A comparative study of the popularization of medical knowledge and information in Korea and Japan in the 17th to 19th centuries: Cultural mediums

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Abstract

Background: In the 17th to 19th centuries, Korea was centralized, ruled by the Joseon Dynasty. During this period, medical knowledge and information were mostly for the ruling class, led by the king. At the same time, Japan was centrally governed by the Tokugawa Shogunate, where a kind of local autonomy system, clan, was implemented that provided political and economic management, with medical knowledge and information managed differently by each clan. Moreover, the Japanese populace had risen socioeconomically and had interests positively in medical knowledge and information to get benefits. No comparative study has been conducted to determine the unfolding of medical knowledge and information in Korea and Japan from the 17th to 19th century. Accordingly, the purpose of this study was to conduct a comparative analysis of the dissemination and popularization of medical knowledge and information in this period via medical books and literary works depicting medical practices.

Method: This study compared books on medicines and literary works from Korea and Japan that mention doctors, medicines, disease names, and prescriptions in order to popularize medical knowledge and information in each country. The rationale for understanding medical culture between two countries was based on the rapid distribution, consumption, and popularization of medical knowledge and information via cultural mediums since the 17th century.

Results: In Korea and Japan, books on medicine were popularized among each country's populace. The medical institutions of the Joseon Dynasty were established by the state from the late 14th century. In contrast, Japanese medical institutions for the general population started to emerge much later, in the 19th century. Medicinal books from the 17th to 19th century in Korea and Japan are similar in that they were gradually and easily changed readable for the populace. In addition, whereas the Joseon Dynasty conducted medicinal research nationwide, with knowledge and information about medicine spread to the populace, the populace did not show initiative on herbal medicine or medicine-related groups as much over the same period compared to the populace in Japan. It was found in the literature that Japanese doctors in the Edo period were mostly nurtured through private schools and gained success and economic stability. In Korea, on the other hand, there were few literary works depicting medicine. This finding indicates that the state took the initiative to manage medical knowledge and information in the cultural mediums of Korea, and the populace did not feel the necessity to play an active role in disseminating medical knowledge and information. In the case of Japan, state-led medical knowledge and information was not disseminating over the same period, because they were led by the populace who were eager to get benefits through selling and disseminating medical goods and books. Therefore, it seems that the populace published several medical books in the process of actively producing and distributing medical knowledge and information.

Discussion: By comparing the medical knowledge and information of Korea and Japan in the 17th to 19th centuries through cultural mediums, we can see the different leading subject of medical knowledge and information. Japanese populace took initiative to disseminate the medical knowledge and information, while the Joseon state did. And we can also comprehend that it is useful to propagate medical knowledge and information, not just for the development of medicine but also to promote public health and a peaceful society. Furthermore, as is the case nowadays with spread of fatal viruses such as HIV and coronavirus, popularizing and sharing medical knowledge and information is of great use.

Conclusions: In the 17th century, medical institutions were established in Korea, and medical books, medicinal herbs and medicines were distributed. In contrast, production and distribution of medical knowledge and information was led by the populace in Japan because the Tokugawa Shogunate was passive in producing and distributing medical knowledge and information, unlike the Joseon Dynasty. [*Ethiop. J. Health Dev.* 2020;34(Special issue-3):40-47]

Key words: 17th to 19th centuries, medical knowledge and information, cultural mediums, Korea, Japan

Introduction

In the 17th to 19th centuries, Korea was a centralized and ruled by the Joseon Dynasty (1392-1897). Its Munmu Yangban (civil and military officials) governed politics, the economy and culture (1). Medical knowledge and information were mostly for the ruling class since the medical institutions such as Jeonuiwon, Naeguk were led by the king and ruling class. To this end, the offspring of the middle and lower classes with excellent learning ability were selected to be educated. In some cases, they were sent to Seoul to work as physicians for the royal family. However, among those who took the examination (Gwageo) for entry into miscellaneous state departments, medical officers were selected and educated, and were assigned to medical institutions according to their ability. In contrast to Japan, there were also official medical institutions for the populace,

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such as Hyeminseo and Jejungwon.
Over a similar time period, Japan was centrally governed by the Tokugawa Shogunate. However, a kind of local autonomy system, clan, was implemented that managed political and economic institutions. Furthermore, after the end of repetitive wars in middle ages, urban culture emerged and cultural gaps between regions were created. In other words, medical knowledge and information wasn't disseminated in the rural country but mainly in the city by clan in practice. It was not until the mid-19th century that the central government, the Tokugawa Shogunate, recognized diseases of the populace were a threat to the nation (2) and began to be interested in disseminating medical knowledge.

