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## An Analysis of and Recommendation for the Japanese KARATE's Process of Flowing into KOREA

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### Abstract

*As a traditional Japanese martial art and a self defense technique, Karate is one that which does not use a weapon but systematically trains hands and feet to run, kick, lunge, block and avoid, among other techniques while promptly identifying moving targets and submitting the counterparts with a legal strike. As this Karate was introduced to Korea, it has formed a new martial arts culture in combination with traditional Korean martial arts. It is very rare that a nation or a culture has a unique culture of its own and instead has flourished and grown by interacting with and under the influence of other nations and cultures. Karate was also developed as a result of a combination of "te", indigenous to Okinawa, and the martial art of the fist of southern China, and it was spread throughout Japan decisively by Funakoshi Gichin in October 1908, when it was adopted as a formal subject along with Judo and Kendo for Teachers School in Okinawa and Jeongrip Jeil Middle School. Thereafter in 1936, a meeting was held in Naha, the capital of Okinawa, to unify the official name of Karate into Karatem(空手). And in May 1956, the Okinawa Karate Federation was formed, and in 1960, the first official grading and dan review was held, and in February 1967, it turned into the All Okinawa Karate Federation.*

*Ever since, Karate has globalized through the magnificent works of Oyama Masters(Choi Young-eui) and was adopted as a formal event for the Tokyo Summer Olympic Games in 2020.*

*During the 36-year Japanese colonial period, Koreans naturally came to learn about the Japanese culture, and Korean students who learned Karate during their study in Japan returned and taught Karate they learned before and after liberation, which gave rises to the inflow of Japanese Karate into Korea.*

*Among the representative figures was Lee Won-guk, who founded the 'Cheongdokwan' and went to Japan's Waseda Middle and High School to studied Karate from Funakoshi Gichin by entering 'Shotokan', the root of Karate while he attended faculty of law at Chou University. And while studying in Japan, Roh Byeong-jik who founded 'Songmukwan' also learned Karate at 'Shotokan' of Funakoshi Gichin, the founder of the modern Karate, and Jeon Sang-seob also learned Karate during his study in Japan, founded 'Chosun Yeonmukwan' and taught Karate.*

*Yoon Byeong-in, who taught Karate at the YMCA Fungfu Department located in Jongno, Seoul, also learned Karate during his study in Japan and was promoted to the 5th dan.*

*The Japanese Karate, which was introduced into Korea, formed Karate with five major factions including Moodeokkwan, and taught Karate. However, in September 1954, the title of Taekwondo was conceived by Choi Hong-hee, and in 1965, Choi Hong-hee became the chairman of the Korean Taesoodo Association and renamed it to the Korean Taekwondo Association and used 'Taekwondo' as its official name.*

*In November 1972, the central studio 'Kukkiwon' launched and integrated.*

*Given this background, this study will help to understand the historical flow of the culture of Korean and Japanese martial arts and also help understand the foundation for the formation of martial arts through the analysis of Japanese Karate's flow into Korea.*

**[Keywords]** Martial Arts, Karate, History, Taekwondo, Kukkiwon

## 1. Introduction

It is very rare that a nation or a culture has a unique culture of its own and instead has flourished and grown by interacting with and under the influence of other nations and cultures[1]. As a traditional Japanese martial art and a self defense technique, Karate is one that which does not use a weapon but systematically trains hands and feet to run, kick, lunge, block and avoid, among other techniques while promptly identifying moving targets and submitting the counterparts with a legal strike. The training and teaching of martial arts such as Karate are undertaken under a strong teacher student relationship, and the characteristics of the east Asian martial arts in which those with such identities are handed down as a single faction can be identifiable[2]. Such phenomena are one of the reasons for the lack of literature and materials to study martial arts. Karate is also a martial art that has been trained by the common people in the background of the period that carries the joys and sorrows of people, and accordingly, Karate research has been limited. As this Karate has flowed into Korea, it has formed a new culture of martial arts in combination with traditional Korean martial arts[3].

Therefore, this study intends to explore what changes the Japanese Karate underwent for development, and among numerous Japanese cultures that took their roots during the 36 year long colonial period, how Karate representative of the Japanese martial arts flowed into Korea, and ultimately, how it has been influential on the culture of Korean martial arts.

## 2. Change of Japanese Karate

The Japanese Karate is a martial art originated from Okinawa, and as agriculture settled during the 8th century, it grew into a castle town nation from the 11th century, after which Ryukyu Kingdom formed during the 15th century and flourished by pursuing tributary trade with China and Japan, then came under invasion of Satsuma, a feudal lord in the 17th century, and became a colony, then

was integrated into the Japanese territory during the Meiji era in 1879.

However, Okinawa was prohibited from carrying weapons because of the restrictive weapons policy expressed as Katanagari.

The Okinawans had a bare-handed martial art of resistance without use of weapons, and the Ryukyu people tried to train their bare hands in secrets and try to weaponize them as a form of martial art, which is now called Karate.

Karate is written as Dangsū Karate in Chinese characters, and read 'Karate' in Japanese. In Okinawa, it has been called 'Te', 'Karate' or Okinawa "Te" from the past[4].

This Karate was developed through the combination of "Te", which was indigenous to Okinawa, and the martial art of the fist of southern China, and it was spread throughout Japan decisively by Funakoshi Gichin in October 1908, when it was adopted as a formal subject along with Judo and Kendo for Teachers School in Okinawa and Jeongrip Jeil Middle School. Funakoshi Gichin organized a demonstration team and gave a demonstration of Karate in mainland Japan for the first time at Mudeokjeon of Kyoto in 1917, and in 1922, participated in the Komudo exhibitions sponsored by the Ministry of Education, formed Dangsū Department at Keio University for the first time in 1924 then expanded to another at Waseda University, Keio's rival[5]. In 1934, he founded Shotokan following his name, and Shotokan Karate grew into a the most influential group on the Japanese mainland and completely settles on the mainland. In 1936, a meeting was held in Naha, the capital of Okinawa, to unify the official name of Karate into Karate(空手). Thereafter, in May 1956, the Okinawa Karate Federation was organized, and in 1960, the first official grading and dan review was held, and in February 1967, it grew into the All Okinawa Karate Federation[6].

However, the Karate faction in Japan contributed to the spread of Karate with the characteristics of each faction, but it was not enough to become globalized. Among the Karate factions, the most magnificent Karate known to the world through the activities of

Oyama Masters(Choi Young-eui) was Keukjin Karate, and Karate was selected as an official event for the 2020 Summer Olympic Games in Tokyo.

### 3. Process of Karate Flowing into Korea

The forced dismissal of King Kojong in 1907 and the dismantling of the military, followed by Japan's land survey project starting in 1910, gave rises to the 36 year period of colonization by Japan. As a result, Koreans came to naturally learn about the Japanese culture, and Koreans went to study in Japan. Some of these Korean students learned the Japanese Karate while studying in Japan.

The people who spread Karate in Korea were not the Japanese but mostly Korean students who studied in Japan and returned to teach the Karate they learned before and after the liberation of Korea[7].

The first person to teach Karate in Korea was Lee Won-guk, the founder of 'Cheongdokwan', who was born into a wealthy family in Youngdong, Chungbuk. In 1926, at the age of 19, he went to study in Japan, and after attending Waseda Middle and High School, entered 'Shotokan' the roots of Karate while studying at Chuo University, and learned Karate from Funakoshi Gichin and was promoted to 4th dan. Thereafter, he passed the Japanese high civil service exam and worked as a civil servant in the Tokyo Metropolitan Government, and in 1944, while working as a legal department officer for the Justice Department of the Chosun Governor General's Office, he spread the Karate he practiced. In August 1944, he launched 'Cheongdokwan' at the Youngshin School Auditorium for the first time in Okcheon-dong, Seodaemun-gu, Seoul, and for the second time after a year, in August 1945, he relocated it to 'Hwagangkyowon' in Kwansu-dong, Jongro-gu, then for the third time relocated to special annex of Taegosa Temple in the city, then for the fourth time, relocated it to 'Shicheonkyodang' in Kyeongjiodong, Jongro-gu to spread Karate.

Cheongdowan faction was consisted of 'Kukmukwan' located in Incheon, 'Jeongdokwan' in Seodaemun-gu, Seoul, and

'Cheongryongkwan' in Gwangju, and 'Ohdokwan' centered around soldiers[8].

