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## A Study on the Moxa Education Using Voucher Service

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### Abstract

*This study is about dissemination of moxa education using voucher service. Moxa is one of the traditional medicines of Oriental medicine. Moxa is the only medicine in which is characterized by self-management of preventive medicine. Moxa which is prescribed in advance when it is healthy can prevent Alzheimer's dementia and cancers.*

*Moxa activates neurotransmitter dopamine system and cerebral vasoconstrictor substance serotonin system, which actively helps to prevent and cure Alzheimer's dementia. Also moxa produces HSP (heat shock protein), which can prevent and treat cancers. Moxa, which costs little, is a strongly effective medicine.*

*Therefore, this study emphasizes the necessity of moxa education and suggests a self-care training program for the reduction of medical expenses. As a methodology for this, moxa education can be done by using voucher service. At the same time, it proposes the establishment of a moxa instructor.*

**Keywords:** Moxa education, Moxa voucher, moxa instructor, Alzheimer's dementia prevention moxa method, cancers prevention moxa method, Self-care

### 1. Introduction

In Korea, according to the Korea Health Industry Development Institute (KHIDI) in 2015, demand for aging-friendly products has steadily increased with the importance of individual health and population aging. The size of the elderly friendly industry combined with the market size of each industry in 2012 is 27.38 trillion won, and the annual growth rate from 2012 to 2020 is 13.0%, which is estimated to reach 72,830.5 billion won by 2020.

In the United States, the cost of Medicare and Social Security is \$25,000 a year for the elderly in the "2012 Federal Hospital Trust and Federal Supplement Health Insurance Trust Fund Annual Report" [1]. This means that the average US worker has to pay \$8,000 a year in tax to maintain only the old-age welfare program. In the future, there is a dark prospect for the workforce to pay taxes on Medical and social security to support one elderly person. Therefore, old-age persons such as the US Social Security System and Medicare and the elderly health program are in need of reform.

In the case of China, China plans to launch a million jobs in Medicare, extend its life expectancy by one year, and reduce child mortality by 88% in the "Genetic Engineering & Biotechnology News" [2]. With specific goals, he announced plans to invest \$308.5 billion in biotechnology over the next 5 years.

Voucher service is one of the way of social services. Voucher service is the most fundamental limited support system for a particular product or service. However, if you give cash only, it is called 'subside', but

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voucher is a support method such as ‘spot money’ or ‘gift certificate that can only be exchanged at a specific spot’. In the 1950s, the educational voucher system was first proposed by Milton Friedman of the United States. In Korea, Law No.15187, “Act on the Use of Social Services and Management of Use Rights (Dec. 12, 2017) prescribes the right to use social services. Domestic voucher schemes include maternity neonatal care service, geriatric care services, and assisted living services for the disable.

### 1.1 Purpose of this study

I propose to introduce the education and dissemination business of moxa to government voucher service. I also propose to establish a new job, ‘moxa instructor’.

### 1.2 Necessity of this study

Moxa causes burns and scars, so people do not like it. The use of moxa aids that do not cause burns and scars promotes the use of moxa. The cost of moxa is about 1~ 2 won, which is surprisingly, chip. Moxa education voucher service enables human being to live to the end by the doctor who oneself manages the sickness by oneself. Final goal of Moxa education is self-care.

## 2. Significance of moxa and moxa education

### 2.1 Prevention and Regeneration Medicine

Because of preventable health problems, we are seeing tremendous losses not only in medical cost but also in lost productivity. The potential amount saved by preventive medicine is indeed significant. In the “2009 Chronic Diseases Yearbook” published by Miken Institute, an independent economic think tank in the the United States, seven thing (cancer, heart disease, diabetes, diabetes mellitus, lung disease, mental disorders, hypertension stroke). According to these studies, a company’s annual lost is only \$1 trillion terms of the diseases mentioned here.

The way to solve the cost problem is to find the answer in preventive medicine. It is also a way to find the answer in Oriental medicine. Oriental medicine is also called “1acupuncture(鍼) 2 moxa(灸) 3 medicine(藥)”. Moxa is caused by burning 1 to 2 degree of intentional burning of dried mugwort as a material, causing HSP (heat shock protein) to be produced in the cell. Moxa is an Oriental medicine that uses HSP to control the function of the body, and to prevent diseases. Moxa has been clinically confirmed for thousands of years.

