

Review Article

The past, present, and future of traditional medicine education in Korea



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ARTICLE INFO

Article history:

Received 8 March 2016

Accepted 11 March 2016

Available online 19 March 2016

Keywords:

educational system

evidence-based teaching

Korean traditional medicine

medical history

ABSTRACT

Korea has kept the heritage of Korean traditional medicine (KM) during the 19th century harsh modernization, and has established a medical system in parallel with Western medicine. The purpose of this study was to review systematically the history and current system for educating highly qualified traditional medical doctors in Korea. KM produces 750 certified medical doctors every year with a 4–7-year curriculum in 12 universities and their affiliated hospitals. There are 22,074 clinicians along with 2474 clinical specialists in eight departments as of 2014. A national licensing examination and continuing medical education for KM are used for maintaining qualifications of KM doctors, and independent organizations are established for the evaluation of educational institutes. KM has thrived to establish an independent and competitive educational system for KM doctors, equivalent to Western medicine, and has regained a pivotal role for public health in Korea. This study would be useful for cultivating traditional medicine and establishing its educational system in the world.

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<http://dx.doi.org/10.1016/j.imr.2016.03.003>

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1. Introduction

Korean medicine (KM) or Korean traditional medicine (TRM) experienced the harsh modernization of the 19th century, and has maintained its social status as clinical professionals and established unique educational systems based on the distinctive cultural, social, and political situations of Korea.^{1,2} KM plays a pivotal role in Korean public health and has an established educational system and professional status equivalent to Western and dental medicine and nursing in other countries.^{2–4}

Korea has substantial role in TRM as a member of World Health Organization (WHO) Western Pacific Region along with China, Japan, and others.^{5,6} Unlike the state-led development of Chinese TRM and forced absorption into Western medicine (WM) in Japan, Korea has noteworthy experiences in creating its own healthcare and educational system throughout the history of East Asian modernization, including termination of TRM (1907) by the Japanese empire, reestablishment with the National Medical Service act (1951) by the Republic of Korea, and complete restoration as public health by instituting a nationally established school for TRM (2008).^{2,5,7} Currently, KM is practiced by 20,000 certified clinicians and takes 8% of the National Health Insurance.^{8–10}

These experiences of KM would be an important reference for other countries that want to build an educational system, clinical professionals, and administrative bodies as a response to the globally increasing interests on complementary and alternative medicine and integrative health, especially acupuncture and medicinal herbs.^{2,11,12}

In particular, in contrast to Chinese TRM empowered to use WM by the compulsory ruling of the communist government and Japanese TRM forced to be terminated and merged into WM, KM has been under the strict prohibition of combined application of clinical techniques and medications from TRM and WM, even the WM and KM have equal status.^{5,7} Therefore, it would be very useful for the nations who is promoting the development of TRM as independent professions.^{2,3,5}

This study systematically describes the history of TRM system in Korea to show what KM has experienced to reclaim a role in public health for 100 years. We also present a contemporary system for teaching and training basic knowledge and clinical skills to ensure the quality of medical professions along with the future of KM education to be achieved.

2. The history of TRM education system in Korea from 1894 to 2015

The healthcare providers of Joseon dynasty (1392–1910) might be trained by government-established institutes or private clinics, and they had to pass a national examination to be recognized.¹³ The Bureau of Royal Medicine (*Jeon Eui Gam*) was a government body established by the Rules for Six Bureaus (*Yuk Gwa Jeon Seo*), and had a duty for the education of medical professions and medical service for the royal family until 1894 (Fig. 1). They have successfully developed a Korean medical system that used acupuncture and herbal medicine as clinical modalities for 500 years.¹⁴

Interestingly, the year of 1894 was both an end to sovereign tradition of Korean Medicine and also a start of irreplaceable Korean personalized medicine with Jema Lee's Longevity and Life Preservation in Eastern Medicine (東醫壽世保元) based on hundreds of years of clinical experience in Korea and understandings on the human mind of Confucianism.^{1,15,16}

However, this sovereign Korean system was compulsorily replaced with Rules for Medical School (1898), Medical Doctor (1900), and Grand Korean Medical School (1899) to install a Western Medicine-only system of the Japanese empire, and the government agency and national hospital were substituted with Bureau of Medical Policy (1907) and Grand Korean Hospital (1907) as a consequences of Hague Secret Emissary Affair (1907) by Emperor Gojong claiming independence of the Korean Empire.¹⁴