In addition, originally from Kaeseong of Hwanghae-do Province, Roh Byeong-jik who founded 'Karate Songmukwan' returned to Korea after studying Karate at Shotokan of Funakoshi Gichin, the founder of the modern Karate during his study in Japan, and in March 1944, launched a studio in Gwandeokjeong in Janam-dong of Kaeseong and began teaching his students[9].

From 1966, he served as the chairman of the 4th Korea Taekwondo Association(KTA) for a year. During his incumbency, KTA created the 'President's Cup Team Competition', which boasts the most history and tradition, and directly led the first launch of the tournament, through which Taekwondo gained popularity and attracted attention[10].

Jeon Sang-seob also learned Karate during his study in Japan, and after returning to Korea in 1943, taught Karate in Sogong-dong, and in March 1946, he officially founded the 'Chosun Yeonmukwan' and taught Karate. Thereafter, he renamed it to 'Jidokwan' and developed around Jeonju of Jeonbuk.

Yoon Byeong-in, who taught Karate at the YMCA Martial Art of the Fist Department in Jongro, Seoul, also learned Karate during his study in Japan and was promoted to the 5th dan. The YMCA Martial Art of the Fist Department has continued via Changmukwan and Kangdeokwon[11].

As said in the above, the Japanese Karate, which was introduced into Korea, formed 5 major factions including Mudeokkwan, all of which taught Karate. However, in September 1954, the name of Taekwondo was conceived by Choi Hong-hee, and was called Taesoodo from 1961 to 1965, then Choi Hong-hee served as the chairman of the Korean Taesoodo Association in 1965, then renamed it to the Korean Taekwondo Association and used the official name of 'Taekwondo'.

In November 1972, the central studio 'Kukkiwon' launched and integrated[12].

### 4. Conclusion

Reviewing the flow of the culture, most of the Korean and Japanese cultures flowed into the Japanese archipelago through the Korean peninsula originated from the Yellow River Civilization. However, the Japanese Karate flowed into Korea from Japan.

This study intends to analyze the process of the Japanese Karate entering into Korea, understand the culture of the Japanese martial arts and also understand the background of how Karate was able to enter into Korea away from the general flow of east Asian culture at the time Karate was not propagated overseas, further to what influence it has had on the culture of Korean martial arts.

1) Karate, representing the martial arts culture among the Japanese culture, was introduced to Korea not by the Japanese, but by the Korean students who studied in Japan.

2) Korean students brought Karate into Korea because during the 36 year long Japanese colonial rule, Koreans naturally interacted with the Japanese culture and Koreans studied in Japan. Some of these Korean students learned Karate in Japan during their study and returned to teach Karate in Korea.

3) Karate, entering into Korea, formed five major factions, all of which taught Japanese Karate. However, in 1954, Choi Hong-hee conceived the title of Taekwondo, but from 1961 to 1965, it was called Taesoodo, and as Choi Hong-hee served as the chairman of the Korean Taesoodo Association, he renamed it to the Korean Taekwondo Association and officially used the title of 'Taekwondo'.

4) In November 1972, the central studio of 'Kukkiwon' launched and integrated to give influence to building the foundation of the Korean martial arts and sports.

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## Study on the Utility of KOREAN HAPKIDO as a Modern Physical and Spiritual Training

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### Abstract

*This study investigated as to whether Korean people living in modern society are effective in playing a role of bringing the healing of mind and body through Hapkido training which is one of the martial arts that started on the basis of oriental thought while living with social problems.*

*Oriental thought is able to remind Koreans, who are suffering from social problems like modern times, that human beings are no longer separated from the world, are not helpless and worthless, but that they are universal beings possessing eternal time and infinite space within themselves. If we accept a new human perspective through Hapkido training, we will realize that our existence's value is quite meaningful and would be able to pursue true peace and happiness.*

*It emphasizes the fact that the relationship between body and mind is not dichotomous but rather closely related to each other in order to be fully human in oriental thought, so that the mind and body must be performed at the same time. It is ki that mediates the relationship between mind and body, that is, the body and mind are connected to each other through the medium of ki.*

*Hapkido has a spirit of martial art that seeks to unite humanity and the universe by recognizing the change of the universe as the flow of ki and realizing its principle. Therefore, Korean Hapkido, which sees the flow of ki as the basis of performance, is a martial art based on the fundamental spirit of oriental martial arts. Thus, ki in Korean Hapkido is based on the inner strength of the human being and strengthens through breathing training and thus coincides with the movement. It is not only the basic maintenance tool of life but also the main spirit and sustaining source of Hapkido in order to reinforce the internal strength of the human mind through breathing training and to harmonize the movement of the body.*

*Pursuing in Hapkido is to have spirit and body gain enlightenment through ki. Thus, the training principle and technical system of Hapkido is to realize the body by sustaining ki.*

*Therefore, naturalness is greatly emphasized when one practices Hapkido techniques, and it is a process of naturally communicating the technique and learning the importance of human being without competing with each other and instead, exchange techniques with each other. Accordingly, when practicing Hapkido as a physical and spiritual training, it can be said that the utility is great as a physical and spiritual training method if the technique is focused on ki central to the breathing technique, and if the technique is performed naturally while harmonizing with the opponent.*

**[Keywords]** Martial Arts, Hapkido, Utility, Ki(氣), Techniques

### 1. Introduction

Today, Korea is the only country that has achieved industrialization and democratization in such a short length of time relative to other

countries. Economic growth and democratization may be said to be the symbols of modernization, and the pursuit of happiness for the people would likely be the ultimate goal of modernization. However, can the people living in Korean

society be truly happy? The suicide rate of Koreans is the highest among the OECD countries. What is the reason as to why Koreans who have achieved economic growth and democratization in a short length of time live unhappily? In addition, Korean problems such as the craze for overseas study, abuse of foreign workers, discrimination against racially mixed children, enthusiasm for luxury goods, and the expansion of looks-are-the-bestism are manifesting in such a variety of forms. These socio-psychological problems have been reported to be a part of people's efforts to resolve the sense of helplessness and inferiority within the minds of the Korean people[1].

The phenomenon caused by the sense of helplessness and inferiority causes pain and misery to the members of society and further deepens human alienation. The reason for such helplessness and inferiority is that the self-consciousness of the Korean people has not been created in the course of 36 years of Japanese colonial rule and the influx of western culture since the liberation entered people's lives without filtration. The reason for paying attention to oriental thought is that human perspective is rich in the oriental thought as a universal being that meets these demands of the times[2].

The traditional oriental thought has a basic perspective for harmonizing the heaven, human, nature and human life, and there is also the ideology of the unity of god and man(天人合一)in Confucianism as well as Daoism which held a deep interest in the organic life of man and nature. Then, in the oriental traditional cradle thought based on this ideological basis, there was an attempt intrinsic to planning harmonious development of body and mind through the physical and spiritual training[3].

The human body and mind function closely interact and adapt to the environment in which they live. Thus, health depends on how you adapt to your environment. To prevent and heal unhappiness, people make efforts to improve their health and quality of life physically and mentally in various ways. Particularly, there is an increasing interest in the physical and spiritual training method among the ways of pursuing quality of life. The physical and spiritual training

method is linked to the improvement of the eating habits, and it is not only improving the healthy constitution but also strengthening spiritually, so that it has a serious attitude to the life in the order of the universe and makes it aware of the importance of morality and ethics in the universe of the universe. It is also a way to achieve emotional stability by focusing on studying and reading with high concentration[4]. With growing interest in health, the oriental physical and spiritual training is gaining increasing popularity. The oriental physical and spiritual training method is a systematic and natural performance system that polishes the human body and mind, and is an expression of the universe's spirit that embodies the essence of nature to harmonize with anything. It is consisted of yoga, danjeon breathing, meditation, and gigong, and there is such a great variety. The physical and spiritual training method secures the flexibility of the body, smoothes out the flow of ki(氣 or energy), and restores the body functions such as the internal organs, so it can be said that it conforms to the laws of the nature. Therefore, it can be said that it is a performance system that restores and improves the health by balancing the mind and body through the physical and spiritual training[5].

One of the high values of these oriental physical and spiritual training methods is the martial arts training. The ultimate goal of the martial arts training is to remind the self through training and to control the form of real life. In fact, the martial arts training is a way of life that enables learning the norms of behavior that appear in oriental thought and leads to real life, which is practicing the principle of practice of oriental philosophy in the human behavior style. This is an important clue to solve the human problems facing mankind as an alternative to improve the spiritual life of human beings worn out by the technological civilization. Furthermore, the characteristics of oriental martial arts also developed in close relation with the way of performing Confucianism(儒), Buddhism(佛), and Taoism(道). According to the methodology, the Buddhism chose the method of meditation(坐禪), Confucianism chose upright posture(靜坐), Taoism chose Taoyin(導引). Through the selection, the Buddhism pursues human perfection, that is, liberation, and nirvana, and Confucianism grows finished character of a larger man through the

reception, whereas Daoism reaches the pinnacle of a hermit(仙人)[6].

