

Thesis of Doctor Degree

**Survey Study in Awareness and Use of Chiropractic Care in
Japan**

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Abstract

The study aims to understand people's CAM and chiropractic use and awareness.

As a result, it was found that 60.9% of the surveyed participants herein had awareness on complementary and alternative medicine (CAM). They followed CAM methods such as colon therapy, chiropractic, cupping and moxa, and foot reflex zone therapy in order of frequency. Regarding their understanding of CAM use, the awareness that CAM use could maximize therapeutic effect was most well understood among them where the awareness that using CAM and hospital treatment in parallel does not cause side effect and toxic effect recorded the lowest level.

The most common chiropractic recognition path was their family members or neighbors. Among those aware of chiropractic, as high as 91.3% used it before mainly to treat low back pain and frozen shoulder. The chiropractic-experienced participants showed high satisfaction at 83.8% and only 4.9% of them were found to have experienced side effect. The participants with chiropractic experience showed higher awareness than those without in aspects that chiropractic is different therapy separated from hospital treatment ($p<0.05$); chiropractic effectiveness is based on scientific ground ($p<0.05$); and general people also use chiropractic often to improve and maintain their health ($p<0.05$).

Key Words: Complementary and Alternative Medicine, Chiropractic, Understanding, Awareness

I. Introduction

1. Research Purpose and Necessity

The health and medical sector of South Korea has changed by diverse factors such as increasing national income, rising interest in diseases and illnesses, hospitals and clinics' upsizing and specialization, etc. In addition to these, the increasing interest in complementary and alternative medicine (CAM), other than the diagnosis and treatment by hospital or clinic doctors, functions also as a change factor.

CAM bases on the belief that human beings have own natural ability to heal themselves and applies a holistic idea of health that physical, mental and social psychological health are mutually related, stressing harmonious balance accordingly (Yoo, 1980).

Along with the growing use of CAM in South Korea, many people spend more for CAM and increasing number of insurance associations and medical management organizations consider the application of insurance payment in the field of complementary and alternative medicine. The World Health Organization (WHO) investigates the CAM use status of each state, related statistical data, their policy plans and so forth to understand global trend, further widening the scope of CAM in disease treatment (Mariams et al., 2003).

Generally, CAM is known as a proactive way to contribute to chronic disease prevention and treatment through diverse methods such as dietary therapy, herb medicine, various psychosomatic medicines for stress relief, exercise therapy, energy medicine, etc. used in parallel with modern medicine treatment (Richardson, 2004). It may be said that, in the past, orthodox medicine used to give unilateral treatment to patients to meet their need. But now, as patients are recognized more as consumers,

their attitude or expectations have changed as those of consumers. Such consumer patients now require to directly consume what is necessary for their disease treatment or enhanced health status and demand such information from doctors, representing a big change.

In the US, the number of patients using CAM rose by 25% for the past 7 years from the 2003 level. Approximately 70% of the family medicine doctors were reported to use modern orthodox medicine as well as CAM together in their treatment (Lee, 2003). Fisher & Ward (1994) reported that about 20-50% of the European people had used CAM and about 95% of the German doctors had used herbal medicine or homeotherapy. Based on these reports, it can be viewed that compared to South Korea, other status have easier access to CAM.

Since the 2000s, a series of graduates schools of alternative medicine have been established along with CAM related lectures in the clinical treatment and health and medicine areas for more specialized study on complementary and alternative medicine in South Korea (Jang & Park, 2003). More hospitals use CAM in parallel. Specialized CAM centers are operated. And several medical organizations have launched homeotherapeutic clinics. Complementary and alternative medicine society establishment also garners rising interest of people in the medical sector. More medical staff is interested in CAM primarily to provide right information to guide patients in their selection of therapeutic methods and further to develop and apply CAM helpful for disease treatment (Ko & Berbrayer, 2000).

Of the CAM methods, chiropractic is well known to many Koreans and frequently utilized. In 2008, chiropractic was first tried to be incorporated into the scope of CAM but has still been under discussion so far (Korean Chiropractic Association, 2013).

Chiropractic is one of the most advanced forms of US manipulative medicine. It uses bare hands only without any injection, drug, etc. (Kim, 2003). The technique is to hold a specific part of spine or joint and apply stimulation at fast and lower amplitude

(Shekelle, 1994). Chiropractic is known to facilitate optimal painless status of motion by maintaining joint expansibility or expand the expansibility of tissues around joints, resulting in enhancing joint mobility (Mobilization, 1993).