During this time, merchants (Chonin) in the cities of Japan held most of the economic power. Among the Chonin, a new merchant class of entrepreneurs emerged. For example, the famous Sumitomo family started publishing and apothecary businesses, among others, and later moved into mine excavation and currency exchange (3). In contrast to Joseon society, in Japan the populace, represented by Chonin, were actively interested in producing, distributing, and consuming economically profitable cultural objects and technology of the day. Therefore the medical knowledge and information was often used in the cultural mediums such as literary works and books describing medicine to get readers' interests.

Previous research in this area was conducted by phenomena (4) and by record type (5) only, and there is no comparison of Japan's cultural mediums with that of the neighboring country of Joseon in the 17th to 19th centuries. Accordingly this study aims to conduct a comparative analysis of the books produced in Korea and Japan from the 17th to 19th century in order to reveal the process of disseminating medical knowledge and information in the respective countries and to evaluate their significance.

Method
This study compares how the demand for medical knowledge and information in Korea and Japan in the 17th to 19th centuries was met culturally through literary works on medicine.

Studies related to Korean medicine were selected from those included in research by Miki Masae (6) and Kim Doo-Jong (7). Among the medical studies of the Joseon Dynasty investigated by these two researchers, those with the greatest influence were selected for analysis. In addition, in the case of Japanese medical books, those published and distributed nationwide by the Tokugawa Shogunate were selected for study.

In the case of Korean studies involving medicinal drugs, those selected were based on a follow-up survey using the latest version of *Korean Classical Literature History* (8) and related research studies. In the case of Japanese literary works, studies that explored doctors or medicinal drugs of the time were selected from a report by Yoshimaru Yuya (9) and the corresponding author's manuscript (10). In the case of medicinal drugs mentioned in literary works, those with commercial advertisements were selected from popular writers' works that were widely distributed in big cities. Although Korean and Japanese materials differ in genre and form, they both describe the medical system and medicine of their place and time. Therefore, this study aimed at researching medicinal books and literary works recorded in the 17th to 19th centuries, and examined how medical knowledge and information in both countries were recorded and described.

Results
Who led public health?: The Joseon Dynasty, which inherited the tradition of medicine of the Koryo Dynasty, established medical facilities, a medical education system, herbal gardens, and so on in Seoul and in other provinces in 1393, the year after King Lee Seong-gye's enthronement. Medicine departments were deployed to collect medicines, and medical institutions and a medical system were established. It is noteworthy that in 1412, during the early Joseon Dynasty, the official record, the "Annals of the Joseon Dynasty", noted: "Those who have been in charge of medical care, such as Jeonuigam, Hyeminseo, and the Jesaengwon Institute, have made medicines beforehand. If there is a sick man, let him be saved immediately, that he may not lose his life" (11), and especially Hyeminseo was a formal medical institution for the populace as noted in the "Annals of the Joseon Dynasty" in 1452. In addition, according to an article in the "Annals of the Joseon Dynasty", in 1799, Heo Jun's medicinal book, *Donguibogam*, completed in 1613 under the name of the royal family, had its main points summarized in the *Suminmyojeon*, a first-aid prescription medicinal book for the populace by the king's order (12). Furthermore, in the 19th century, the Korean version of *Donguibogam* was produced under royal order, so that the populace could read it. However, despite establishing a medical institution and producing a medicinal book for the populace, most medical benefits were limited to the ruling class, such as the royal family and government officials, because it was identity society in those days (13,14). Furthermore, doctors in the 17th to 19th centuries who had passed the state examination worked mainly for the royal family and the ruling class around them, and it was not easy for the populace to access a doctor.