### 2.2 Clinical data of moxa

Moxa is one of the oldest treatment methods in Northeast Asia. In the “Introduction to medicine(醫學入門)”, “if the medicine is not heard and the acupuncture not significant, it must be moxa(若藥之不及, 鍼之不到, 必修灸之). Through the thousands of years of clinical experiences, moxa heals all sickness. In 1979, acupuncture and moxa therapy was officially recognized by WHO (World Health Organization) [3]. In January of 1998, WHO announced that acupuncture and moxa could treat 300 kinds of diseases.

### 2.3 A moxa aid to prevent marks made by moxa

Three countries of Korea, China, and Japan prescribe moxa to all incurable diseases including cancer until the 20<sup>th</sup> century. However, with the introduction of Western medicine, elimination surgery, radiation therapy, and chemotherapy injection have been the mainstream in the prescription of cancers.

Let’s look at why moxa, which had been in the cancer treatment for the thousands of years, has disappeared. In the view of Western medicine. Moxa was judged to be non-scientific and primitive to burn and burn skin with fire. In addition, moxa remains a trail even after the injury caused by skin burns, which is why moxa is avoided.

Moxa aids that prevent moxa injury have developed now. Moxa education and moxa publicity are needed to apply moxa to all incurable diseases including Alzheimer’s dementia and cancer. Fig.1 is a moxa aids [4].



Figure 1. Moxa aids

## 2.4 Moxa is the only preventive medicine for Alzheimer's dementia and cancers

### 2.4.1 Prevention and treatment of Alzheimer's dementia

According to the "Dementia Customized Service" data of Korea Veterans Welfare Medical Corporation (2018.7.05), one of the 10 elderly people is suffering from dementia as of 2018, and there are 256 centers of Alzheimer's disease all over the country.

It is a reality that there is no cure for Alzheimer's dementia and prevention. The number of patients with dementia in Korea is expected to more than quadruple from 700,000 in 2017 to 3.03 million in 2050. The proportion of dementia patients in the entire elderly population is expected to rise from 9.9% to 16.8%. In 2050, one in six elderly people will become dementia.

In Oriental medicine, the moxa points in the head, GV20 (the 20<sup>th</sup> point of Governor Vessel, 百會) and 4 points around (四神聰)[5], are widely used in clinics, especially for the prevention and treatment of headache and dementia. Figure 2 shows moxa treatment of GV20 for Alzheimer's dementia.

Kobayashi [6] identified that moxa activates the dopamine system as a neurotransmitter in the neuronal nucleus of the rabbit and the serotonin system in the blood of mammals. HSP70 is also used to predict the pathology of Alzheimer's dementia by covalently binding to a denatured protein that has reached its end of life and serving as an index of degradation by the protease proteasome.



Figure 2. Moxa treatment of GV20 for Alzheimer's dementia

### 2.4.2 Prevention and treatment of cancers

HSP is a protein whose synthesis is included by heat shock, and is common to all organisms. Thermal shock proteins have a chaperone function that binds to other protein to regulate their activity and stability. In other words, chaperone function helps immature cells to form a higher order structure, to carry out intracellular transport, and it is an essential function for cell survival such as participating in membrane permeation process of mitochondria. These chaperone functions are used to treat chronic disease such as cancer. Figure 3 shows an example of lung cancer moxa treatment [7].