Traditional oriental training methods such as Qigong gymnastics, taichi, and kuksundo are based on breathing exercises. Thus, danjeon breathing is the basis of martial arts practice. From this point of view, Korean Hapkido performance emphasized that "it is performed by danjeon breathing, Hapkido techniques, falling down and kicking." Danjeon breathing is an essential factor in Korean Hapkido performance. It is, of course, the basis for the practice of Korean Hapkido, which implies the integration of ki(氣), and is a source of other performance fields[7]. This is the basis of life-sustaining means, but strengthening the internal strength of the human mind through breathing and matching the movements of the body is the main spirit and practice of Hapkido.

Therefore, the purpose of this study is to examine the utility of Hapkido as a physical and spiritual training that can help resolve the sense of helplessness and inferiority of modern people living in the modern civilized science.

## 2. Physical and Spiritual Training of the Oriental

### 2.1. Danjeon breathing

Danjeon breathing, a representative practice of Taoism, is a cure breathing method in which oxygen and ki(氣) are inhaled and exhaled around danjeon. The breathing method takes different ways depending on the age and the arteries of Taoism, but the basic thing is the method of the law taeshik. Taeshik is a way of breathing like a fetus breathes in the womb as if accepting the primitive energy through the umbilical cord, not the mouth and nose.

At this time, the fetus is in the shape of a cuckold holding the thumb with four fingers, which is for the sake of suil, or protecting the day. In the concept of days, the word "one"(一) refers to the spirit or deity within the body, and it is said that it is mainly staying in three danjeon.

Sangdan(上丹) is called Yihwa(泥丸), and is located in 3 chon(寸) above the eyebrow. Chungdan(中丹) is called Kanggunggeumwol(絳

宮金闕), which is located at 2 chon(寸) 4 pun(分) underneath the belly as a danjeon(下丹). The law of suil is connected with the inner perspective law which sees the goddess in the danjeon of the inner body. This law is to unify the spirit that exists in the body and the mind in unison.

In addition, the inner perspective is performed with haengki(行氣), or the acting energy, which is to send the energy to sandanjeon. The energy coming through the respiration reaches the brain through the pipe source, from the brain back to the chest, then goes through 3 danjeon. This is called danjeon breathing, and what to be aware of when breathing is that breathing has always to be thin and long through the nose for both inhalation and exhalation.

There are junggi(靜氣) and donggi(動氣) in the haengki technique, whereas in the former, there are jungjw(正坐)a, gwejwa(跪坐), hojwa(胡坐), gijwa(奇坐), bokjwa(伏坐), hwengja(橫坐), and banwa(半臥), and in donggi, there are manbo(慢步), wanbo(緩步), sokbo(速步), kwebo(快步), and pobo(跑步), respectively.

In the case of jungki, the beginner performs jungwa(lying while facing the ceiling) or bokwa(facing the belly down on to the floor), and after breathing once, spit out after counting 80 to 100, and the mid performer can perform tonab(吐納) by counting 100 to 300, and the extreme performer does so after counting 300 to 1,200, respectively[8].

### 2.2. Qigong

Qigong(氣功) is a training method of self-esteem and physical and spiritual training, which mainly regulates posture, breathing training, mind and body relaxation, concentration and operation of the willpower, and rhythmic movement, and controls and strengthens the function of each organ or system of the body. It induces and develops the potential to prevent and cure diseases and to make them healthy and enable longevity.

Qigong claims that it contains the meaning of care within ki(氣), or energy. Traditional curing methods, such as shinseon(神仙), doin(導引), tonab(吐納) and naedan(內丹), have been passed on for thousands of years in many oriental countries including Korea. However, the term

Qigong became universally used in China in the 1950s. Qigong is a curing method that combines body movement, breathing control, and mental discipline. Specifically, it is a synthesis of whole body gymnastics(調身), breathing exercises(調息), and transcendental meditation(調心)[9].

It is said to be the three major elements of physical and mental training. In the method of physical and spiritual training, the mind is controlled, the breath is controlled, the posture is controlled to prevent diseases, with the ultimate goal being a complete unity. The beginning of the Qigong movement is to learn three methods of joshin(調身), joshik(調息) and joshim(調心). First, joshin means to control posture and to take correct posture and to perform correct operation. Second, jishik is a way to control breathing and control itself. Third, jishim is a way to concentrate the thoughts in one spot by eliminating misconceptions[10].

The purpose of practicing Qigong is to train the jinki(真氣), to train wonki(原氣), or the new original energy, and to enable good circulation through kyeongrak(經絡). If the blood circulation is not stagnant and smoothly circulated through kyeongrak, balance of um and yang(陰陽) will be maintained, the homeostasis of the body will be maintained, vitality will become strong, and morale will be maintained and health will be maintained.

### 2.3. Yoga

Yoga is of a vigorous history of physical and spiritual training that began in India, whose origins are unclear. The ultimate goal of all yogas is enlightenment and can be divided into various ways depending on what you emphasize as a way of practicing for enlightenment.

Yoga should be practiced in the right way with the right purpose. Patanjali divided the correct yoga practice into eight steps. Yama(rate of morality), Niyama(religious practice), Asana(physical adjustment), Pranayama(breathing method), Pratyahara(restraining of sensory organs), Dharana(concentration of awareness), Dhyana(meditation), and Samadhi(unity of ecstasy, subjectivity and objectivity)[11].

The traditional yoga practices, which are best known to us today, include Hatha Yoga, Raja

Yoga, Juana Yoga, Karma Yoga, Bhaki Yoga, and Mantra Yoga.

There are three methods of yoga practice such as position method, breathing, meditation. First, the position method is originally a method of sitting on yoga(asana). Second, breathing is closely related to the way the state of mind is breathing, so you can control your mind by controlling breathing. Breathing is the way to control breathing, ultimately controlling the mind, activating vitality, adjusting to the limits of human routine, and getting a state of higher energy. Third, in meditation, the Indians not only think quietly about meditation, but also have a higher level of meaning to reach the level of liberation by breaking their thoughts. Through meditation, they make the performers calm, balanced and deliberate. Yoga meditation opens up a whole new dimension of life, and as one learns how to sit at regular and precise times and places, one become more and more delighted and discovers joy in meditation[12].

### 2.4. Meditation

Meditation is "meditatio" in Latin, which is a term used to establish the inner self by naturally immersing the mind in it, or the spiritual concentration for the practice of the religion. The basis of all thought and consciousness is the tranquil inner consciousness, through which one is naturally immersed in consciousness.

Meditation is the basis of human mental life. It is the driving force of mankind, but it has been passed down to the present day as it has developed in the West, and in the East, especially in India, Since meditation is the driving force of cultural creation, it has developed along with the human history.

Meditation is a reconstruction of all oriental physical and mental training methods and wisdom into scientific, psychological, behavioral medical, and state knowledge. Many meditation methods belong to one of "focusing attention" and "visualization technique" or "creative visualization technique", or a combination of both elements. The former refers to observing changes in all body and mind through 'self-gaze' and the latter refers to vivid imaging of the ideal goal of

life in the head. The former refers to the technique of Vipassana, and the latter refers to the mind control technique[13].

When meditation is performed, organs that have been nervous in their daily lives are resting and look at their minds in a stable state. Feelings of hatred, tough feelings are refined and the mind is relaxed. The expected effects of meditation include emotional refinement, comprehension and compassion empowerment, ability to establish emotional control and autonomous emotional empowerment, relief of anxiety, improvement of concentration, concentration of anger, wisdom of life, and is expected that the effect of meditation can be used even more broadly to help solve social problems with the enhanced body and mind[4].

### 3. Korea Hapkido's Training System

The beginning of Hapkido in Korea was 1948 when Choi, Yong-Sool returned from Japan and opened the first Hapkido Dojang in Daegu, spreading the techniques and discharging many disciples. In addition to the Jujutsu taught by the master, the students of Choi, Yong-sool completed the present the Korean type of hapkido technical system by adding breathing, kicking, and weaponry(cane, fan, short bar, and tying skills)[14].

The Korean hapkido training system may be different depending on the association and school, but the most common ones are breathing, falling, kicking, and techniques.