In Japan, after the Edo period (1603-1868), the each lords of clan hired some well-known civilian doctors who didn't earn money from the Tokugawa Shogunate but from the clan; however, because of frequent wars before the Edo era, national-centered medical knowledge and information did not develop in Japan, but in Joseon Dynasty. Also, before the Edo era, medicines had been handed down in the powerful warriors and temples, rather than being manufactured under state control (15). However, in the Edo period, we can see that those in power and the intelligentsia worked hard to publish medicinal books for the populace. For example, Tokugawa Ieyasu, who founded the Edo Shogunate, was interested in medicine, read Chinese medicine prescriptions (*Wazaikyokuho*) and prepared medicines. Also, Tokugawa Mitsukuni,

Lord of Mito clan, issued a medical book called *Kyuminmyoyaku* (1693) to teach the populace a simple treatment by instructing Hozumi Hoan, a doctor. In the preface of *Kyuminmyoyaku*, it is noted that: "A lord commanded me, there are no doctors and medicines in the mountains and poor areas, so the populace just lie down and hope to get better when they get sick. The uncured, the dying man, or the disabled are all dead unintendedly. I am willing to accept orders to collect easy-to-use prescriptions and distribute them to the populace." (16). This shows that Mitsukuni published information about medicines and prescriptions that were easy to obtain for the purpose of treating diseases among the populace. Similarly, the intellectual, Kaibara Ekiken, in his book *Yojokun* (1713), attempted to raise awareness of medicine among the populace, based on his own experiences. To this end, the first volume, based on Confucianism, encourages the purpose and significance of curing, while the second volume encourages a life of exercise, nutrition, and rest. Volume 3 covers food, while volume 4 also covers food, as well as the harm of smoking. Volume 5 is about the functions of the ears, eyes, mouth, nose and body, and the importance of oral hygiene; Volume 6 describes how to cure oneself from getting sick; Volume 7 describes the efficacy and harm of medicine; and Volume 8 explains how to live in old age. Ekiken wrote *Yojokun* in order to raise awareness about medicine, regretting that poor people were deceived by fraud doctors without receiving medical benefits (17). This shows that the level of medical knowledge and information among the populace was still very low, and medical activities through professional doctors and pharmacies were not carried out. As noted above, the state failed to initiate the popularization of medical knowledge and information, which led to the emergence of countless medicinal drugs with unproven efficacy by doctors in Japan in the 19th century.

Given that medicine in the Edo period was a concern of the ruling class, it took a long time for the state to create a medical institution or medicinal book for the populace, unlike in the Joseon Dynasty. There was no official doctor's license until 1801, when Owari clan introduced doctor registration and business licensing.

In Japan during the Edo period, some doctors were employed by the Tokugawa Shogunate and clan, such as Okuishi, who had excellent medical knowledge and expertise. Doctors practiced medicine for the royal family and high-ranking warriors exclusively. However, many of them hereditarily became doctors, regardless of their medical ability. However, from the late 18th century, several professional medical institutions were established under the leadership of clan, and the Tokugawa Shogunate started training and educating for doctors directly in 1791, about 200 years after the Edo era started. Also, to become a doctor, it was not necessary to be educated in this institution. Therefore, in the Edo era, doctors were trained through private schools, usually under famous doctors, and were trained as apprentices (18). Furthermore, anyone with medical knowledge and skills could be a doctor, so there could be doctors of various identities, including warriors, Chonin, farmers, and citizens. Paradoxically, becoming a doctor was one of the few routes to transcend status and achieve economic stability in the feudalistic Edo period (19).

This situation can be seen from the fact that *Chikusai* (1623) and *Ukiyomonogatali* (1665), which tell the story of ignorant quack doctors, were published and read in the early Edo period. These stories portrayed quack doctors whose ignorance was revealed while they were acting as doctors, with no public education or training. *Zenakumimochiougi* (1730) also depicts quack doctors, who succeed in their roles because of their skills in deception, rather than medical knowledge. In contrast, in the famous *Budodenraiki* (1687) written by Ihara Saikaku, it was paradoxically found that some doctors with talent could succeed regardless of status. Kurozu, an officer of clan, wanted to get a success by recommending a good doctor to the lord. He recommended a local doctor Genpo, a lower class, to examine a sick mistress of lord, but Genpo was driven out of town by the lord because of her death. Kurozu, got mad and entrapped Genpo's rival, a wandering doctor Shueki, a lower class as Genpo, because Shueki pointed out Genpo's fault in front of the lord. If Genpo succeeded in saving the mistress, he and Kurozu could get money and reputation in the clan. This is an anecdote that doctors were often hired to get money and reputation by clan. And if they did good job, they could succeed in society regardless of their status.

As mentioned above, the two countries were similar in that a large number of medical books were published for the populace starting from the early 17th century and were popularized in the 19th century. However, medical institutions for the populace did not exist in Japan until the 19th century, and the state did not play an active role in fostering doctors, which led to the emergence of quacks.