The *Dongje* Medical School (1904–1907), the first modern TRM educational institute of Korea, was established by Emperor Gojong as a last attempt to maintain public TRM education; however, it was terminated along with his forced resignation and TRM education and medical service were performed only in the private sector for 100 years.¹⁷ After the Japanese Annexation of the Korean peninsula (1910), official and public healthcare services, hospitals, and government ministrations were continued as in Japan, where TRM had been eradicated and replaced with a WM-only system in 1875. The Korean healthcare system during the Japanese Colonial Period (1910–1945) was focused on supporting the imperialistic Japanese army and their wars.¹⁶

The resurrection of Korean TRM started with the liberation of Korea in 1945. After the surrender of Japan, the framework of the Korean healthcare system was shaped by the Medicine for Citizen Act (1951) in the middle of Korean War (1950–1953). The name of a TRM doctor was just a replication of Chinese character of Japanese *Kampo* (漢方醫學), which can be misunderstood as old Chinese style medicine; however, it was changed to Korean medicine (韓醫學) in 1986 with the pronunciation *han eui hak* to represent the identity of KM.^{13,16,18}

The Medicine for Citizen Act also provided a foundation for higher education of KM, a Korean style TRM. The *Dongyang Daehakwan* (1947–1952) was the first private educational institute, and its descendant *Dongyang* medical college (1953–1964) with a 4-year curriculum was merged with the College of Oriental Medicine, Kyunghee University (1965–) to be a modernized university teaching KM with a 6-year curriculum (Table 1).

Modernized TRM universities in Korea have incorporated instructor-led lectures on clinical knowledge, subject-specific classes, and clinical education in big hospitals with disease-specified departments, unlike the traditional apprenticeship in small group with medical classics such as *Treasured Mirror of Eastern Medicine* (東醫寶鑑, aka Korean Medical Encyclopedia or *Dong Ui Bo Gam*) (1910)¹⁹ and *Introduction to Medicine* (醫學入門). Knowledge on biomedicine and WM clinical skills were also included to support the clinical practice of KM.¹³

The socioeconomic developments in Korea (late 1980–early 1990) stimulated public interest in TRM and its typical medical services, and KM has reclaimed its position in the public healthcare sector (Fig. 1). KM was included in the National Health Insurance (1987), which is a national healthcare service for all Korean citizens, and KM doctors have had the

