
Traditional medicine	2 (7.4%)	2 (5.3%)
Medical history	1 (3.7%)	1 (2.6%)

Complementary and alternative medicine	1 (3.7%)	1 (2.6%)
Others	1 (3.7%)	2 (5.3%)
Academic year		
Academic year		
1	4 (14.8%)	5 (13.2%)
2	22 (81.5%)	30 (78.9%)
3	0 (0%)	2 (5.3%)
4	1 (3.7%)	1 (2.6%)
Subjects taken		
Compulsory subjects	25 (92.6%)	35 (92.1%)
Elective subjects	2 (7.4%)	3 (7.9%)
Style of classes		
Lecture	25 (92.6%)	35 (92.1%)
Seminar	2 (7.4%)	3 (7.9%)
Number of classes		
1	25 (92.6%)	34 (89.5%)
2 ≤	2 (7.4%)	4 (10.5%)

Table 2: Profiles of Kampo education in the schools.

Consciousness survey for nursing students on Kampo education

Questionnaires were handed out to 219 nursing students of Kyoto (61), Osaka (79), Okayama (59) and Nagoya (20) Universities, and 208 (95.0%) complete answers were analyzed (Shown in Supplementary Table 2). The age of the students was 21.0 ± 2.6 (mean ± SD) years old (range: 20-46), and 197 (94.7%) were female.

Subjects	Students	Teachers in 2013	Teachers in 2014
Number	**208**	**192**	**173**
Necessity of Kampo education			
Necessary	157 (75.5%)	172 (89.6%)	152 (87.9%)
Not necessary	50 (24.0%)	1 (0.5%)	1 (0.6%)
Unknown	0 (0.0%)	13 (6.8%)	15 (8.7%)
Others	0 (0.0%)	3 (1.6%)	2 (1.2%)
Not answered	1 (0.4%)	3 (1.6%)	3 (1.7%)
Type of educational content desired (multiple responses)			
Basic knowledge	180 (86.6%)	190 (99.0%)	157 (90.8%)
Side effects	84 (40.4%)	139 (72.4%)	99 (57.2%)
Current studies	78 (37.5%)	81 (42.2%)	82 (47.4%)
History of Kampo	62 (29.8%)	58 (30.2%)	56 (32.4%)
Methods to diagnose	46 (22.1%)	46 (24.0%)	38 (22.0%)

Table 3: Necessity awareness and desired education contents for nursing students and teachers.

One hundred and fifteen nursing students (55.3%) have experienced Kampo medicine, among whom 78 (67.8%) reported its effects. More than 3/4 students considered that Kampo education was necessary (Table 3).

A total of 157 (75.8%) students were interested in Kampo and oriental medicine, and the reasons for their interests were; "Benefits differed from western medicine (61.4%)", "Effectiveness of its treatment felt by myself or my family (23.6%)", "Necessity for future medical treatment (23.6%)", and "Preference for plants or nature (21.3%)". The most desired component of Kampo education was "Basic knowledge" (Table 3).

Consciousness survey for nursing teachers on Kampo education

The surveys were conducted 2 times at the seminar of the JANE meetings. The recovery rates were 98.0% (192 of 196) in 2013, and in 91.1% (173 of 190) in 2014.

Although it was similar to the results from the students, nursing teachers felt more need of the Kampo education as total rate was of 88.8% (324/365) (Table 3). The most desired educational content of Kampo was "Basic knowledge" same as the students, but the rate was higher (95.1%, 347/365). The second one was "Side effects" with a rate of 65.2% (238/365) which was clearly higher than that of the students (40.4%).

Although 226 responders (61.9%) answered that "It might be possible to put Kampo in nursing educational program in future", 124 (34.0%) stated "No". The reasons for the impossibility were "Lack of special educators for Kampo" (75.9%), "No time to include in existing educational program" (63.8%), and others.

Discussion

At present, 148 Kampo formulas can be prescribed under the national health insurance system, allowing physicians to integrate Kampo in their daily practice. The results of a survey performed in 2008 indicated that 83.5% of the physicians in different specialties currently used Kampo medicines in Japan [16]. Kampo and oriental medicine education is carried out in all 80 schools of medicine since 2007 after the introduction of the education in model core curriculum by the MEXT [17]. Not only in medicine but also in schools of pharmacy and dentistry, Kampo education has been carried out. As a member of medical care, nurse should acquire the knowledge about Kampo.

Therefore, we have organized the SKEN, and now, the society has more than 70 members including 14 organizers from 13 institutes. The meetings consisting of lectures presented by Kampo specialists held 11 times. Through the SKEN, the present researches were conducted. As mentioned above, many medical fields have Kampo education system, however, less than half of the nursing schools have Kampo education program according to 2016 survey, although the number of the schools is gradually rising. In contrast to this situation, both nursing students and teachers requested to have opportunities to have Kampo education.

Ndosi et al. [18] reported the necessity of pharmacology education for nurses based on lack of sufficient knowledge. Also, a study from UK reported the implementation of CAM education at 23% of departments of medicine and 73% of departments of nursing [19]. Tovey et al. [20] suggested that CAM, which emphasizes the recovery of the human balance and a cure, shared the same values and beliefs as a nursing goal. For example, a previous study showed that CAM relieved anxiety and agitation of patients using ventilators [21]. Although Japanese nurses cannot prescribe drugs including Kampo medicines unlike United States and UK [22], the necessity of introducing Kampo education into the department of nursing is obvious.

Recently, the education model core curriculum for nursing students proposed by the MEXT has demonstrated an additional statement of "It can be an overview of the indication and pharmacological action of major oriental medicines (Kampo medicine)" on October 31, 2017. For the next step, it may be important how to embed the Kampo education in the curriculum, who will teach the medicines as a specialist, what kind of contents should be educated, and which textbook must be referred.

Conclusion

The necessity of Kampo education for nursing students is suggested. Because Kampo education was introduced into the nursing curriculum by the Japanese government recently, educational program should be arranged in the near future.

Declarations of Interest

None.

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