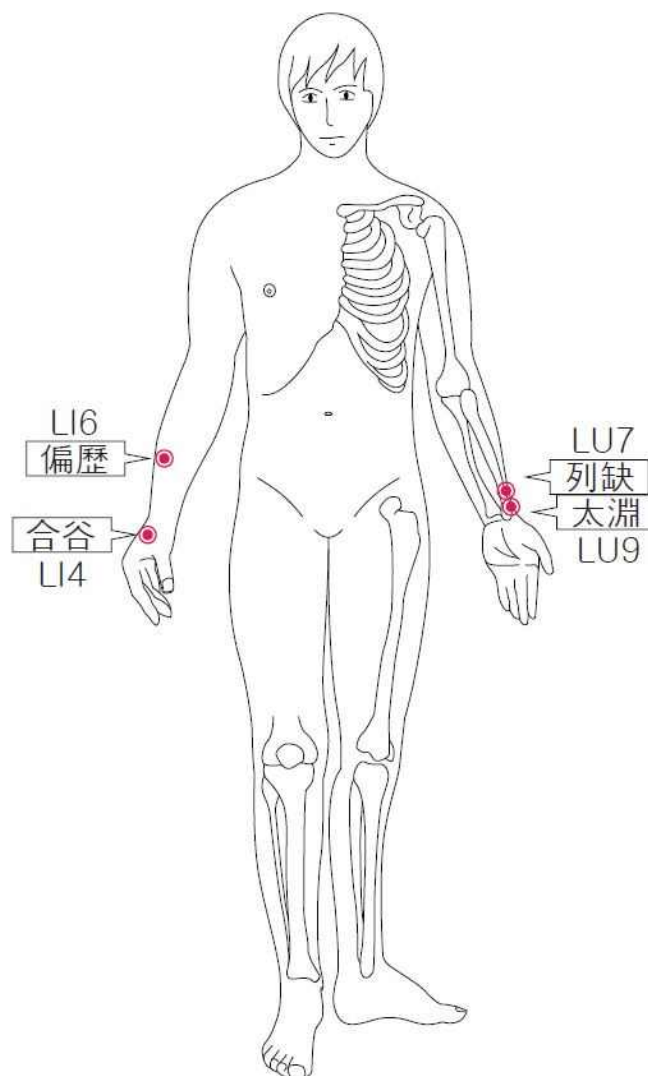


Figure 3. Moxa treatment of lung cancer

## 3. Methodology of moxa education voucher service

### 3.1 The government establishes a voucher service for moxa

Moxa is the official treatment of Oriental medicine. According to the current law of Korea, only an Oriental medicine can be practiced, and it is allowed for the individual to moxa up himself/ herself only for health and treatment. It is strictly forbidden by law to moxa by others without a Oriental medicine licensee. Therefore, it is important that moxa can be prevented and treated by himself/ herself only through moxa education. Moxa

is a good effect on the healthy aging people and quality of life. Therefore it is a priority for the government to introduce the veterinary education service for elderly people and vulnerable groups with increasing medical expenses to the voucher service.

### **3.2 Activation of visiting service**

The followings are the data of visit medical treatment based on “2017 Home Health Report” of Ministry of Health, Labor and Welfare of Japan. In Japan in 2015, the proportion of 75-year olds is 13% of the total population, reaching 16 million. Of these, 350,000 patients who are uncomfortable to move are requested to visit the clinic twice a month and 700,000 monthly. The number of visiting Japanese medical practitioners is about 20,000, or 22.4% of the total. The average medical expenses for hospitalization for 30 days of hospital is 4.87 million won, while the monthly medical expenses for home medical care is 1.66 million won. As a result, the national medical expenditure reduction effect at home medical care reached 6 trillion won a year.

In Korea, voucher service is a kind of home care services and there are 2 or 3 elderly care services. I propose a method to add the moxa education voucher service in the future by segmenting the elderly care service.

### **3.3 Establish a moxa instructor responsible for moxa education**

A key point to moxa education voucher service is the training of moxa instructor who is in charge of moxa education. This will be part of creating a new job.

In Japan, the home health care system consists of 20,000 visiting clinics, 9,000 visiting nursing team, and senior care service.

The government and municipalities are striving to activate voucher services in response to the needs of various people. Because moxa education voucher service is sensitive to the Oriental Medicine Association, medical activities that stimulate the Oriental Medicine Association should be strictly prohibited. Since the person in charge of moxa education is not a Oriental medicine doctor, it is a violation of the current law to give free treatment to others. Therefore the supervisor of moxa education should observe educational matters in order to ensure that the students themselves can moxa.