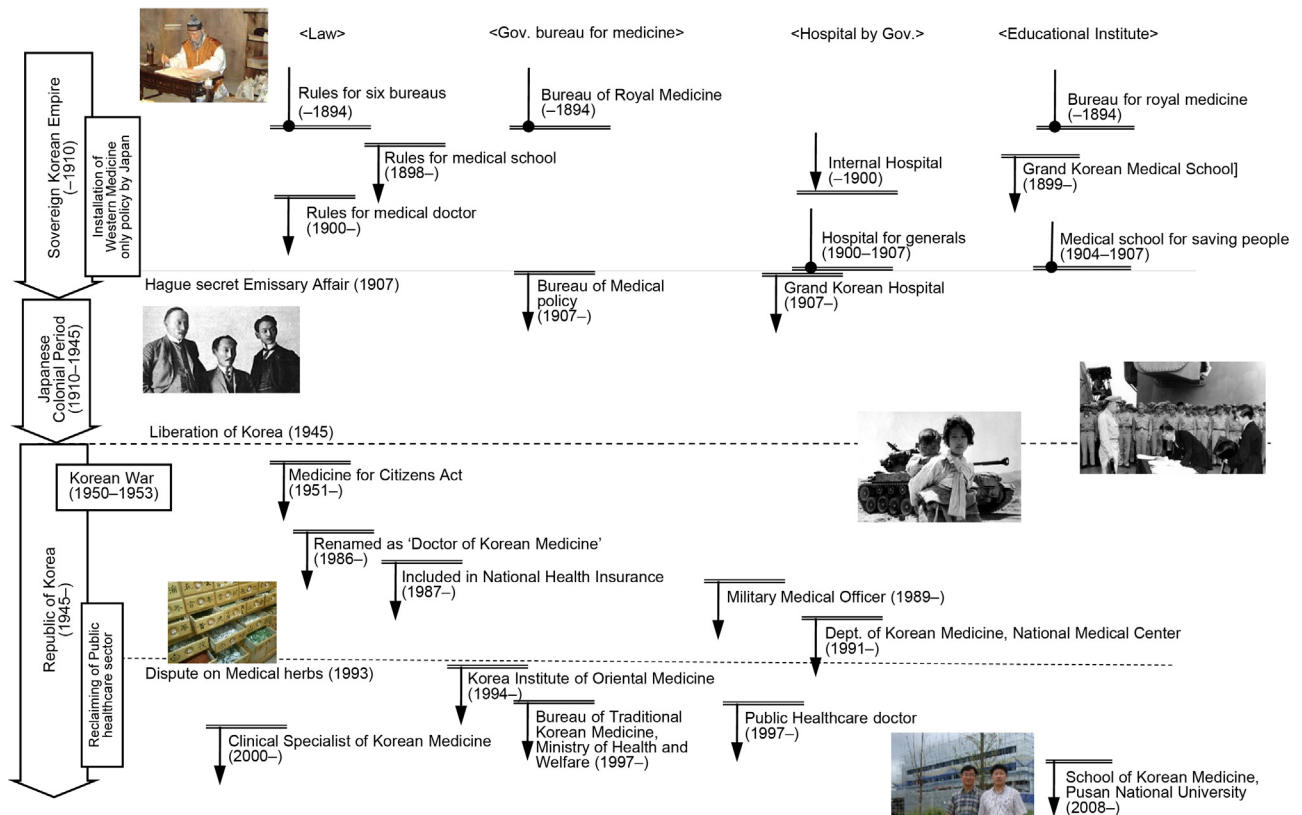


Fig. 1 – The history of Korean Medicine in the public sector from 1894 to 2008.

opportunity to serve mandatory military service as Military Medical Officer since 1989.^{20,21} The Department of Korean Medicine was installed in the National Medical Center (1991). Considering that there were only five colleges of Korean TRM until 1982 and an additional six were founded in just 5 years (1987–1992), the dramatic quantitative expansion of TRM education can be seen (Table 2).¹⁸

The Dispute on Medicinal Herbs (1993) was a historical event for identifying Korean TRM as nationally recognized public healthcare modality.¹⁸ In the process of escalating public interests on quality of life, well-being, natural products, and nonaggressive and person-centered medicine,²² TRM and medicinal herbs stood at the center of the dispute among healthcare professionals in Korea. As an aftermath for confirming the rights and expertise on herbs, the Korea Institute of Oriental Medicine (1994) as a nationally established research

facility, the Bureau of Traditional Korean Medicine and Ministry of Health and Welfare (MOHW; 1997) as government agency, and the Public Healthcare Doctor System with TRM doctors (1997) as a nationally operated service for rural area were established.¹⁸

The final restoration of TRM in nationally recognized public healthcare was with the founding of the School of Korean Medicine, Pusan National University (2008), which invited two Korean Medicine doctors (Han Chae and Sangwoo Shin) as faculty for its establishment. This historic event was the succession of *Dongje* Medical School, closed exactly 100 years earlier, and completion of a nationally recognized TRM system in public sectors including policy making government agency (Bureau of Traditional Korean Medicine, MOHW), public healthcare system (National Health Insurance, military medical officers, and public healthcare doctors), and research

Table 1 – Current educational system for becoming a doctor of Korean medicine

| Installed | Minimum qualification for entrance | Examinations for admission | Required years for graduation | Enrollment quota (/y) |
|-----------|--------------------------------------|---|--------------------------------|-----------------------|
| 1965 | High school graduate | College Scholastic Ability Test & others | 6 y (2 + 4; Bachelor's degree) | 700 (11 colleges) |
| 2008 | College graduate (Bachelor's degree) | Korean medicine Education Eligibility Test & others | 4 y (Master's degree) | 25 (PNU) |
| 2015 | High school graduate | College Scholastic Ability Test & others | 7 y (3 + 4; Master's degree) | 25 (PNU) |

PNU, Pusan National University.

Table 2 – Twelve universities and their affiliate hospitals for teaching Korean medicine

| Universities | Established | Faculty | Admission | Total credits | Total h | Affiliated hospitals (beds) | Clinical specialist trainee (programs) |
|----------------|-------------|---------|-----------|---------------|---------|-----------------------------|--|
| Kyunghee | 1965 | 106 | 108 | 244 | 399 | 3 (240/91/70) | 82 (8/9/4) |
| Wonkwang | 1973 | 62 | 90 | 267 | 442 | 3 (100/137/201) | 50 (6/8/8) |
| Dongguk | 1979 | 41 | 72 | 239 | 382 | 2 (81/77) | 22 (8/7) |
| Daeguhaany | 1981 | 47 | 108 | 245 | 395 | 2 (95/72) | 27 (8/7) |
| Daejeon | 1982 | 52 | 72 | 228 | 381 | 4 (132/98/70/50) | 68 (5/6/3/7) |
| Donggeui | 1987 | 34 | 50 | 243 | 397 | 2 (180/80) | 52 (8/8) |
| Sangji | 1988 | 52 | 60 | 238 | 377 | 1 (70) | 17 (7) |
| Woosuk | 1988 | 22 | 30 | 226 | 406 | 2 (80/133) | 14 (6/2) |
| Gachon | 1990 | 18 | 30 | 238 | 429 | 1 (70) | 8 (5) |
| Dongshin | 1992 | 30 | 40 | 257 | 398 | 3 (119/70/76) | 32 (7/7/6) |
| Semyung | 1992 | 27 | 40 | 242 | 418 | 2 (70/72) | 22 (7/7) |
| Pusan National | 2008 | 45 | 50 | 172 | 229 | 1 (200) | 22 (8) |
| Total | | 536 | 750 | | | 26 (2734) | 416 |

(KIOM) and education (School of Korean Medicine, Pusan National University).