First, the breathing method is a method of accumulating the ki(氣) using inhalation and exhalation, and the inhalation is slim and long, and exhalation is a long and heavy spit of breathing. By repeating this, the diaphragm relaxes and contracts and current is generated, which affects the cerebral cortex. Thus, it is reported that endocrine secretion, which induces a stable mood and sedation, becomes active, and it becomes possible to see a positive physiological phenomenon[7].

Secondly, falling method is a method of falling forward, falling backward, lateral falling, spinning fall, and airborne spin fallout in such a way as to protect oneself, minimize injury, and fall

when fallen by oneself or by the power of an opponent. Hapkido's fall-off is based on the principle of Circle(圓)and Harmony(和), which are the basic principles of Hapkido, to prevent injuries of the human body and to disperse the concentrated physical force of the opponent efficiently, When the force comes in, one can move in a safe direction and disperse the power of the opponent through the circular motion[15].

Third, a kicker attacks the bodily weakness, blood, etc., and uses the practical position according to the position and posture of attack. That is, a wide target is pointed with a toe, and a slender target, such as a shin bone, attacks the inside of a broad leg. The power of Hapkido is very great because it draws the power of the body, the inner strength, while kicking, just before it touches the target without touching the power. Sometimes, the power is exhausted and the kicking speed is fast, but such various kinds of kicking is performed in diverse ways at various associations and schools[16].

Fourth, the techniques is a skills that represents Hapkido which is distinguished from other martial arts. It is techniques that can safely protect and suppress the attacking opponent as well as himself. To understand Hapkido skills, one first needs to understand the conversion method. The Hapki Step(轉環法) is a special way of Hapkido to rotate in the circle to change the movement, further causing loss of the central force of the opponent to suppress the opponent or enable elimination of the opponent with the conversion alone. The Hapki Step uses a circular principle among the principles of Hapkido to move smoothly and in a balanced manner with the body standing upright[15]. Understanding this Hapki step and learning the technique will enable you to demonstrate the genuine Hapkido skills. The technique is representative of the dynamic performance of the Korean Hapkido and serves as a core to protect itself and others, as well as all techniques to suppress opponents[17]. It is divided into punching, kicking, breaking, and throwing by using or opposite using opponent's muscles, bones, ki(氣) and blood. In the technique, there is a distinction between the bare-hand technique and the weapon technique, and the bare-hand technique is wrist technique, clothing technique, punch defense(防拳術), kick defense(防足術), and arrest technique. weapon

technique includes short-stick technique, cane technique, tethering technique, and fan technique. Instead of attacking first, it is a technique to oppress opponent using opponent's power when attacking first[17]. In practicing the technique, the principle of training is firstly the principle of circle(圓), which means to round like a circle, and pursues a curving technique with linear technique. Second, the principle of water(流) means 'to be like flowing water', meaning that the power and ki flow in any direction, so it means to change the power and ki in the desired direction. Third, the principle of harmony(和) means to pull the opponent in the manner of 'cooperating with the opponent' and to push the opponent in the direction of pulling, so that no overaction will be done by using the natural law[18]. In practicing Hapkido, one has to understand these principles and feel the true taste of Hapkido.

## 4. Elements of Hapkido's Physical and Spiritual Training

### 4.1. Principles of training

The circle does not stagnate at one point but forms the root of Hapkido based on the flow of ki and body that turns freely. The Hapkido technique should be circular for both the movement of the foot, and the twist of the waist. The training of the basics should also be done to acquire the circular motion. Every movement in the universe is made up of circles. That is, the circle becomes a pole that moves the movement of the body according to the law of nature[19].

There is no constant shape in Hapkido as there is no constant shape in water. It is an exquisite Hapki to change according to others and follow the natural order of matters. The water is extremely weak but the obstacles to the front are defeated even if they are strong. Therefore, the principle of water implies the intensive suppression of the opponent's concentrated force as the flowing water, and the weak force, which is supposed to be flexible, has the intrinsic meaning that it can handle the strong force[20].

The universe has a constant circular motion with respect to a single central point, and this circular motion is the great principle of the

movement of the universe. As a microcosmic universe, humans also live in the natural flow of the circle movement. The principle of harmony is the drawing of the opponent and the different circular movements into my circle movement. That is, the principle of harmony is to understand the flow of relative motion and to make the flow of my movement equal to that of the opponent, but to put the opponent into the whirlpool in the direction I desire[21].

The basic idea of the harmony, can be found in the Lao-tzu's virtue of lack of dispute. In a fragmentary sense, it can be thought of as 'combining with the other'. But one step further offers a new enlightenment. If you attempt to get something from your opponent without giving something to him yourself, your opponent will not give it to you either. If you make your opponent harsh, your opponent will fight, become cunning, and turn away. In the martial arts, harmony is to show the opponent your weakness and allow your opponent to pursue your weakness. It is a true harmony to stand in the opponent's position, let your opponent take over your body, and direct your opponent in your intended direction[19].

Thus, Hapkido training is a mind and body that transforms the angular personality into something circular, suppresses the strong with a gentle flow, and harmonizes disagreement with one another. It has the characteristics of martial arts.

### 4.2. Danjeon breathing

When humans breathe well, our being develops the ability to preserve life for a long time, and if one governs even his mind correctly, he can heal most of the diseases of modern people. Indeed, we are exposed to a number of physiological, biochemical, and biological factors that can cause human disease, but the low incidence of disease is due to the fact that the human ki and information network are effectively responding[22].

Danjeon breathing has the inherent essence of martial arts that circulates behavior while controlling the fundamental tendency of human from within the inside. It is the joshik(調息) of danjeon breathing, the control of breathing, joshim(調心) of the control of mind, joshin(調身)

of the control of mind, unifying breathing, movement and awareness[23].

Danjeon breathing is a breathing method that takes the ki of yin-yang(陰陽) and five elements(五行) of the universe's ki as a danjeon and forms a sympathetic feeling in the nature, achieving the proper circulation of blood and ki to achieve emotional balance and stability, and is further based on making the mind and body harmonized by strengthening the mind through the adjustment. Therefore, it is aimed at the essence of physical and mental training, which is called mind and body for the direct connection with human life[24].

Danjeon breathing is a traditional oriental technique that keeps mind and body healthy. Therefore, oriental martial arts are based on breathing control, and Korean Hapkido training is also a fundamental element of performing danjeon breathing. This is because it is not only a means of maintaining life, but also strengthening the internal strength of the human mind through breathing training and harmonizing body movements as the main spirit and sustaining source of the Korean Hapkido.

#### 4.3. Hapki step

The Hapki Step(轉環法)is a method of moving a peculiar Hapkido that defines the movement of the foot for body movement. The body is pulled out of the body, the waist is raised, and the balance is moved. The conversion method is the simplest and direct representation of the principle of circle, water, and harmony[21]. It seeks a more curvilinear flow than a linear flow and must flow smoothly.

The Hapki Step is a technique to train the whole body such as muscles, bones, joints, and backs of each organ, and it facilitates the metabolism such as blood circulation and the development of each organ of the body through smooth movement to the left and right. Continuous repetition of the Hapki Step improves flexibility, muscle elasticity, balance, and development of bones and joints[15].

The Hapki Step is a technique that can be practiced without any restriction in any place, whether it is a wide space or a narrow space. It is necessary to start breathing first, the line of

vision should start to change to a light heart toward the front, and all of Hapkido technique is a training of ki for the sense of conversion and practice.

#### 4.4. Techniques

Hapkido is a martial arts that focuses on physical and spiritual training to fuse with nature and to protect people and others according to its principles. It is to strengthen the process and methods, and the nature of the force is harmony and conformity. As you can see from the training method of performing the form of repeated training that exchanges skills without fighting, that is, fighting in the attitude of love and harmony of each other, only the skilled person(attacker role) and receiving person(defender role), which may be a pure martial art form of another modern meaning unlike the sports where games are played under rules[25].

The meaning of Hapki in Hapkido can be found in the coincidence of ki of oneself and ki of heaven and earth. As for the characteristics of Hapkido, it can be said that 'Hapkido is a training exercise that repeats certain skills(form) against the skilled person(attacker role) with bare hands'[14].