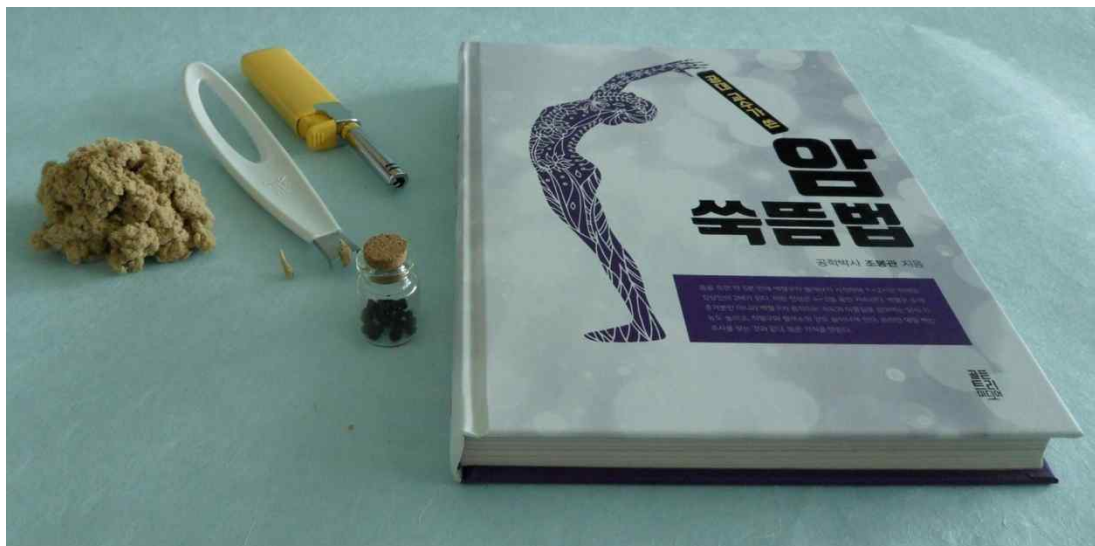
### **3.4 Unconventional therapy for cancers**

In a report entitled “Unconventional Therapy for Cancer” issued September 1990 by the Office of Technology Assessment in the United States Congress (OTA). The report pointed out that Western medical treatment of cancer has wasted its budget for decades, because it has not had a clear effect. In addition, the US Congress has an obligation to investigate this fact in detail and to inform the public of unconventional therapy. Unconventional therapy for cancer refers to alternative medicine such as acupuncture, moxa, yoga, acupressure and herbal therapy [8].

### **3.5 Business model for moxa education voucher service**

#### **3.5.1 The costs incurred in training of moxa education are supported by the government**

Materials for moxa education are moxa, a moxa aid, a lighter for ignition, a moxa textbook, and a bag. The training is held 4 times (once a week for 90 minutes). The registration fee is 10,000 won to prevent false registration of the applicant. The municipalities support 60,000 won per person. The number of students per class is 10. Moxa education voucher provider should be able to take charge of moxa education. At the point where the actual receipts are guaranteed to be 3 million won per month, the operator shall be able to console an employment contract with the training person. I think that the business of a single business operator can exceed the break-even point if there are about 50 students. Figure 4 shows materials for moxa education.



**Figure 4. Materials for moxa education**

### 3.5.2 Residents receive a voucher if they complete moxa education

Total of 4 sessions of moxa education are complete, and more than 75% of attendees are provided with voucher. Moxa is a self-cure medicine that helps the healthy life of the residents and eventually reduces Alzheimer's dementia and cancer with minimal cost.

### 3.5.3 Preparing for moxa education mandatory

Cancer patients, whether cured or not cured, cost a lot of treatment. Cancer patients have difficulties in economical ability, and the rest of the life span faces economic difficulties. As the life span increases, the incidence of cancer is increasing.

The incidence of Alzheimer's dementia also increases, and the government defines the treatment of dementia as a national responsibility in 2018. It is necessary to reform massive medical financing for chronic diseases such as senile dementia whose prevention and treatment are unclear.

Everyone acknowledges that reforming medical finances is in preventive medicine. However, not everyone knows the fact that preventive medicine for dementia and cancer is nothing but moxa. Therefore it is necessary to build up big data about preventive medicine of dementia and cancer by trial operation of moxa education voucher service. Through this process, the government needs to prepare for mandatory education of moxa.

## 4. Review

In the '2017 Population and Housing Census' released by the National Statistical Office, Korea has entered an aged society with an elderly population ratio exceeding 14 since 2017. Especially in China, the aging rate accelerating due to the restriction of birth control. These aging trends are due to a decrease in the production age population as the life span increases and the fertility rate falls. Medical reform to reduce medical expenses is urgently required.