The School of Korean Medicine, Pusan National University has significant differences compared to the other 11 private universities to meet diverse demands in TRM education. TRM education was dramatically upgraded in Pusan National University by introducing: a block lecture system; integrated lectures in basic and clinical courses; modulated clinical practice; clinical symptoms study courses integrating diverse clinical specialties; problem-based learning; objective structured clinical examination; clinical practice examination; clinical skill tests; training and testing with standardized patients; student-directed field trips on specific subjects; computer-based test system; and others.^{23–32} Along with these, strengthening the integration of basic and clinical education, improving clinical skills with structured practices, providing opportunities for competence in medical research, and enhanced courses for character development, social medicine and medical humanities were also incorporated in KM education.^{30–33}

3. Current educational system and teaching facilities in Korean TRM

Fig. 2 is an illustrated flow of KM education that can be divided into three stages. The first stage is a university education providing three tracks depending on the prerequisite requirements and length of education (Table 1), which is identical to the WM and dentistry in Korea.^{10,34}

From three tracks of university education (Table 1, Fig. 2), a 6-year curriculum has been used by the 11 private universities (700 students/year) since 1965. Pusan National University has implemented two master degree tracks that enroll 25 new students every year; the 4-year graduate school curriculum for applicants with a bachelor degree (2008–) along with 7-year medical school curriculum for high school graduates (2015–).^{10,33,34}

The second stage is the National Licensing Examination (NLE) to be a Doctor of Korean Medicine, which is operated by the National Health Personnel Licensing Examination Board (NHPLEB). Third is the 4 year-long Clinical Specialist

training program by the Korean Medical Hospitals Association (<http://www.komha.or.kr/>)³⁵ and continuing medical education (CME) by the Association of Korean Medicine (AKOM; <http://www.akom.org/>).^{10,13}

4. The educational curriculum of 12 TRM universities in Korea

Twelve KM universities (Table 2) are distributed across the nation, and 4632 students are currently enrolled in either the national university or one of the 11 private universities as of 2013. The total number of faculties is 536 (8.6 students per faculty) as of 2013; the number of students per professor in Pusan National University is 4.4, and that of Kyunghee University is 6.1.^{10,34}

Kyunghee University provides a 6-year course with 244 credits including 2 years of premedical and 4 years of medical school. Pusan National University provides 172 credits within a 4-year graduate medical school and 104 credits within 3-year premedical school.^{10,33,34,36}

The total hours required for the graduation in schools of KM (4880 hours), WM (4060 hours), and dental medicine (4720 hours) of Pusan National University and College of Korean Medicine, Kyunghee University (6080 hours) are presented for comparison in Fig. 3.^{10,33,34,36–38} The curriculums might be categorized into seven groups including: basic knowledge and theory; biomedicine (in TRM only); clinical knowledge and theory; humanities and social medicine; clinical observation and apprenticeship; elective courses; and research training course even with slight differences among these schools. We have excluded several curriculums of pre-medical school in Pusan National University and Kyunghee University that cover liberal arts, biology, chemistry, philosophy, foreign languages, and others since these are indirectly related with medicine and different with individuals. The elective courses of the School of Western Medicine, Pusan National University are also excluded for the same reason.

The representative basic TRM courses are: history of medicine; physiology; pathology; Shanghan-Lun; diagnostics; preventive medicine; medical *qigong*; medicinal herbs; prescription; meridian and acupoints; medical law and ethics;