Who pioneered the development of herbal medicine?: The reason that the Joseon Dynasty's knowledge of medicine was spread and extended to the populace started in the nationwide process of researching and collecting herbs. Great King Sejong (1397-1450) examined medicinal herbs and herb seeds throughout the country to replace Dangyak (Chinese herbs) with Hyangyak (Korean herbs). This led to a new phase in the Joseon Dynasty's medical knowledge and information (20), because during the research, intellectuals and medical person participated in the survey and the populace helped accumulate related medical knowledge. The policy of the dynasty led to the public gaining knowledge about medicinal herbs and to move towards the distribution and consumption of medicinal herbs and the development of a related market economy. After 1608, when the Taedong Law came into force (which involved paying taxes with rice instead of local crops), medicinal herbs gradually became superbound. A market for selling and buying medicinal herbs, such as the Daegu Yangnyeong-si, emerged (21). In addition, *Donguibogam*, published in 1613, described in detail how to collect, dry, and process medicines, the processing method, pharmaceutical methods, medication, and the

disposition of medicine. Chinese characters were written in Korean, so that people who could not read Chinese could easily understand them. Such research on medicinal herbs by the royal dynasty and publication of medicinal books for the populace contributed greatly to the dissemination of medical knowledge and information after the 17th century.

Medical facilities founded for the treatment of the populace, such as Hyeminseo, existed in Korea much earlier than in Japan. Also, because of the influence of Silhak in the 18th century, herbology flourished and interest in the practical use and popularization of medicine increased (22). However, it is hard to say that it succeeded in popularizing medical knowledge and information. The medical knowledge and information of the Joseon Dynasty was for the state to govern the populace stably, because the ideology of state was Confucianism and most upper class people were Confucian. This contrasts with the situation in Japan, where the most upper class people were Samurai, officers who were warriors before Edo era. Therefore the Japanese populace directly produced and distributed medical knowledge and information.

On the other hand, the Tokugawa Shogunate of Japan, where medical knowledge and information was not established by the state, tried to import medical knowledge and information from the Joseon Dynasty. Tsushima clan, who was in charge of trade with the Joseon Dynasty, requested not only advanced Joseon Dynasty medicinal books, but also medicines and herbs, as a diplomatic exchange between the two countries, and asked to import them through trade (23). In particular, as demand for Korean ginseng increased rapidly in Japan, the price soared, resulting in a severe outflow of silver, placing the finances of the Tokugawa Shogunate finances under pressure. Thus the eighth Shogun, Tokugawa Yoshimune (1684-1751), tried growing Korean ginseng in Japan and succeeded finally. Many studies indicate that Japan, a latecomer in the production of medicinal herbs, developed a significant amount of medical knowledge and information during the Yoshimune era (24,25). To increase financial stability of state by farming in food industry, Yoshimune researched and managed the nation's products in the process of attempting to localize various medicinal herb seeds and medicinal herbs, including Korean ginseng, and allowed Western medical books to be imported through Nagasaki. As a result, various kinds of knowledge related to medicine were accumulated and distributed throughout Japan, and interest in medical knowledge and information increased.

However, Yoshimune's policy for the food industry was only a part of the industrial revival policy in his days. The management and operation of medical knowledge and information led by countries such as Korea were not Yoshimune's main purpose. Regardless of his intention, there was same tendency in Korea and Japan, in that medical knowledge and information was established through research on medicinal herbs and herb seeds. However, there was a big difference between two countries in the perception of whether they intended to commercialize them nationwide as cultural mediums.

In Japan, as the state did not actively promote the popularization of medical knowledge and information, the populace generated and distributed medical knowledge and information. This finding suggests that the mid-18th century set a milestone in the popularization of medical knowledge and information led by the demand of the populace. As mentioned above, the popularization of medical knowledge and information in Korea and Japan in the 17th and 19th centuries was carried out based on herbal medicine; however, such propagation of medical knowledge and information was led by the state in Korea, while it was initiated by the populace in Japan. The Japanese Tokugawa Shogunate was interested only in exploiting herbal medicine in the food industry at the national economic level in Yoshimune's days. Thus, there were groups such as Hiraga Genai's, which were privately engaged in producing and propagating medical knowledge and information, indicating that the popularization of medical knowledge and information in Japan was led by the demand of the populace.

