

## 学位論文の内容の要旨

学位論文題目 EVALUATING INTEGRATIVE MEDICINE IN JAPAN: A SOCIAL AND MEDICAL MODEL PERSPECTIVE

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### Abstract

#### Background

The world's demographics are changing, and governments are prompted to implement various health promotion and disease prevention programs to improve the well-being of their people around the world, to improve the quality of life (QOL) and to reduce Medicare expenses. Therefore, a reliable system is needed to aid and support this expectation.

Integrative medicine (IM) is an "integrative approach to health care that combines traditional and/or complementary and modern medicine that emphasizes a whole body, patient-centred approach to health care and wellness and the treatment of the whole person and is designed to enable diverse providers and well-coordinated care across institutions". In addition, in terms of medical practice, the Japanese government defines IM as "medical practice led by doctors and in collaboration with other health professionals."

However, to promote the IM, we must first gain the trust of patients and the public. This is not only a challenge, but a significant problem faced by the solution, including effectiveness and safety, insufficient understanding of drug-product interactions, lack of strict regulatory controls on the product leading to abuse, and a statistically significant of CAM, and conflicts between research and clinical practices. But there is still excitement about IM, especially after the COVID-19 pandemic, the emphasis on epidemics and underlying diseases, and the rise of alternative medicine. In Japan, the Japanese government is considering actively promoting the IM from the perspective of extending healthy life expectancy. Therefore, obtaining reliable information and easily getting it to consultants is very important. As far as IM in Japan is concerned, IM is based on modern Western medicine, and the combination of complementary

and alternative therapies with traditional medicine further improves QOL. However, it is not easy to define IM under the current circumstances.

Based on this, an in-depth understanding and analysis of integrated medicine are necessary. This study investigates the use of medical and social models to analyse IM in Japan. It uses the results of this analysis to provide a reference for the development of IM in other countries.

## **Methods**

This study investigated core curriculum, syllabuses, national examinations, and local government health promotion programs in Japan.

It was analysed whether the published documents regarding the core curriculum, national examination standards include IM. The syllabuses in 2018 academic year were analysed. The local government health promotion programs on 2018 academic year were also analysed.

### **Core curriculum**

The national core curriculum for education of medicine, dentistry, pharmacy, and nursing universities were obtained from The Ministry of Education, Culture, Sports, Science and Technology (MEXT) website.

### **National examination standards**

The national examination standards for medical doctors, dentists, pharmacists, and nurse licenses were also obtained from Ministry of Health, Labour and Welfare's (MHLW) website.

### **Syllabus**

The syllabus of lectures in each university, the homepages of all Japanese universities are recorded periodically in the Web Archiving Project (WARP) of the National Diet Library of Japan. Syllabuses of lectures from medicine, dentistry, pharmacy, and nursing universities in the 2018 educational year were obtained from the homepages of each university recorded in WARP. Syllabuses of medicine, dentistry, and pharmacy university lectures were limited to

the 6-year courses to get national licenses. Syllabuses of nursing universities were limited to the 4-year courses in universities to get national graduate nurse licenses.

### **Term of IM**

The search term of IM in the documents was based on the names of remedies frequently used in Japan (Table 1). In addition, other non-modern and nonconventional remedies were also picked up. Comprehensive terms such as “integrative medicine”, “complementary medicine”, “alternative medicine”, “traditional medicine”, and “holistic medicine” were also picked up.

### **IM Health-promotion programs in local governments**

IM health-promotion programs in Japanese local governments were Investigated in the National Diet Library of Japan (Web Archive Project: WARP; <https://warp.ndl.go.jp/?lang=en>). This library preserves the websites of all Japanese local governments four times per year. We extracted the IM programs, including IM vocabulary, from the four recordings of the websites of 1,944 local government archived on WARP in 2018. Types of IM, the qualifications of providers, the number of times programs, and the purpose of programs were searched. The IM programs extracted in WARP were analysed according to the classification of IM in the “Information Site for Evidence-based Japanese Integrative Medicine (eJIM)” (Table 1).

## **Results**

### **Core curriculum**

In the model core curricula for medical, dental, pharmaceutical, and nursing education, Kampo medicines were gradually included with specific requirements. The 2022 editions all address the indications, pharmacological effects, and characteristics of Kampo medicines. While other integrative medicines are optional in medical and dental education, Kampo medicine is a required part of pharmaceutical education. Nursing education also requires

concrete knowledge of Kampo medicines and alternative therapies.

## **Syllabus**

The Faculty of Medicine collected data from 97.1% of medical schools and found a significant presence of Kampo medicine in medical education, and 84.4% of the universities/courses are compulsory subject. But other descriptions of IM have hardly been confirmed.

The Faculty of Dentistry found that 60% of dental schools include Kampo medicine subjects, which is compulsory in 58.3% of the universities/courses, other descriptions of IM same as medical school.