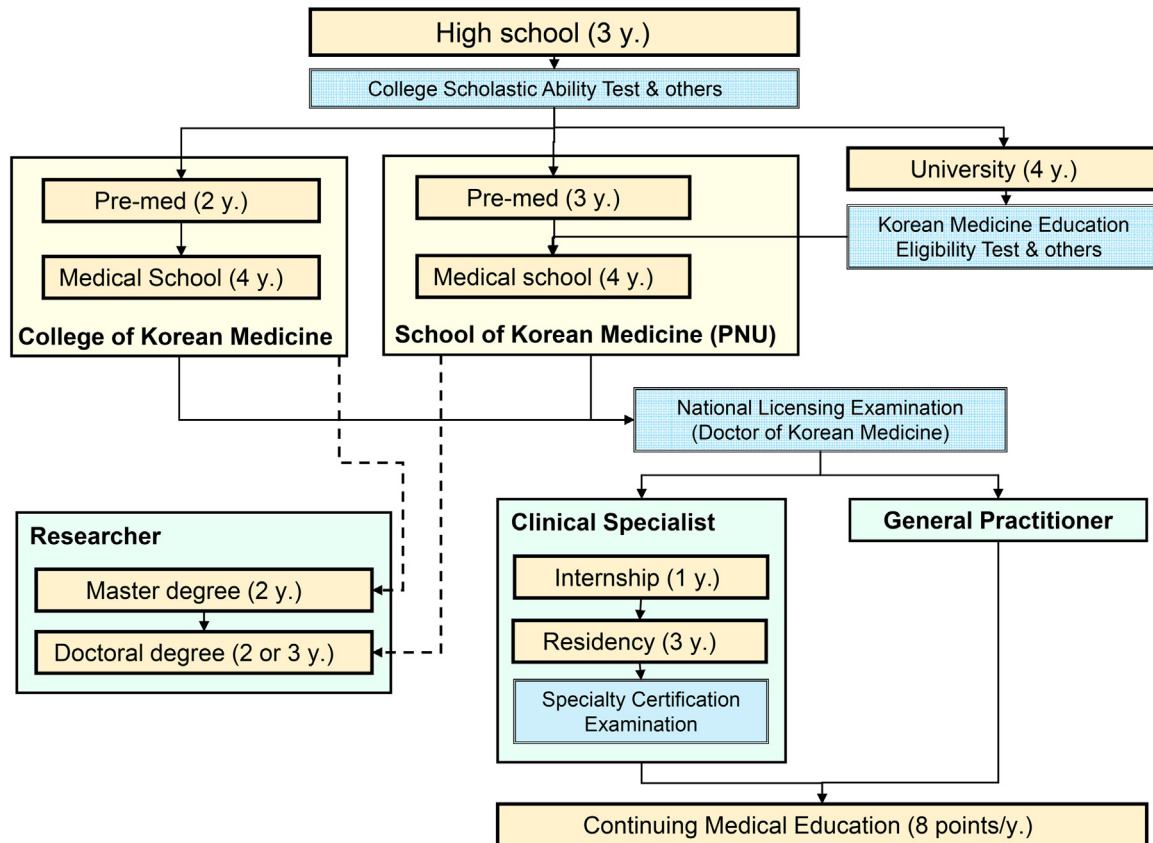


Fig. 2 – Current educational system for Korean Medicine or traditional Korean medicine. PNU, Pusan National University.

medical statistics; medical terminology; medical classics; and others with classroom lectures; laboratory practices; and field trips. Courses for WM include medical terminology, physiology, biochemistry, pathology, microbiology, anatomy, histology, pharmacology, diagnostics, clinical pathology, radiology, emergency medicine, and others. Besides, there is a wide range of elective courses covering diverse interests, such as pharmacopuncture, *bu-yang* theory, *hyung-sang* medicine, myofascial pain syndrome, taping treatment, medical classics, and others, depending on the demands of students.^{10,33,34,36,39}

Clinical courses for KM are: internal medicine (liver, heart, spleen, lung, kidney); obstetrics and gynecology; pediatrics; ear, nose, and throat; dermatology; neuropsychiatry; acupuncture and moxibustion; rehabilitation; *Sasang* typology; and others.^{10,33,34,36,39} After the classroom lectures on clinical knowledges, the students are transferred to 26 affiliated hospitals running 2734 beds as a clinical apprenticeship. Affiliated hospitals also provide clinical specialist training programs currently with 416 trainees.^{10,34}

The characteristics of KM curriculums can be summarized as follows. First, the Treasured Mirror of Eastern Medicine is the main frame of Korean TRM,¹⁹ and all the curriculums of 12 KM universities emphasize on delivering its context and contents. Second, a long history of emphasis on essence (精) and biopsychological individual differences has created the distinctive features of KM including *Sasang* typology as personalized medicine, and well-being or life-nurturing focusing

on maintaining one's essence as for longevity.⁴⁰ Third, KM has preserved its originality of TRM comparatively well, since the combination of WM and KM modalities is forbidden until these days.^{2,4}

5. Evaluation and accreditation of TRM educational institutes in Korea

The 12 KM universities should have appropriate teaching programs and supporting facilities for educating KM students. The Institute of Korean Medicine Education and Evaluation (IKMEE, <http://www.ikmee.or.kr>) was founded as a nonprofit organization in 2005 to guarantee the nationally standardized educational system for KM, and recognized by the MOHW based on the Article 32 of Civil Code.^{10,41} Only the graduates of educational institutes accredited by the IKMEE would be qualified to take the NLE after 2017.^{10,41,42}