Popularization of medical knowledge and information from a literary perspective in Korea and Japan:

In the 17th to 19th centuries, there were far fewer and less diverse Korean literary works, including publications relating to medicine, than in Japan, because the Korean state controlled publications (26). However, medical knowledge and information were mentioned in a few literary works, indicating that these studies facilitated the popularization of medical knowledge and information at the time. In the 16th century, the *Mukjae Diary*, in the 17th century the *Keam Diary*, and in the 18th century the *Heum Young*, diseases and treatment processes were recorded. However, the recorders were all ruling class, so it is not easy to confirm the medical knowledge and information of the populace through their diaries. On the other hand, the practitioners who argued for the practicality of scholarship insisted on the importance of accurate diagnosis and treatment of disease, as evidenced by *Sunghosaseol* (1760) (27,28). Park Jiwon tried to popularize medicine by writing a song about medicines, referring to the ingredients and efficacy of medicines, or a simple prescription. Jeong Yakyong embraced Western medicine and discussed pandemic diseases extensively. As mentioned above, academic and practical records and discussions on medicine had been made in Joseon, but there are no examples of the introduction and sharing of medical knowledge and information through literary works, as happened in Japan. Exceptionally, Pansori, the Korean opera, enjoyed by the Korean public, was produced in the 18th century. And medical knowledge and information, such as doctors, disease names, and a song about medicines, were used in Pansori 'Sugungga' and 'Byungangsoega'.

'Sugungga' begins with Sinsun (a doctor) descending from heaven and examining the sick dragon king. As the dragon king doesn't respond to treatment, Sinsun says he needs to eat rabbit liver to survive. The dragon

king's servant, a turtle, uses various tricks to obtain a liver from a live rabbit, but the rabbit grasps the situation and avoids capture (29). The main plot of 'Sugungga' is a wisdom battle between turtles and rabbits. Interestingly, there are various descriptions of medicinal knowledge and information, such as Sinsun's prescription, disease names, medicinal names, and song about medicines, for healing the dragon king's illness. 'Byungangsoega' also uses specific medical knowledge and information. To save her sick husband, Byungangsoe asks a doctor for acupuncture and prescription drugs, but various treatments and prescriptions do not work (30). It is interesting that, although the doctor explains the disease and the prescription, the specific names of pharmaceutical names – such as "Chilling tang, Palmultang, Gumigangbyeongtang, and Sipjeondaebotang" – are listed as being ineffective (31). As previous studies have pointed out, Pansori provides evidence that there were attempts to share and distribute medical knowledge and information through literature in Korea around the 18th century. However, no other extant works from this period in Korean history refer to the sharing of medical knowledge and information.

In Japan, just as nurturing doctors was conducted through private school, the interest in and commercialization of medicinal herbs were rapidly developed through private research groups. Furthermore, unlike the medical associations and the books that recorded them, medical literature spread rapidly in Japan, where a popular publishing culture developed. Published in the early 17th century, the novel *Chikusai* portrays quack doctors' medical descriptions (32). The work shows that medical knowledge and information was already widespread among the general public. Another literary work, *Uishadangi* (1759), in which were the poor doctors not also secular, also shows that medical knowledge and information was used as literary material (33). The emergence of works in which doctors are presented as an object of humorous metaphor shows that medical knowledge and information was produced and distributed in mainstream Japanese culture, although not by the national authorities.

Shikitei Samba's *Wataonzaku Kikonohikihuda* (1802) advertised a famous medicine handed down from an excellent doctor named Wataonjaku (34). The medicine was a newly manufactured and expensive product, touted as having an effect on strokes, diseases caused by body fluids, diseases caused by hernia or external genital swelling, long-lasting diseases in the stomach, abdominal pain, and dysentery. The place where the medicine was prepared and where it was stored were recorded in detail. In those days, acupuncture appeared at around the same time as the commercialization of medicine. There were many acupuncture doctors in charge of the Shogun; these doctors also taught acupuncture to the blind. As such, acupuncture-related medical knowledge and information developed and became popular in the 17th and 19th centuries.

After the 18th century, Japanese medical knowledge and information was widely consumed by the populace through private gatherings and publishing, and medicine was thoroughly commercialized as one of the popular products distributed at the time. The reason why Japanese medicine knowledge and information could be commercialized is the rise of identity through medicine. Although Hiraga Gennai's earlier attempt to succeed as a herbalist had academic ambitions, he also hoped for economic success (35). Like Gennai, many people who dreamed of being wealthy through medicine appeared in Japan, and the same phenomenon was found in Joseon. By the late 18th century, Seoul had become more commercially active, and many local goods were traded through the market. *Kyoungdojabji*, a book on Korean customs in the late 18th century, said: "The pharmacy dropped down its reeds and gave store names such as Sin-nong-yu-up and Man-byung-hoe-chun; all the people who sold drugs were called Bongsa." Based on this, we can confirm that drug distribution was active. However, even with the development of commercial medicine, the distribution and consumption of medicine was concentrated among the bureaucrats and wealthy living in Seoul.