The learning of the technique is not derived from the principle of oppression, but it is training the mind and body in the process of learning the technique and learns the importance of the human being without knowing it himself. In the technique of Korean Hapkido, the unity of internal and external forces coincides with the constitution of ki and mind that harmonizes with the other. That is, when the movements of the mind and the body are accurately displayed externally, it can be said that the technique has been properly learned. Techniques may be applied separately, but they may take the form of interdependent techniques. There are unique martial arts such as throwing and breaking, breaking and throwing, hitting and breaking and throwing. Also, the harmony between attacking technique and falling technique is not only a free and voluntary technique of Korean Hapkido but also an expression of stylishness and beauty. Therefore, it can be said that the technique is the essence itself of existence of Korean Hapkido, and it is the basis of existence as a different martial art. At the same time, mobilizing danjeon(丹田) to a

stable position and consider the safety of the counterpart to take over is a value that can not be overlooked in Korean Hapkido. This a spirit of respecting each other, and is the basis for pursuing human centric oriental cosmology and the idea of person of heaven and earth through the ki of heaven(天氣) and ki of earth(地氣)[24].

## 5. Conclusion

This study investigated as to whether Korean people living in modern society are effective in playing a role of bringing the healing of mind and body through Hapkido training which is one of the martial arts that started on the basis of oriental thought while living with social problems.

Oriental thought is able to remind Koreans, who are suffering from social problems like modern times, that human beings are no longer separated from the world, are not helpless and worthless, but that they are universal beings possessing eternal time and infinite space within themselves. If we accept a new human perspective through Hapkido training, we will realize that our existence's value is quite meaningful and would be able to pursue true peace and happiness.

It emphasizes the fact that the relationship between body and mind is not dichotomous but rather closely related to each other in order to be fully human in oriental thought, so that the mind and body must be performed at the same time. It is ki that mediates the relationship between mind and body, that is, the body and mind are connected to each other through the medium of ki.

Hapkido has a spirit of martial art that seeks to unite humanity and the universe by recognizing the change of the universe as the flow of ki and realizing its principle. Therefore, Korean Hapkido, which sees the flow of ki as the basis of performance, is a martial art based on the fundamental spirit of oriental martial arts. Thus, ki in Korean Hapkido is based on the inner strength of the human being and strengthens through breathing training and thus coincides with the movement. It is not only the basic maintenance tool of life but also the main spirit and sustaining

source of Hapkido in order to reinforce the internal strength of the human mind through breathing training and to harmonize the movement of the body.

Pursuing in Hapkido is to have spirit and body gain enlightenment through ki. Thus, the training principle and technical system of Hapkido is to realize the body by sustaining ki.

Therefore, naturalness is greatly emphasized when one practices Hapkido techniques, and it is a process of naturally communicating the technique and learning the importance of human being without competing with each other and instead, exchange techniques with each other. Accordingly, when practicing Hapkido as a physical and spiritual training, it can be said that the utility is great as a physical and spiritual training method if the technique is focused on ki central to the breathing technique, and if the technique is performed naturally while harmonizing with the opponent.

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## Improving First Aid Education through Analysis of First Aid by MARTIAL ART field

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### Abstract

*Martial art field is composed of trainees, training facilities, and field. In Martial art field, judgments of instructor and safety awareness have considerable amount of influence on the trainees and the players. Therefore, current research would propose a way to enhance safety awareness of the leaders, trainees, institutions and first aid education.*

*First, practical lecture has to be prior to the theory based education. Also, first aid education needs to be changed from general emergency education to education specifically for each martial arts. Moreover, mandatory certificate is required for assistant instructors. When the instructor is absent, making safety management system manual for the trainees would be essential to react the emergency situation. At the same time, ability of reacting against emergency situation and its educations are necessary along with technical instruction for normal situation.*

*Second, evaluation and education of instructors' emergency certification, overall social awareness, and change of awareness on possible danger of training are needed. In addition, professional knowledge of emergency aid is required for each instructors.*

*Third, management and supervision over safety supplies and facilities should be mandatory and regulated along with furnishing and integration of basic emergency kit.*

*Fourth, improvement on gym insurance policy is needed. Also prevention program for emergency education system and safety related program should be developed.*

**[Keywords]** *Martial Arts, First Aid, First Aid Education, Safety, Education*

## 1. Introduction

Martial art field is composed of trainees, training facilities, and field. In Martial art field, judgments and safety awareness of instructors have considerable amount of influence on the trainees and the players. In addition, martial arts players and trainees are exposed to variety of possible danger while training[1].

Intense training caused by excessive competition among trainees or other various possible dangers on the field causes considerable amounts of emergency situations[2]. Especially, popular competitive sports in modern

society such as Judo and Taekwondo cause various injuries. For example, Judo players frequently experience sport injuries such as nerve damage by shoulder dislocation[3], dislocation of distal ulnar fracture[4], full thickness of hamstring tendon[5], aneurysm and dissection of vertebral artery[6], arthritis of finger and toe[7], brain damage[8]. Additionally, Taekwondo players have traumatic brain damage along with the injuries above[9].

A case reports that 23 years old Israeli University Taekwondo player fainted during the game because of the kick by the other player during the competition. The player was taken

to a hospital, but went into a coma, not able to react to sense and movement. Cases of various injuries and traumatic injuries are examples why the emergency education and ability of the instructors to react those emergency situation are important[2].

Therefore, current research would propose an improved model to enhance safety awareness of the leaders, trainees, institutions and first aid education. Survey was used to analyze first aid knowledge and current status of first aid education of martial art specialists. (With the help of Professors, instructors, assistants from the universities which have martial art majors) Five hundred martial arts major students from universities located in Seoul, Kyunggi Province, and Chungchung Province participated for the research. Participants were major in Judo, Taekwondo and Yongmoodo, Five hundred martial art specialists were recruited for the research. Thirty eight participants who responded carelessly or partially were excluded, and 462 survey respondents were included in analysis. SPSS WIN Version 16.0 program was used for analysis.

## 2. Analysis of First Aid Education Status of Martial Art Specialists

### 2.1. Experience of first aid education and education institution.

<Table 1> show that number of professionals who have educated first aid was 226(48.9%) while 236(51.1%) was not. Majority of martial art specialists took first aid education on universities(115 respondents, 50.8%). Sixty five(28.7%) participants answered that they have got the education in pre-university institutes, 2 respondents(0.8%) at a seminar and 44 respondents(19.4%) took an education at the other institution.

**Table 1.** Experience of first aid education and education institution.

Contents	Item	N(%) (N=426)
Education experience	Yes/No	226(48.9)/236(51.1)
Education institution	Pre-university schools	65(28.7)
	University	115(50.8)
	Seminar or other institutions	2(0.8)/44(19.4)

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	University	115(50.8)
	Seminar or other institutions	2(0.8)/44(19.4)

Note: Excluded non-responses.

### 2.2. First aid instructor and period

<Table 2> show that most of the martial art specialists indicated that they were educated by their professors and instructors of the class(105 respondents, 16.4%) or physical education teachers and health education teacher(70 respondents, 30.9%) while only 10 respondents(4.4%) reported that they got it from martial art instructor and 41 respondents(18.1%) answered instructor from the other institutes.

Majority of the professionals(149 respondents, 64.9%) answered that they have educated was near than a year; near than 3 months was 53 respondents(23.4%), 6 months was 51 respondents(22.5%), near than a year was 45 respondents(19%) while 77 of them(34%) answered they have got education more than a year ago.

**Table 2.** First aid instructor and period.

Contents	Item	N(%) (N=426)
First aid education instructor	College professor or instructor	105(46.4)
	PE or health education teacher	70(30.9)
	Martial art instructor/Other instructor	10(4.4)/41(18.1)
Period of education	Within 3 months	53(23.4)
	Within 6 months	51(22.5)
	Within a year	45(19.9)
	More than a year ago	77(34.0)

Note: Excluded non-responses.

### 2.3. Contents of education and method

<Table 3> show that according to the survey with multiple responses, most of martial art specialists(87.9%) have received education on CPR(204 respondents, 56.8%) or surgical first aid(112 respondents, 31.1%). Participants also have taken internal first aid(43 respondents, 11.9%) or theoretical education(46 respondents, 20.3). Most of the respondents have received education based on theories and practical theories; theory-based(46 respondents, 20.3%), practice-based(40 respondents), theories and practice based(139 respondents, 61.5%) and the others(1 respondent, 0.4%).

**Table 3.** Contents of education and method.

Contents	Item	N(%) (N=426)
Contents of education (Multiple response)	CPR	204(56.8)
	Surgical first aid	112(31.1)
	Internal first aid	43(11.9)
Method of education	Theory-based	46(20.3)
	Practice-based	40(17.6)
	Theory and practice/others	139(61.5)/1(0.4)

Note: Excluded non-responses.