A university applying for this accreditation will be examined with 72 items from 18 sectors and six domains. The six domains are: the mission of the school and its plan for the future development; members of the school (faculties, administrative staffs, and students), educational curriculums; facilities for education; financial status and management of the school; and contributions to the society.^{10,41,42} Field inspection on applied educational institution after the document assessments would be conducted to determine

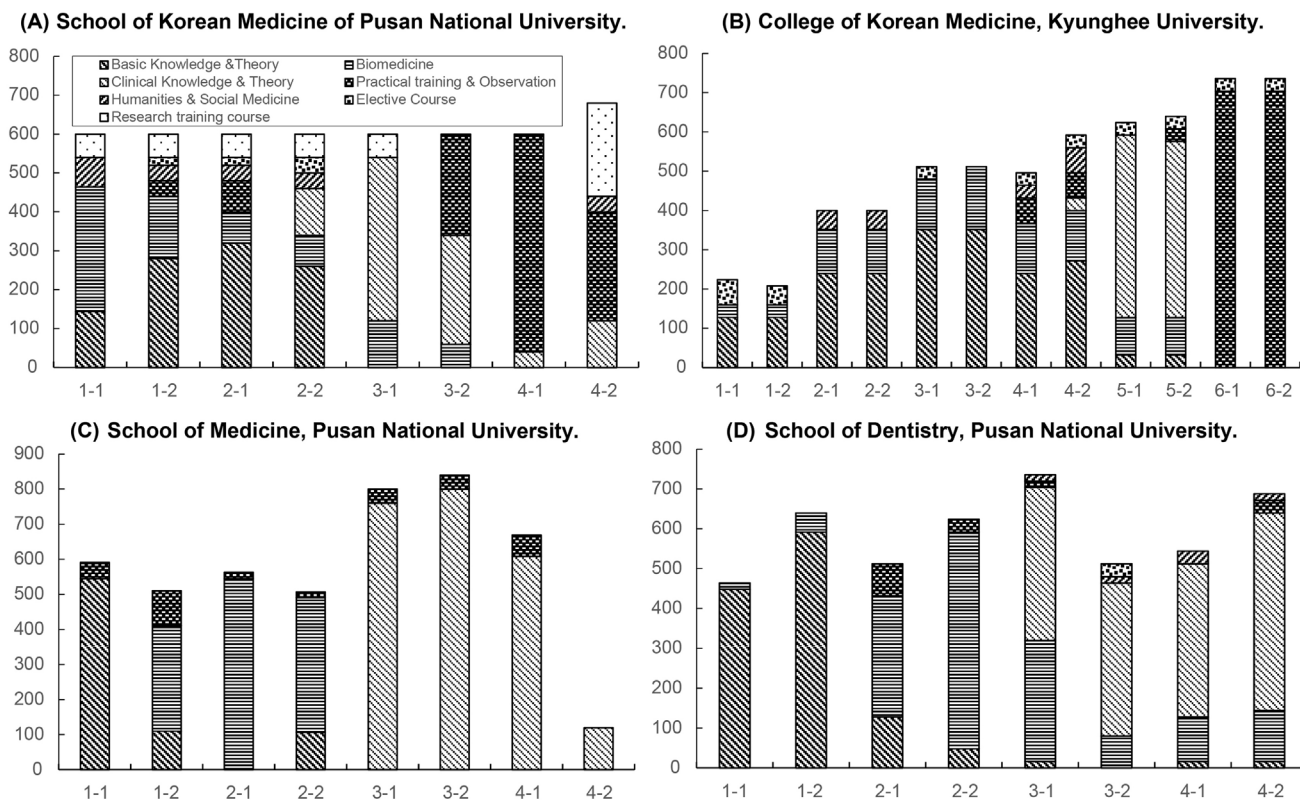


Fig. 3 – Comparison of class hours of traditional Korean, western, and dental medicine at university.

the types of result, which are 5-year accreditation, 3-year accreditation, suspension of accreditation, and accreditation disallowed (Table 3).⁴¹ Previously, Pusan National University (2010) obtained accreditation and Wonkwang University (2012), Kyunghee University (2013), DaeguHaany University (2014), and Semyung University (2014) followed.⁴¹

The IKMEE and NLE of KM have similarities with Accreditation Commission for Acupuncture and Oriental Medicine and National Certification Commission for Acupuncture and Oriental Medicine of the USA.^{44,45} However, Korean healthcare license and licensing examination is governed and operated by the national government agency (MOHW), not a private

organization, and the applicants to IKMEE are domestic universities under the influence of Ministry of Education and Higher Education Act of Korea, not individuals from domestic and foreign educational institutes.⁴¹⁻⁴⁵