Chiropractic treatment blocks pain signal transmission to brain to lower pain levels. It was reported that such pain reduction was because pain shock transmission is disturbed or modified in one of the three parts - distal (where nociceptors are stimulated), spine (where afferent neurogens come in to combine with the center) and the upper parts of central nerve system or upper spinal parts (Lee, 2004).

Chiropractic treatment has excellent safety, effectiveness and cost efficiency. Patients have high satisfaction with the method. And such benefits have been proven by many clinical experiments regarding back pain, neck pain, headache, etc. For these reasons, chiropractic treatment has been often utilized together with medical treatment in treating diseases (Eun, 2008).

As such, medical staff, national public and patients with diseases are reported to increase their attention to and interest in CAM. Still, the national government has not allowed CAM institutionally due to concerns and suspicious.

Many countries such as the US, Canada, Sweden, UK, France, Swiss, Australia, Hong Kong, Japan, Iran and Norway have conducted multiple verification processes for chiropractic through an institutional scheme called 'legalization of chiropractic medical license', recognizing chiropractic effectiveness and potential (Kim, 2006; Korean Chiropractic Association, 2013).

In relation to spine and neural part, especially, many studies reported that chiropractic had an effect on low back pain and joint treatment with high therapeutic satisfaction by patients. In this situation, it seems necessary to further examine chiropractic satisfaction in states allowing chiropractic institutionally.

With this understanding, the study investigated Japan's case where have already conducted multiple verification processes for legalization of chiropractic in Asia.

By doing so, the study is expected to provide a more objective and scientific material for chiropractic systemization and CAM application.

II. Theoretical Background

1. CAM Definition and Types

The WHO divides medicine into orthodox medicine, traditional medicine and complementary and alternative medicine. The orthodox medicine or allopathic medicine or standard medicine refers to the western medicine, scientific medicine or modern medicine which is to assume human body as a biological and physiological system and try to overcome physical disorders through complicated and technical methods such as medication, surgical operation, etc.

The traditional medicine is developed locally in reflection each local culture. It encompasses diverse generational medical approaches, knowledge, belief, etc. passed down orally or in writing. Traditional medicine utilizes plant or animal-based treatments, spiritual treatment, diverse techniques, exercise, etc. either solely or jointly. It is applied to disease diagnosis, treatment and prevention or sustained well-being (Jo, 2002).

CAM is defined as a medical system considerable in addition to the orthodox medicine. It refers to many other treatment measures not included in the orthodox or western medical system, which are alternative, unproven, unorthodox and secondary. In expressing such multiple therapeutic measures not included in the orthodox, standard or western medicine, European states including the UK tend to use the term complementary while the US chooses alternative. Recently the term, complementary and alternative medicine (CAM) has been generally utilized (WHO, 2001).

In South Korea, studies trying to find more scientific evidence of CAM that affects national health to a great extent have been going on in neutral and academic approaches by centering on the Korean Academy of Medical Science. In reflection of the US NCCAM's definition and the national situations, CAM, in the country, generally

refers to any kind of health and medical systems, accompanied theories or beliefs thereof and the whole set of related healing resources such as treatment behaviors, products, etc. not included in the socially-recognized orthodox medicine, mainstream medicine, standard medicine or regular medicine.

Unlike other countries, as Korean Oriental medicine belongs to the mainstream medicine, standard medicine or regular medicine, it does not fall under the CAM scope.

CAM includes borderline behaviors or products between medicine and non-medicine, which are utilized for medical purposes such as disease treatment, prevention and health improvement.

Although CAM types performed in the country have not been clearly defined, main types are bee venom therapy, psychosomatic medicine, IMS, aroma therapy, dietary therapy, natural treatment, homeopathy, chiropractic, prolotherapy and Ayurveda.