In contrast, the Tokugawa Shogunate did not pay much attention to the training and management of doctors, although herbal medicine shops were thoroughly regulated with the introduction of licensing in 1722. When society was commercialized in the late 17th century because of the development of a product economy and distribution, the Tokugawa Shogunate began to manage herbal medicine shops to stabilize the price of commodities (36). The licensed Japanese herbal medicine shops were similar to Yakgye in the Joseon Dynasty, but unlike the Yakgye, these privately owned pharmacies could distribute medicines legally with a certain degree of protection from public power, and therefore succeeded in the national commercialization of medicines. As a proof of this, an aphrodisiac Jiougan, presented in Ishihara Saikaku's novel *Khoshokuichidaionna* (1686), and the digestive medicine Watchusan, presented in *Nanshokuokagami* (1687), were medicines that were widely distributed, and readers knew them by name. In other words, in Japan in the late 17th century, there were well-known drugs that people were familiar with and used, despite being unproven scientifically. Even in the early Joseon, there was a panacea called Shin-seon-tae-ul-ja-geum-dan, and the commercialization of medicine occurred since the middle of Joseon (37). However, in Japan, the economic value and commercialization of medicines had clearly progressed, including advertisements and sales outlets of medicine mentioned in the genre of popular novels (Gesaku).

Despite the fact that it was rare for the populace to be examined by doctors in the middle of the Edo period, the successful commercialization of medicine was made possible because of increased demand. The populace tried to treat diseases through medicine. Each clan, paying attention to this, competitively attempted to commercialize medicines and distribute them nationwide. Toyama clan, for example, thought that the development and distribution of medicines would greatly help his finances. Accordingly, a nationwide sales organization was created to systematically sell them. Okigusuri, a breakthrough medicine-marketing

scheme, was designed to allow the merchants to place emergency medicines in common people's homes and pay for them later. In addition, the distribution and consumption of medicine in Japan became more commercialized with the development of product distribution and brokerage after the middle of the Edo period. Rental books on medicine, one of the key products of brokerage, became popular products among the populace. The book broker, who handled multiple products, distributed the rental books and medicines together. The publishing industry, which began to be dominated by book brokers, promoted medicine through rental books in order to produce popular products that directly met readers' demands. For example, Shikitei Sanba, Santo Kyoden, Kyokutei Bakin, and other famous writers of the time, put medicine advertisements in the literature. Medicines were distributed and consumed as popular products such as popular novels.

Santo Kyoden's 'Tokushogan' was a medicine that had the same effect as current nutritional tonics and appeared frequently in the books he wrote. It was promoted as a potent and long-lived medicine that strengthened nerves, increased memory, and compensated for weakness of mind and body. 'Tokushogan' was also promoted in the work of Kyoden's younger brother, Santo Kyozan. Even after the death of Kyoden, the advertisement of the book and medicine was sustained, and the economic value and commercial viability of the medicine continued. 'Shonimubyogan' was effective in children's diseases and was recommended as a drug that lightened symptoms when taken in advance. Sanba's *Ukiyoburo* contained advertisements for the medicines of 'Kinzeigan', 'Tennogan', and 'Hujinmanbyoin'. 'Kinzeigan' was touted as a panacea effective for various symptoms and for removing toxins from the body. 'Tennogan' and 'Hujinmanbyoin' were promoted as medicines for women's diseases, including menstrual disorders (38). Bakin promoted the medicines 'Shinnyoto' and 'Kiogan' in the imprint of *Kinseisetsubishonenroku*. 'Shinnyoto' was a gynecological medicine passed down from generation to generation, and was especially effective before and after childbirth. With this drug, there was no difficulty of dystocia in his family for five generations. As described above, the medicine advertisements of the late Edo period appeared frequently in entertaining books with practical applications, and it can be seen that through them, medical knowledge and information was popularized among the populace, similar to the advertising of nutrition, tonics, and beauty-related products in newspapers and magazines of today. The medicines distributed by the popular writers to the populace were nutritional tonics, cold medicines, eye drops, headache drugs, and gynecopathy prevention medicines, all of which are still taken in modern times.