In the case of WM in Korea, the Korean Institute of Medical Education and Evaluation was founded in 2003 for evaluation and certification, and they can determine on of the results including 6-year accreditation, 4-year accreditation, suspension of accreditation, and accreditation disallowed.⁴⁶

The Liaison Committee on Medical Education is in charge of the certification of medical schools of the USA, and medical schools have to pass evaluation every 8 years.⁴⁷ This

Table 3 – The decisions of evaluation and accreditation on a teaching university by the Institute of Korean Medicine Education and Evaluation

| Decisions | Requirements | Details of accreditation & follow-ups |
|--------------|-----------------------------|--|
| Accredited | 5-y accreditation | All requirements are satisfied & > 50% are superior Valid for 5 y Monitoring of accreditation |
| | 3-y accreditation | All requirements satisfied Valid for 3 y Monitoring of accreditation |
| Not approved | Suspension of accreditation | Requirements for accreditation are not satisfied Reevaluate within 1 y after improvements The accreditation for 2 (or 4) y, if satisfied |
| | Accreditation disallowed | Failed to be approved for three times (consecutively) Banned for reevaluation for 2 years from the date of decision |

Table 4 – Subjects, items, and allocated time for National Licensing Examination for a Korean medicine doctor

| Class | Subject | Items | Allocated time |
|-------|--------------------------------------|-------|----------------|
| 1 | Internal medicine (1) | 90 | 85 |
| 2 | Internal medicine (2) | 36 | 100 |
| | Acupuncture medicine | 54 | |
| | Public health & medicine related law | 20 | |
| 3 | Lunch time | | 60 |
| 4 | Dermatology & Surgery | 18 | 85 |
| | Neuropsychiatry | 18 | |
| | Ophthalmology & Otorhinolaryngology | 18 | |
| | Gynecology | 36 | |
| 5 | Pediatrics | 27 | 85 |
| | Preventive medicine | 27 | |
| | Physiology | 18 | |
| | Herbology | 18 | |

committee focuses on the integration of educational programs and emphasis on research training combining basic science and clinical experience to foster the MD-PhD course,⁴⁸ and has installed standards for qualitative and quantitative evaluations.

In Europe, the European Association for Quality Assurance in Higher Education was founded in 2004 to evaluate medical education, and this secures the quality in partnership with WHO and World Federation of Medical Education.^{49,50}

6. Examination for KM license

The licenses for 24 types of medical professions in Korea should be acquired by passing the license examination under the administration of the NHPLEB (<https://Kuksiwon.or.kr>).

The applicants of NLE for KM doctor should be a graduate of one of the 12 KM schools in Korea. If the applicants are licensed in foreign countries with equivalent education of KM schools, they should provide proof before passing the preliminary examination as a prerequisite under the regulation of NHPLEB.⁵¹

The NLE for KM doctors is a written test with 380 multiple choice items from 11 subjects, and minimum of 60% correct answer for totals and 40% for each of three bundles are required. The detailed number of items and allocated times for each subject are described in Table 4. The NLE for WM is composed of prerequisite clinical skills test and written test with 400 items. For dentists there is a written test of 364 items.^{51,52}

The numbers of newly licensed applicants (pass rate as %) of Korean Medicine doctor, WM doctor and dentist are 772 (94.6%), 3,125 (94.6%), and 725 (96.5%) in 2015⁵¹. The successful applicants of National Licensing Exam get their clinical license to open a private clinic as a general practitioner anywhere in Korea.⁵¹

7. CME for KM doctors

The number of KM doctors was 22,074 as of 2014, and they work as: general practitioners (14,798, 67.0%) for primary health care; hospital doctors (2,991, 13.5%); and public health-care doctors (917, 4.2%).^{10,53} The ages of KM doctors are diverse; 8.3% are under 30 years, 36.3% are in their 30s, 30% are in their 40s, and 25.4% are over 50 years.¹⁰

Since 1965, all Korean Medicine doctors are subjected to the CME provided by central Korean TRM doctors association, the AKOM, which was implemented by the Medical Service Act and Enforcement Decree of the Medical Service Act.^{10,54}

Eight CME points approved by AKOM are required every year. If not satisfied, the notice of incompleteness would be sent to MOHW at the end of April in accordance with Enforcement Regulation of Medical Service Act, and that KM doctor is disqualified to file their license, which is needed for clinical practice by Article 25 of the Medical Service Act.⁵⁵

The AKOM provides several ways for getting CME points including regular nationwide conferences (4 points).^{10,54,55} Along with this, they can earn points with a research article (2 points), international academic conference (4 points), domestic academic conference (2 points/d), and others.⁵⁵ The Society of Korean Medicine (<http://www.skoms.org/>) is a central body of affiliated 37 academic societies (as of 2014) focusing on specific academic fields or clinical diseases, and they serve opportunities for acquiring and developing clinical knowledge and skills.⁵⁶