Based on the 'Cancer Statistics, 2010', 40 years after the US National Cancer Act passed, there was no clear result. Progress has been made in early diagnosis, but only a few types of cancer are completely treatable. Even with billions of dollars invested in research, the number of annual cancer outbreaks per 100,000 in the United States has increased from 400 to 468 per year between 1975 and 2009. Judging from at least figures, the treatment of cancer has failed. The responsibility for failure lies with NIH (the US National Institutes of Health).

Today, the application of alternative medicine to cancer is increasing explosively [9]. According to the study of 2011, the treatment is being performed in the order of acupuncture, qigong(氣功), and Chinese medicine in the United States [10]. It is noticeable for moxa to be not ranked in the United States. In Japan, around 2013, about 80% of physicians use Oriental medicine in clinical practice. In Japan, 16 Cancer Centers, 40 treatment centers, 25.5% benign tumor patients and 44.6% cancer patients are receiving Oriental medicine treatment [11], herbal medicine, qigong(氣功), moxa, and acupuncture are ranked in Japan [12]. In the domestic study in 2012, 31.0% of cancer patients received Oriental medicine treatment, and the treatment was performed in the order of herbal medicine, acupuncture, moxa, and immobilization [13].

## 5. Conclusion

Moxa is a preventive medicine that can be cured before illness can be spread. Moxa has a role to improve the quality of public health and stabilize the medical finances by alleviating the medical expenses of the elderly. It is necessary to recall that moxa education voucher service requires tens of thousands of moxa instructor in Korea. In other words, moxa education voucher service is new business that is able to create new jobs, it can be said that moxa education voucher service is in conformity with government policies.

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## References

- [1] A. Zhavoronkov, *The Ageless Generation*, Palgrave Macmillan, pp.17-19, 2013.
- [2] D. Jiang, “Myths about Doing Business in China: This large and Growing Country Provides Many Opportunities for Companies in the Know,” *Genetic Engineering & Biotechnology News*, Vol. 32, No. 5, pp.21-22, 2012
- [3] Traditional medicine health topic, [http://www.who.int/topics/traditional\\_medicine/en/](http://www.who.int/topics/traditional_medicine/en/)
- [4] B. Jo, J. Kim, “The Development of Supporting Device for Direct Moxibustion,” *The Journal of the Korean Medicine*, Vol. 38, No. 1, pp. 1-7, March 2017.
- [5] B. Jo, “The Development of Acupuncture- Moxibustion Device for 4 points around GV20(Baihui),” *The Journal of the Society of Korean Medicine Diagnosis*, Vol. 19, No. 2, pp. 101-108, August 2015.
- [6] K. Kobayashi, “Induction of Heat Shock Protein by Moxibustion,” *The American Journal of Chinese Medicine*, Vol. 23, No. 3, pp. 327-330, 1995.
- [7] B. Jo, *Cancer Moxa Treatment*, Golden Tree Media, pp. 209, 2018.
- [8] W. Choi, *There is no East- West in Life*, Jay Pro Co., pp. 67-69, 1999.
- [9] H. Yoon, Y. Kang, J. Kim, J. Jung, C. Son, “Current State of Research on the Treatment and Mechanism of Moxa Methods on Cancer Patients,” *The Journal of the Korean Medicine*, Vol. 36, No. 2, pp. 361- 379, 2015.
- [10] B. Carmady, C.A. Smith, “Use of Chinese medicine by cancer patients: A reviews of surveys,” *Chinese Medicine*, Vol. 6, No. 22, pp.1-8, 2011.
- [11] U. Payyappallimana, M. Sebulea, “Integration of traditional medicine in the health system of Japan-policy lessons and challenges,” *European Journal of Integrative Medicine*, Vol. 6, No. 5, pp.399-409, 2013.
- [12] I. Hyodo, N. Amano, K. Eguchi, M. Narabayashi, J. Imanishi, M. Hirai, “Nationwide Survey on Complementary and Alternative Medicine in Cancer Patients in Japan,” *Chinese Journal of Oncology*, Vol. 23, No. 12, pp.2646-2654, 2005.
- [13] J. Lee, S. Cho, “Utilization of Oriental Medicine in Cancer Patients,” *Journal of Korean Oriental Medicine*, Vol. 33, No. 3, pp. 46-54, 2012.