Since the 17th century, Japanese medical knowledge and information has been popularized and spread through the cultural mediums. If we compare the propagation of medical knowledge and information among the populace in Korea and Japan based on their literary works in the 17th to 19th centuries, Japan had an overwhelmingly higher number of works and more diverse content than Korea. This abundance of studies was possible because Japanese literary works of the time understood the demand of the populace for medical knowledge and information and commercialization of products. On the other hand, Korean literary works of the time did not reveal any commercialization of medical knowledge and information, and the state did not allow it either. Therefore, it can be said that the popularization and commercialization of medical knowledge and information in Japan was facilitated by the populace via the cultural mediums.

Discussion

In Korea, the medical system was developed under the initiative of the state, including the establishment of public medical institutions, the nurturing of doctors, the publication of medical books, and surveys of herbal medicine. In contrast, Japan did not have a state-led medical system, which led to a strong demand for medical knowledge and information by the populace, and the emergence of quacks. In addition, the demand of the Japanese populace for medical knowledge and information appeared in the form of accumulated medical knowledge and herbal medicine. Further, mass production and distribution of medical knowledge and information was facilitated by literary works.

In addition, both Korea and Japan actively utilized medical books and literature to disseminate medical knowledge and information among the populace, which contributed to making both those societies stable and peaceful. These results remind us that it is useful to propagate medical knowledge and information via cultural mediums, not just for the development of medicine itself but also to promote public health and a peaceful society. Furthermore, the popularization and the sharing of medical knowledge and information via cultural mediums is very useful nowadays, with the spread of viruses such HIV and coronavirus. Arguably, in Korea, the state-led popularization and sharing of medical knowledge and information via the cultural mediums of the cell phone and news on TV succeeded in containing coronavirus in the country and keeping infections and fatalities down to a very small number. In contrast, Japan struggled with coronavirus in the populace-led popularization and sharing of medical knowledge and information

Conclusion

In the 17th century, medical institutions were established in Korea, and medical books, medicinal herbs and medicines were distributed. Throughout the 19th century, the general public in both Korean and Japan shared, distributed, and propagated medical knowledge and information around the country. However, medical institutions for the populace had existed in Korea from a much earlier time.

Paradoxically, the production and distribution of medical knowledge and information was led by the populace in Japan because the Tokugawa Shogunate was passive in producing and distributing medical knowledge and information, unlike the Joseon Dynasty.

Furthermore, the Japanese were more economically active than the Koreans, and acquired economic gains by producing and distributing medical knowledge and information, which resulted in differences in the production and distribution of medical knowledge and information by Korea and Japan in the 17th and 19th centuries. Therefore, the movement was led by the state in Korea, while it was led by the private sector in Japan. However, both countries recognized the need for the popularization of medical knowledge and information in the 17th and 19th centuries.