8. Education and training to be a clinical specialist of KM in eight specialty fields

Unlike other countries, Korean TRM has a clinical specialist system that needs 4 years of clinical training as for specific treatment or disease areas in TRM hospitals.^{10,35,57} KM has 2472 clinical specialists (11.2% of 22,049 KM clinicians, as of 2014) in eight specialty fields provided by 47 (23%) TRM hospitals, and the Korean WM has 82,160 clinical specialists (75% of total WM clinicians) in 26 specialty fields trained by 269 (16%) hospitals.^{10,35,53}

The current (2014) number of clinical specialists in eight specialty fields is as follows: internal medicine (919); acupuncture and moxibustion (506); rehabilitation (326); obstetrics and gynecology (208); neuropsychiatry (148); ear, nose, and throat and dermatology (140); Sasang constitutional medicine (134); and pediatrics (91).^{10,35,57}

The clinical specialist training of KM requires 1 year of internship and 3 years of residency in designated KM hospitals, and is supervised by the MOHW and Korean Medical Hospitals Association. The history of clinical specialist training can go back to the clinical training programs of university hospitals started in 1994.¹⁰ As shown in Table 2, 26 university

Table 5 – Minimum requirements for internal medicine (IM) and acupuncture and moxibustion (A&M) residency in Korean medicine

| Year | 1st y | 2nd y | 3rd y |
|------------------------------|--|--|--|
| Number of cases (y) | | | |
| IM | 70 (discharged patients) | 70 (discharged patients) | 70 (discharged inpatients) & 200 (outpatients) |
| A&M | 30 (discharged inpatients) | 30 (discharged inpatients) & 300 (outpatients) | 30 (discharged inpatients) & 300 (outpatients) |
| Conference presentations (y) | | | |
| IM | 12 (in hospital) & 1 (academic conference) | 12 (in hospital) & 1 (academic conference) | 12 (in hospital) & 1 (academic conference) |
| A&M | 10 (in hospital) & 1 (academic conference) | 12 (in hospital) & 2 (academic conference) | 12 (in hospital) & 2 (academic conference) |
| Publications | | | |
| IM | 2 | 2 | 2 |
| A&M | 1 | 2 | 2 |

affiliated hospitals provide clinical training for their students and has lead the development of clinical specialist training program at the same time.^{35,58} The government accredited program started with 436 initially certified clinical specialist in 2002 and 170 doctors are certified every year.

The number of clinical specialist trainees of a hospital is determined by the MOHW depending on the current volume of the patients every year, and 47 KM hospitals (9 for internship and 38 for residency) has 619 trainees (174 for internship and 445 for residency) in 2014. Table 5 shows representative requirements for the trainee to be certified in internal medicine and acupuncture and moxibustion.³⁵

To be designated as internship training hospital, they have to install internal medicine and two other specialty departments; for example, internal medicine, acupuncture and moxibustion, and pediatrics departments are required to be operated. In addition, 400 inpatients (discharged every year), 20,000 outpatient (every year), and 50 beds (approved, 50% of annual use) are required as a minimum.³⁵

To be designated as a residency training hospital, they have to install a minimum of five specialty departments including internal medicine, acupuncture and moxibustion, and three others. Further, 550 inpatients (discharged every year), 30,000 outpatient (every year) and 70 beds (approved, 50% of annual use) are required as a minimum.³⁵

9. Conclusion

KM and its education has developed a unique and independent system, and achieved a high level of professionalism equivalent to Western and dental medicine in Korean health-care service and public health.^{2,4}

In this study, we have systematically reviewed and described the past and present situation of KM education for the first time. KM has survived 100 years of harsh modernization, colonization and war, and has developed and installed its own educational system with 20,000 highly trained clinicians.^{1,16,59} Well organized licensing examination, CME, and university evaluation and certification have made the KM education more quality assured and efficient.^{32,60–64} The next challenge of Korean TRM education would be competency-based education,^{65,66} evidence-based education,^{30–32,61,67–70}

multidisciplinary studies on KM,¹ and integration of TRM and WM.^{4,71,72}

Korean TRM and its education have unique heritage and originality compared to that of China and Japan.² Interest in complementary and alternative medicine and TRM is increasing rapidly in the world,^{2,73,74} and quality assurance of TRM clinical practice and standardization of TRM education is suggested by WHO.⁷⁵ The experience of KM would serve as important reference and guide for fostering clinical experts on medicinal herbs and acupuncture, and maintaining adequate quality in the world.²

Conflicts of interest

All authors declare no conflicts of interest.

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