### 2.4. Number of first aid education session and problems of first aid education

<Table 4> show that one of the most important problem that the professionals who have educated pointed out was the lack of training sessions(75 respondents, 31.1%). The following others were need for professional contents(68 respondents, 30%), lack of supplement materials and equipment for practice(50 respondents, 22.1%), need for easier level of education(20 respondents, 8.8%), requiring more use of visual materials(13 respondents, 5.7%).

Most of the participants responded that number of education session is not enough. About the number and frequency of first aid

education session, 96 respondents(42.4%) responded 'It is vary not enough.', and 80 respondents(35.3%) said 'It is moderate.' 24 respondents(10.2%) said 'It is too short.' 22 respondents(10.0%) said 'It is enough.' Only 4 respondents(1.7%) said 'It is very enough.'

**Table 4.** Number of first aid education session and problems of first aid education.

Contents	Item	N(%) (N=426)
Problems	Lack of visual materials	13(5.7)
	Need for easier level of education	20(8.8)
	Need for professional education	68(30)
	Lack of Education time	75(31.1)
	Lack of education materials and equipments	50(22.1)
Education time	Vary enough	4(1.7)
	Enough	22(10.0)
	Moderate	80(35.3)
	Not enough	96(42.4)
	Vary not enough	24(10.2)

Note: Excluded non-responses.

### 2.5. Reasons of absence on the education and participation

<Table 5> show that the reasons why the martial art specialists did not or could not get the education were the followings; 'Felt the necessity of education but could not have opportunity to participate'(176 respondents, 74.5%), 'Felt the necessity of education and had opportunity to participate but could not participate because of the personal excuse'(7 respondents, 2.9%), and 'Did not feel the necessity of education and had no opportunity'(1 respondent, 0.4%). It appears that majority of respondents could not participate because of the lack of opportunity or personal excuse even though they felt the necessity of education. Also, 231 respondents(97.8%), which is majority, answered that they would participate the education if they

have another chance in the future while 5 respondents(2.1%) answered that they would not.

Overall awareness of necessity and demand of first aid education among martial art professionals were high. It reflects the circumstantial feature that martial art specialists frequently encounter the emergencies in the real field.

**Table 5.** Reasons of absence on the education and participation.

Contents	Item	N(%) (N=426)
Reasons of not taking first aid education	Lack of chance	176(74.5)
	Personal issue	53(22.4)
	Did not feel necessity	7(2.9)
	Did not feel necessity and lack of chance	1(0.4)
Opportunity of first aid education	Yes/no	231(97.8)/ 5(2.1)

Note: Excluded non-responses.

### 3. Improvement Proposal of the First Aid Education

#### 3.1. Improvement proposal of the first aid education in the field

The problem that there is no improvement on the first aid education which is a part of instructors' qualification was pointed out. Even in the past, lots of professionals felt the lack of interest which was caused by theoretical education and general first aid education which is not related to the martial art injuries and lack of practices which was caused by limited number of materials and time that trainees can actually practice. Increase the portion of practical education sessions and instructors who understand and majored in martial arts is required since the instructors encounter various emergency situation in the

actual field. Also, qualification and certification of assistants are not managed and it appears to be one of the main problem. It is possible that not qualified assistants cannot perform appropriate first aid to the young, growing teenagers in case of the emergency and finally end up with severe danger. Therefore, the mandatory certificate of assistants is necessary and when the instructor is absent, making safety management system manual for the trainees would be required to react the emergency situation. In normal situation, ability of reacting against emergency situation and its educations are necessary along with technical instruction.

#### 3.2. Improvement of awareness and license of instructors

In Korea, no domestic institute issues the instructors' certification with limited valid period. Martial art instructors are exposed high level of encountering injuries. However, martial art instructors in Korea has unlimited period so the instructors are not expected to get reeducation or reevaluation on first aid response. It certainly is a problem that the license is maintained forever without any additional qualification

In Australia, the United States of America, and the England, which are the advanced countries for sports, if the instructors want to maintain their certification to be validated and work as instructors, they have to be reeducated every year or every certain period. One of the qualifications that is mandatorily included in the curriculum is first aid. Therefore, it is suggested to change the domestic policy to be impossible to extend the certification without taking extra first aid training on every certifications. Changing awareness of instructors in the field is also important. In the current status of overall social awareness and dodging risks of martial arts, not only on the leading instructors' awareness but safety system of overall domestic society's awareness is required to be changed. Moreover, instructors are need to have professional knowledge of first aid so that they can perform appropriate first aid and look after their students' safety. Changing awareness of the

instructors' would change the level of safety and environment of the field.

### 3.3. Improvement of safety system inside of martial art education fields

Currently, each martial art training facilities has different first aid equipment and some of the facilities even do not have any equipment. Lack of managing licenses of assistant instructor is the problem of front of martial art training facilities. There are several safety and instructor regulations for training facilities, but management or supervision on those regulations are not well done. According to the training facility regulations, each facilities are required to equip first aid kits. However, the regulation is not being observed well. In addition, according to the 'Training Facility Establishing Standard', Item eight, each facilities only required to have medicines for emergency, but do not mention about details. Therefore, safety equipment and systems are needed to be mandatory for all of the facilities, and being supervised.

### 3.4. Improvement for government and association

Currently, on the laws about establishing and use of training facilities, martial art training facilities are excluded for insurances. There are sue cases about medical fees of injuries during the martial art training or competition. Mandatory insurance policy could minimize medical expense problem. At the same time, the government need to address regulations on training facilities, especially about instructors and establishing, suit for martial arts. It would enable trainee safe training environment.

## 4. Conclusion

Martial art field is composed of trainees, training facilities, and field. In Martial art field, judgments and safety awareness of instructors have considerable amount of influence on the trainees and the players. Various injuries and traumatic injuries cases during martial art training or competition emphasizes importance of first aid education and re-

action of instructors. Therefore, current research would propose several suggestions to improve awareness of safety and first aid education.

First, practical lecture has to be prior to the theory based education. Also, first aid education needs to be changed from general emergency education to education specifically for each martial arts. Moreover, mandatory certificate is required for assistant instructors. When the main instructor is absent, making and educating safety management system manual for the trainees would be essential to react the emergency.

Second, first-aid qualification or education for martial art instructors are required. Awareness on danger of martial art training and necessity of first aid or safety issues are need to be changed. At the same time, professional knowledge on first aid are required.

Third, equipping first aid kit and supervising overall safety equipment and facilities must be mandatory and regulated.

Finally, insurance policy on martial art facilities are required to be reformed. First aid education for martial art instructors and prevention programs on safety issues are need to be invented.

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## Effects of Qigong TRAINING on Body Composition, Fitness and Bone Mineral Density in the Elderly

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### Abstract

*This study investigated the effects on body composition, physical fitness, and bone mineral density (BMD) of 20 elderly women aged 60 or older residing in G city, K province who participated in the Dahn-taekwondo Qigong program for the elderly for 1 hour per day, 3 times a week for 3 months. This study examined the suitability of incorporating elderly Qigong program into the exercise prescription program for the elderly with decreased physical activity ability. The results showed that the Dahn-taekwondo Qigong program showed a significant decrease only in body fat percentage among the elderly women's body composition. For the fitness factor, all the fitness factors except cardiopulmonary endurance for the normal weight group and agility and dynamic equilibrium measures for the overweight group were significantly improved. Also, it showed a significant increase in the BMD of the normal weight group. Based on the observations mentioned above, participating in Qigong program for the elderly will be suitable as a health promotion program for the elderly by improving BMD and fitness factors even though the body composition does not change so much.*

**[Keywords]** *Body Composition, Physical Fitness, Qigong Training, Dahn-Taekwondo, Bone Mineral Density(BMD)*

### 1. Introduction

In 2000, with 7.2% elderly population whose age is 65 or older, South Korea entered the aging society. In 2018, with 14.46% of such population Korea became an aged society. Further Korea is anticipated to become a super-aged society by 2026 with 20.83% of elderly population. Colchero et al.(2016) reported that In the last two or three centuries, human life expectancy has increased by more than 40 to 50 years, Regular exercise is recommended as the most effective way to reduce the difference among delayed physiological aging, life expectancy and healthy life expectancy[1][2][3]. Physical inactivity is closely related to health risk factors[4] and health promotion of the elderly includes positive effects of reducing medical expenses[5]. Aging causes a reduction in body composition

and physical activity[6], and changes in body composition due to aging typically are decreased muscle mass and increased body fat[7][8]. Advantages of regular exercise is reported to include increased cardiopulmonary functions and muscle strengths[9][10][11][12] and decreased body fat and increased muscle mass as well as increased balance ability It has been reported that it helps to improve the balance ability with decreasing body fat and increasing muscle mass[13][14][15][16][17]. Meta-analysis related to the exercise effect of the elderly since 2011 shows the effect on the improvement of muscle strength[18][19][20] and effects on risk factors of cardiovascular disease[21] and emphasizes not only the importance of participating in exercise programs but also the necessity of tailored exercise programs.