The Faculty of Pharmacy found that Kampo medicine was in 100% of the faculties of pharmacy. However, in compulsory subjects, syllabuses of only 94.3% include Kampo medicine, 92.9% include health foods and supplements, and 30% include integrative, complementary, and alternative medicine.

The Faculty of Nursing collected data from 33.4% of schools. In compulsory subjects, 11.5% included integrative, complementary, and alternative medicine (Others Integrative medicine except for Kampo or health food), 19.7% included Kampo medicine, 16.8% includes massage and 17.3% included Anpo.

## **National examination standards**

Despite being part of the core curricula, Kampo medicine is not mentioned in the medical license, though health foods are included under prevention and health management. Kampo is listed in supplementary sections on treatment and care for vulnerable groups but is not a critical focus for the dental license. The pharmacist license provides detailed coverage of Kampo, including classification, diagnosis, pathology, usage, side effects, and interactions, under pharmaceutical clinical practice. In contrast, the nurse license mentions health foods but excludes Kampo medicine entirely.

## **Health-promotion programs**

A total of 1,739 IM programs were implemented in 537 local governments (27.6% among all Japanese local governments). These included programs for Yoga (1,242; 71.4% of the projects), Qigong (211; 12.1%), and Aromatherapy (145; 8.3%). After the survey found that among the integrated medical health promotion programs, most health promotion activities were one-time, among which yoga accounted for the most. Yoga is the most repetitive activity, and Qigong is the longest session most activity. Among the providers of the programs, only 16 (0.9%) were national medical-related license holders. The purpose of disease prevention or health promotion was not described with scientific basis (safety and effectiveness).

## **Discussion**

This study evaluates the medical and social models of Japan's integrated medical care. Regarding the present-day results, we investigate the medical model from the education perspective and the social model from the perspective of health promotion plans in public health.

In the medical model, IM subjects need to be included in the model core curriculum and are barely included in the syllabus, indicating a lack of educational progress. There is very little IM education in the medical faculty other than Kampo medicine, ideally, doctor-led medical practice with other professions. Even the national exam standard Kampo medicine and others IM does not exist in medical and nursing schools. However, this does not show that medical doctors have more education and knowledge. In other majors and medical schools, the situation is the same. Kampo is still the mainstream, and there is little introduction to other IMs.

In the social model, in Japan, also strongly emphasizes health prevention, and integrated medical health promotion programs often promote healthy lifestyles. Patient education and empowerment are key components of these programs, encouraging individuals to manage their health actively and have more choices about their healthcare options.

Local governments across Japan are implementing health promotion program plans. No

local government Home page (HP) has announced the results of implementing projects, and it cannot be judged that implementing integrated medical projects benefits disease prevention and health promotion. In the future, it is necessary to obtain clinical evidence on the usefulness of these programs to promote them as a healthy and safe integrated medical social model to citizens participating in the course.

Most program leaders need to have national medical qualifications. Even if the MHLW formulates IM led by doctors, most do not adhere to the definition.

The purpose of the project often needs to be clarified. Even if the purpose is clear, the rationale must be clearly stated. In the future, medical instructors with national qualifications will ensure the quality of instructors by conducting projects, demonstrating the project's purpose, explaining the reasons, and clarifying the results of disease prevention and health promotion after participating in the project. It is possible to choose practical and safe IM without causing the citizens participating in the course to have misunderstandings and excessive expectations about IM. Promoting it as a social model is necessary.

Regarding the Japanese integrated medicine situation, the actual results require strengthening education and training in both the medical and social models to realize the contribution of integrated medical care to society.

## **Conclusion**

Understanding Japan's integrated medical care, regardless of the medical and social model, needs to start with education. Enhanced training is important to integrate IM and realize its potential contribution successfully. Proper education and training for medical doctors and all other health professionals are essential.

## Keywords

Core curriculum, integrative medicine, Kampo medicine, medical education, national examination standard, syllabus, Evidence-based medicine, Health promotion, Integrative medicine

Table 1. **Types of integrative medicine extracted from WARP**

Name of integrative medicine	
Acupuncture and Moxibustion	Kampo*
Aromatherapy	Magnetic Therapy
Ayurvedic Medicine	Massage Therapy
Balneotherapy	Medical Diet
Bonesetter	Music Therapy
Chiropractic	Supplements / Health foods
Fasting Therapy	Thermotherapy
Forest Therapy	Qigong (Tai Chi) **
Holistic Therapy	Yoga
Homeopathy	Others

\*Kampo medicine followed ancient Chinese medicine, and Japan modified it to adjust to conditions in Japan. Kampo medicine in this research does not include Kampo medicines/products prescribed by physicians at clinics or hospitals.

\*\*Qigong: sessions incorporate a wide range of physical movements, including slow, meditative, flowing, and dance-like motions.