References

1. Lee DS, Kim SG. History of medicine. Seoul: Seoul University Press; 1997.
2. Burns SL. Constructing the national body: Public health and the nation in nineteenth-century Japan. In: Brook T, Schmid A (eds.). Nation work: Asian elites and national identities. Ann Arbor: University of Michigan Press; 2000:17-49.
3. Sakudou Y. Edoki Shouinn no Kakushinteki koudou. Tokyo: Yuhikaku; 1978.
4. Suzuki N. Edo no Hayari Byou. Tokyo: Yoshikawa Koubunkan; 2012.
5. Sakai S. Maruwakari Edono Bungaku. Tokyo: KK Best Sellers; 2011.
6. Miki S. Chōsen igakushi oyohí shippeíshi (History of Korean Medicine and of Diseases in Korea). Sakai City: Sakae, Miki; 1962.
7. Kim DJ. A history of Korean medicine: Chung Um Sah; 1955.
8. Koh MS, Jeong M, Jeong BS. Hangook Kojeon Munhaksa. Seoul: Institute of Translation for Korean Classics; 2006.
9. Yoshimaru Y. Kinsei Shosetsu no Nakano Isha. Tokyo Ikashika Daigaku Kyouyoubu Kenkyu Kiyou. 2009;39:1-13.
10. Koh YR. A Short thinking on quacks' characters described in the literature written in the Edo era. Japanology. 2019;86:179-201.
11. Veritable Records of the Joseon Dynasty [Internet]. National Institute of Korean History. 1412 [cited March 23, 2020]. http://sillok.history.go.kr/id/kca_11201010_001.
12. Veritable Records of the Joseon Dynasty [Internet]. National Institute of Korean History. 1412 [cited March 23, 2020]. http://sillok.history.go.kr/id/kca_12312011_001.
13. Shin DW. Medical life history of Joseon Dynasty. Seoul: Deoulnyeok Press; 2014.
14. Kim SS. Panaceas of Joseon Dynasty. Journal of Humanities of Seoul National University. 2012;67:81-113.
15. Shinmura T. Nihon Iryoushi. Tokyo: Yoshikawa Kobunkan; 2013.
16. Kyuminmyoyaku [Internet]. National Diet Library Digital Collections. 1693 [cited 2020.03.23]. https://dl.ndl.go.jp/info:ndljp/pid/2536812?itemId=info%3Andljp%2Fpid%2F2536812&__lang=en.
17. Ekibara E. Yojokun. Tokyo: Kodansha; 1982.
18. Yamazaki M. Kusuride Yomitoku Edo no Zikenshi. Tokyo: Touyou Keizai Shinpousha; 2015.
19. Umihara R. Edozidai no Ishi Shugyou. Tokyo: Yoshikawa Koubunkan; 2014.
20. Lee GR. Two ways of the development of the Hyangyak during the era of King Sejong of the Joseon Dynasty. The Taedong Center for Eastern Classics. 2010;26:216-7.
21. Gwon BT. Study on an official medicine market of Taegu (2)-focused on Heo Jun's achievements. Publishing Committee of Dr Haecheon Park Jun-Chae's 70th Birthday Congratulation Dissertation Collection. Seoul: Publishing Committee of Dr. Haecheon ParkJun-Chae's 70th Birthday Congratulation Dissertation Collection; 1985:405-25.
22. Park YG, Noh BS. Literature review on the development of herbology of the Joseon Dynasty. Korean Journal of Herbology. 1995;10:69-117.
23. Kim GM. Japan's request for Korean medicinal materials during a period of the 17th to 18th century. Journal of Daegu Studies. 2015;119:217-355.
24. Mizumaki C. Kusuri no Bunmeishi. Tokyo: Kankin Shuppan; 1991.
25. Aoki T. Edozidai no Igaku. Tokyo: Yoshikawakoubunkan; 2012.
26. Jeong BS. Joseon Shide Soseol ui Sengsan gwa Yutong. Seoul: Seoul National University Press; 2016.
27. Kim H. Hygiene and medical care of ruling families of the late 18th century focused on gynecological diseases (Heumyoung). Journal of Seoul Studies. 1998;11:119.
28. Cho SS. Joseon Hugi Seongho Hakpa ui Gohak Yeongurul Tonghan Bonchohak Inshik. Uisahak. 2015;24(2):490.
29. Chang MY. Pansori Saseoljip 12 Hyoundehwa Saseolbon Sugunga Cheokbeokga. Seoul: Miseokwon; 2015.
30. Shin JH, Kim C. BeongGwanSeGa. Seoul: Jisik ul Mandunun Jisik; 2009.
31. An SG. Pansori 'Sugungga' Uihagkisa e Neopdwen Yeoksasong gwa Choseon Hugi Minjung Uihagchisik ui Bogup-Kimyeonsu Changbon Sugungga ui Saseol Desanguro. Honam munhwayoengu Honamhak Yeonguwon. 2010;47:127-58.
32. Maeda K, Morita T. Nihonkotenbunggaku Taikei Kanazoushishu 90 Chikusai. Tokyo: Iwanamishoten; 1965.
33. Hukuda Y. Igakuno Nakano Bungaku. Tokyo: Kasama Shoin; 2016.
34. Wataonzyaku Kikonohikihuda [Internet]. University Library Kotebseki Sogo Database. 1802 [cited March 23, 2020]. www.wul.waseda.ac.jp/kotenseki/search.php?cndbn=%e7%b6%bf%e6%b8%a9%e7%9f%b3%e5%a5%87%e5%8a%b9%e5%a0%b1%e6%9d%a1Waseda.
35. Koh YR. Hiraga Gennai's study in Nagasaki and economic perception. Korean Journal of the Society of Japanese Language and

Literature. 2017;74:17-8.
36. Mizuno M. Santokyoden Zensyu. Tokyo: Perikansha; 2003.
37. Zinbo K. Ukiyoburo Gezyosuigenmakunosoto Daisensekaigakuyasagasi. Tokyo: Iwanamisyoten; 1989.
38. Hanasaki K. Edobaiyakusi Tokyo: Kinseihuzokukenkyukai; 1956.