Especially in old age, the importance of healthy body is absolute[22]. There are various exercises for improving the health of the elderly. However, among those exercises suitable for training, qigong is an exercise aiming for the improvement of general fitness of the body, maintenance of correct postures, restoration of flexibility, and strengthening abdominal and back muscles. Qigong refers to a method of training to human perfection by training and operating the qi. The basic elements of qigong are Joshin(調身: right posture and movement), Joshig(調息: right breathing) and Joshim(調心: right mind concentration) which usually are focused and used at the same time (2002). Yuasa Yasuo(1992) suggests that qigong training has the effects of analgesics, ability to kill cancer cells, and to decrease catecholamine[23]. Xing and Pi(1993) reported that qigong had psychological effects on exercise and perception and physiological functions such as heart rate, body temperature, sympathetic function and gastrointestinal function[24]. Already in China and Japan, medical practices combining traditional medicine and Western medicine are being implemented[23]. In relation to qigong, Kim Jong-hyun(2010) defines breathing as a process confirming that the breath itself is indeed the life itself as breathing continues in human body without a rest[25]. Also, Yoon Tae-gi(2012) said that through qigong the body itself can improve immune system by controlling the autonomic nervous system and prevent and heal diseases by balance and harmony[26].

The fundamental cause of the incongruity of elderly people is that the energy(氣運) of the elderly does not flow properly. A healthy state with good energy flow in body is when the head is cold and the belly is warm which is known as Rising Water and Falling Fire(水昇火降) state. Our society which has become an aging society in the 21st century, the feminization of the elderly population is intensifying 2, Health problems and old age adjustment problems unique to women and different from elderly men are approaching. The researcher of the study has developed Dahn-taekwondo 'Qigong Program For the Elderly' and applied to elderly women as a way to find the health of the elderly generations from the

standpoint of a person who is trained and teaching Taekwondo. Especially, Dahn-taekwondo 'Qigong Program for the Elderly' is a bare hand, whole body exercise using arms, legs and the whole body.

As it trains according to the flow of meridians, it not only facilitates the circulation of the blood, but also corrects the structure of the muscle skeletal system and makes the body healthier. Previous studies related to Taekwondo training so far have mainly focused on improving physical fitness and psychological stability in younger generations. Thus, this study seeks to find the effects of Dahn-taekwondo 'Qigong Program for the Elderly' which incorporates breathing and Doin exercise on body composition and BMI of elderly women.

## 2. Methods

### 2.1. Subject of study

The subject of this study is 20 elderly women aged 60 and above who live in G city in K province and were voluntarily participated in this study after sufficient information about the test purpose and details are provided to them. Their physical characteristics are as shown in <Table 1>.

**Table 1.** The physical characteristics of the subject.

Group	Age(yrs)	Height(cm)	Weight(kg)	BMI(kg/m <sup>2</sup> )	N
Normal weight	67.80±0.95	156.34±5.63	46.76±7.97	21.18±1.66	12
Over weight	69.68±0.79	155.99±6.04	61.13±10.23	25.96±2.16	8

Note: Value are mean±SD.

### 2.2. Experimental design

The subjects were trained of Dahn-taekwondo Qigong Program for the Elderly which modernized Korea Sundo for 36 times(1 hour per day, 3 times a week, 3 months per week) in Y senior citizen community center. Training details are as shown in <Table 2>. In addition, before and after the application of the program, subjects were measured for height, weight, body mass index, and bone mineral density. Also, they

went through Senior Fitness Test: SFT means standing up after sitting on a chair for 30 s, lifting a dumbbell, 2-minute step test, stretching arms and back sitting on a chair, turning arms back and let middle fingers reach each other and sitting on a chair after walking 8 feet.

**Table 2.** Dahn-taekwondo Qigong program for the elderly.

Time (min)	Description	Effect	Stage
15	Hitting danjeon, intestine exercise, hitting water wall, turning infinitely, tapping the whole body	Rising water and falling fire	Initial
30	Doin exercise such as relieving tension in the 8 joints and stretching the whole body	12meridian communication	Development
15	Wagongyundan, relaxation	Stabilization and relaxation	End

### 2.3. Processing the data

Statistical analysis was performed using the SPSS 21.0 program. The mean and standard deviation of each measurement variable were calculated. The paired t-test was used to compare the mean values of the normal weight and task groups before and after participation. Analysis of Covariate (ANCOVA) was used to compare the average value between the two groups after the study. The significance level was set at  $p < .05$ .

## 3. Results

### 3.1. Changes in body composition before and after qigong for the elderly.

Changes in body composition before and after qigong for the elderly is as shown in <Table 3>. Before and after participation in the qigong for the elderly program, the normal weight group showed between  $46.76 \pm 7.97$ (kg) to  $47.43 \pm 6.43$ (kg) and overweight group showed from  $61.13 \pm 10.23$ (kg) to  $60.68 \pm 10.42$ (kg) and no statistical significance was identified. There was statistically

significant difference between the two groups. There was statistically significant difference between the two groups before the program. There was no significant difference in the covariance analysis on the body weight between the two groups after participation in the program. Body fat percentage decreased from  $30.58 \pm 4.74$ (%) to  $29.57 \pm 3.73$ (%) in normal weight group but there was no statistically significant difference. For the overweight group it was significantly ( $p < .05$ ) reduced from  $32.31 \pm 5.26$ (%) to  $30.24 \pm 6.26$ (%). There was no significant difference in the covariance analysis on the fat body fat percent between the two groups after participation in the program. Before and after participating in the Qigong program for the elderly, The body mass index was from  $21.18 \pm 1.66$ ( $\text{kg}/\text{m}^2$ ) to  $21.43 \pm 1.60$ ( $\text{kg}/\text{m}^2$ ) for the normal weight group and  $25.78 \pm 2.06$ ( $\text{kg}/\text{m}^2$ ) to  $25.96 \pm 2.16$  for the overweight group and there was no statistically significant difference

**Table 3.** Changes in body composition before and after Qigong program for the elderly.

	Weight (kg)		Body Fat (%)		BMI ( $\text{kg}/\text{m}^2$ )	
	Pre	Post	Pre	Post	Pre	Post
Normal weight	$46.76 \pm 7.97$	$47.43 \pm 6.43$	$30.58 \pm 4.74$	$29.57 \pm 3.73$	$21.18 \pm 1.66$	$21.43 \pm 1.60$
Overweight	$61.13 \pm 10.23$	$60.68 \pm 10.42$	$32.31 \pm 5.26$	$30.24 \pm 6.26^*$	$25.96 \pm 2.16$	$25.78 \pm 2.06$

Note: Value are mean  $\pm$  SD, \*: Significantly different from pre ( $p < .05$ ).

### 3.2. Changes in physical fitness before and after qigong for the elderly

1) Changes in muscle strength and endurance and cardiopulmonary endurance before and after qigong for the elderly

**Table 4.** Changes in muscle strength and endurance and cardiopulmonary endurance before and after qigong for the elderly.

	Chair stand test		Arm curl test		2-Minute step	
	Pre	Post	Pre	Post	Pre	Post
Normal weight	$13.00 \pm 2.56$	$14.63 \pm 2.88^*$	$15.38 \pm 2.32$	$17.13 \pm 2.10^{**}$	$143.0 \pm 27.76$	$145.8 \pm 22.56$

Over weight	12.91 ±3.14	14.58 ±2.57 **	15.58 ±4.30	17.21 ±4.76 *	125.5 8±36. 27	141.9 2±31. 67**
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Note: Value are mean±SD, \*: Significantly different from pre(p<.05), \*\*: Significantly different from pre(p<.01)

Changes in muscle strength and endurance and cardiopulmonary endurance before and after qigong for the elderly are as shown in table 4. Lower leg strength and muscle endurance(Chair stand test) was 13.00±2.56(each) to 14.63±2.88(each) for the normal weight group and 12.91±3.14(each) to 14.58±2.57(each) for the overweight group. Two groups both are significantly(p<.05, p<.01) increased. There was statistically significant difference between the two groups before. There was no significant difference in the covariance analysis between the two groups after the program, having the before lower leg strength values as the covariate variable. Arm strength and muscle endurance(Arm curl test) was 15.38±2.32(each) to 17.13±2.10(each)for the normal group and 15.58±4.30(each) to 17.21±4.76(each) for the overweight group. Two groups both are significantly(p<.05, p<.01) increased. There was statistically significant difference between the two groups' arm strength and muscle endurance before. There was no significant difference in the covariance analysis between the two groups after the program, having the before program arm strength values as the covariate variable. For cardiopulmonary endurance(2-Minute step), there was a statistically significant difference between the normal weight group and the overweight group. Changes in cardiopulmonary endurance before and after participating the program was 143.00±27.76(each) for the normal group and 145.88±22.56(each) for the overweight group but there was no statistically significant difference. However, for the overweight group, there was a significant (p<.01) increase from 125.58±36.27(each) to 141.92±31.67(each). There was no significant difference in the covariance analysis between the two groups after the program, having the before average value as a covariate variable.

2)Changes in flexibility, agility and dynamic equilibrium before and after qigong for the elderly

Changes in flexibility(Chair sit-and-reach)agility and dynamic equilibrium(8-Foot up-and-go) before and after qigong for the elderly are as shown in <Table 5>.

**Table 5.** Changes in flexibility agility and dynamic equilibrium before and after qigong for the elderly.

	Chair sit-and-reach		Back stretch		8-Feet up-and-go	
	Pre	Post	Pre	Post	Pre	Post
Normal weight	-8.13 ±11.2 6	-5.56 ±10.4 2 ***	-4.61 ±6.86	-0.56 ±5.73 **	7.07 ±1.00	6.72 ±1.00 *
Over weight	3.42± 5.55	5.67± 4.89* *	-8.90 ±6.02	-5.11 ±6.61 *	7.36 ±1.13	6.95 ±.78

Note: Value are mean±SD, \*: Significantly different from pre(p<.05), \*\*: Significantly different from pre(p<.01), \*\*\*: Significantly different from pre(p<.001)

There was a statistically significant difference between the waist flexibility values of the two groups before the program. Changes in the waist flexibility was -8.13±11.26(cm) to -5.56±10.42(cm) for the normal weight group and 3.42±5.55(cm) to 5.67±4.89(cm) for the overweight group. Both groups are significantly(p<.001, p<.01) increased. There was a significant difference in the covariance analysis between the two groups' waist flexibility after the program, having the before average value as the covariate variable. Upper body flexibility was 4.61±6.86(cm) to -0.56±5.73(cm) for the normal weight group and -8.90±6.02(cm)to -5.11±6.61(cm) for the overweight group. Both groups were significantly (p<.01, p<.05)) increased. There was a statistically significant difference between the upper body flexibility values of the two groups before the program. There was no significant difference in the covariance analysis between the two groups' upper body flexibility after the program, having the before average value as the covariate variable.

Changes in agility and dynamic equilibrium(8-Foot up-and-go) were 7.07±1.00(second) to 6.72±1.00(second) for the normal weight group and reduced significantly (p<.05). However, for the overweight group it was reduced form 7.36±1.13(second) to 6.95±0.78(second) but there was no statistically significant difference.

### 3.3. Changes in BMD before and after qigong for the elderly

Changes in BMD before and after qigong for the elderly are as shown in <Table 6>. The BMD of normal weight group significantly ( $p < .05$ ) increased from  $31.29 \pm 2.87$  (g/cm<sup>2</sup>) to  $33.40 \pm 3.41$  (g/cm<sup>2</sup>) but overweight group's BMD changed from  $35.52 \pm 7.25$  (g/cm<sup>2</sup>) to  $35.57 \pm 7.17$  (g/cm<sup>2</sup>) so no statistically significant difference was observed. There also was no difference observed in the two groups's BMD from covariance analysis

**Table 6.** Changes in BMD(g/cm<sup>2</sup>).

Group	Pre	Post	t-value	p-value
Normal weight	31.29 ±2.87	33.40 ±3.41	2.67	.03*
Over weight	35.52 ±7.25	35.57 ±7.17	.37	.72

Note: Value are mean±SD, \*: Significantly different from pre( $p < .05$ ).

## 4. Discussion

For the body composition change before and after participating in Dahn-taekwondo Qigong program for the elderly for 3 months, only body fat percent reduction of the overweight group was statistically significant. Comparing the treated exercise type with various study results[26][27][28][29] on similar exercises such as Danjeon breathing, oriental and gunshin Qigong exercises, The general tendency was found to be consistent, but there was a partial difference in statistical significance. In general, regular aerobic exercise has been reported to have a positive effect on body composition. However, it seems that the effect of exercise program on body composition varies depending on the characteristics of the exercise programs, the demographic characteristics of the participants, and the individual characteristics of the participants. In this study, 20 elderly women aged 60~80 years were administered three times a week for 60 minutes of Qigong program for the elderly for three months. In the previous study, the exercise duration(9~18 weeks), frequency(2~4 times a week), type(Kukhak qigong, Dahn-taekwondo, walking etc.), and participants type(adult male,

adult female, elderly women, elderly women with high blood pressure and etc.) are so different from this Dahn-taekwondo Qigong program for the elder and cannot be used to explain the result and direct relationship). However, based on the results from this study, it can be assured that the Dahn-taekwondo Qigong program for the elderly has positive effects on elderly women's body composition. Especially, the fact that the overweight group significantly reduced body fat percent means that this exercise program is effective in controlling and preventing obesity in elderly women. Changes in physical fitness and BMD before and after participating Dahn-taekwondo Qigong program for the elderly indicated improvement in all aspects of physical fitness except the cardiopulmonary endurance for the normal weight group and agility and dynamic balance measures of overweight group. This results are consistent with previous studies[26][27][30][31][32]. Kwon Kiwook(2000) reported that all health-related fitness factors improved positively after elderly women's qigong training and Jung Yun-soo(2006) reported that muscular strength did not increase significantly, but muscle endurance, flexibility, and balance were increased[27][30]. Jun Young-sun(2004), also reported that the Taegeuk health Qigong exercise program positively affected the flexibility of the waist and arm[32]. Huh Il-woong, Kim Eun-jung, Kim Ji-sung(2008) concluded that Gunshin qigong helps the muscular strength, flexibility, muscular endurance, and equilibrium of the elderly[29]. As shown in the previous studies and the results of this study, regular exercise program is very effective for the prevention of fall, maintenance and improvement of health convenience of daily life of the elderly and means that it should be recommended to the elderly. In addition, the BMD of the normal weight group was significantly increased after the participation of the program. It is because although Qigong program for the did not result in positive change in the elderly women's body condition but it indirectly brought effects of increased muscle. It seems that hitting danjeon and intestine exercise performed during Dahn-taekwondo Qigong program for the el-

derly positively affected the body to normalize body weight and body mass index which are related to body composition, reduce body fat percentage and increase more than other aerobic exercise programs. Cold intestine can hinder Rising Water and Falling Fire effect circulating body energy. Especially hitting danjeon and intestine exercise are training methods to relax the cold and hardened intestine to make warm and comfortable intestine and for the body's harmonious blood circulation. By boosting Rising Water and Falling Fire effect, they are considered to provide various effects for the health promotion of the elderly.

## 5. Conclusion

Study investigated the effects on body composition and physical fitness(BMD) of 20 elderly women aged 60 or older residing in G city, K province who participated in the Dahn-taekwondo Qigong program for the elderly for 1 hour per day, 3 times a week for 3 months and obtained results as follow. Dahn-taekwondo Qigong program for the elderly only body fat percent reduction of the overweight group was statistically significant. Taekwondo Qigong program for the elderly indicated improvement in all aspects of physical fitness except the cardiopulmonary endurance for the normal weigh group and agility and dynamic balance measures of overweight group. Also, the BMD of the normal weight group significantly reduced. Based on the results above, it can be concluded that Dahn-taekwondo Qigong exercise is a program needs to be recommended to the elderly.

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#### Research field

- Anti-inflammatory Effect of Cynanchone a Isolated from Cynanchum Wilfordii in RAW 264.7 Macrophages, International Journal of Sports, 2(1) (2017).  
- Effects of Long-term Endurance Exercise and Salvia Miltiorrhiza Vinegar on Body Composition and Insulin Resistance in High Fat Diet-induced Obese Rats, Korean Journal Food Preserv, 24(5) (2017).

#### Major career

- 2005~2014. Gyeongju University, Professor  
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