Table 1. CAMs Recognized by South Korean Medical Staff

Complementary and Alternative Medicine	Awareness (%)
IMS	44.4
Body-Mind Therapy	18.0
Aromatherapy	17.3
Nutrition Therapy	19.0
Taping	24.3
Massage	12.7
Naturopathy	13.4
Chiropractic	24.6
Prolotherapy	23.2
Homeopathy	12.0
Music Therapy	6.7
Phytotherapy	9.5
Neural Therapy	8.1
Art Therapy	2.8
Hydrotherapy	4.2
Colon Detoxification Therapy	3.9
Detoxification Therapy	2.5
Oseopathy Therapy	3.5
Magnetic Therapy	2.1
Ayurveda Therapy	1.4

Source: Kim (2005). Study on the development of an assessment model for CAM insurance coverage; Yonsei Graduate School doctorate thesis.

2. Definition of Chiropractic

Concerning the concept that subluxation - the altered position of the vertebra - presses nerve and causes nerve functional loss, chiropractic is to correct such a displaced vertebra mainly by manipulation to help natural healing potential through the nerve system function normally as much as possible.

Chiropractic combines two Greek words, chiro (by hands) and practice (to realize). It bases on the idea that human body has an ability to heal diseases for themselves but it is undermined by wrong ways of lifestyle, lack of exercise, and mental or spiritual stresses to cause spinal displacement and subsequent neural oppression or disturbance to finally harm human body.

In this sense, chiropractic is a kind of manipulation medicine developed in the modern US society, which is not to rely on any injection or drugs but to solely rely on bare hands to perform spinal correction (Kim, 2003). Modern chiropractic adds more practical description, observation and assessment of chiropractic treatment and admits that the delivery of socially-known chiropractic medical ideas are irreplaceable (Mootz, 1992).

Palmer, the founder of chiropractic, said that the then vitalism could entail various side effects due to increasing drugs and surgical operations offered by scientific and medical advancement (Lee, 1998), thus, many different alternative therapies were used to remove side effects and reduce stresses and such alternative therapies were to deal with the holistic aspects of human and not to treat a certain specific physical symptom but to promote natural healing process to prevent diseases and restore healthy physical status (Yoo, 2008).

As chiropractic has yet to be recognized as a medical treatment, chiropractic procedure providers are not regarded as medical staff in South Korea.

III. Research Method

1. Research Subjects

The study examined 900 local residents in the 42 regions of Japan from February 15 to April 15, 2014 regarding their awareness on CAM, experience of using chiropractic therapy and awareness by conduction satisfaction survey. Of the respondents aware of chiropractic, those presenting poor answers or none answers were excluded to finally investigate 578 herein.

2. Survey Composition and Investigation Method

The survey questions used in this study were written in Korean initially then translated into Japanese to survey Japanese. The questions were largely consisted of respondents' general characteristics, their awareness and understanding of CAM and awareness on CAM. For more detailed survey, those aware of chiropractic were separately selected among the respondents for further survey.

3. Statistical Analysis

For this research statistical analysis, first, frequency analysis consisted of n and % was employed to examine the general characteristics, chiropractic recognition path, and chiropractic use status. Cross analysis was conducted to look at their awareness on CAM according to their general characteristics as well as differences in their awareness on chiropractic. Multiple response analysis was employed herein for CAM recognition types, CMA experience types and related disease in CAM use. SPSS 18.0 was utilized for this research statistical process.

IV. Research Findings

1. General Characteristics

Table 2 describes the general characteristics of the research participants. Of them, 216 (37.4%) were men and 362 (62.6%) were women, showing a larger female participation. 96 (16.6%) were 30 years old or younger; 150 (26.0%), between 31 and 40; 148 (25.6%), between 41 and 50; 110 (19.0%), between 51 and 60; and 74 (12.8%), 61 or older. 220 (38.1%) were single and 358 (61.9%) were married, indicating more married participants herein. 16 (2.8%) had middle school education; 194 (33.6%), high school education; 164 (28.4%), college or 2-year university education; 168 (29.1%), university education; and 36 (6.2%), graduate college or higher. Concerning occupation, 132 (22.8%) were office workers; 118 (20.4%), housewives; 74 (12.8%), specialised workers; and 66 (11.4%) service employees in order.

Table 2. General Characteristics of Research Participants

General Characteristics		n	%
Gender	Male	216	37.4
	Female	362	62.6
Age	30 or Younger	96	16.6
	Between 31 and 40	150	26.0
	Between 41 and 50	148	25.6
	Between 51 and 60	110	19.0
	61 or Older	74	12.8
Marital Status	Unmarried	220	38.1
	Married	358	61.9
Academic Background	Middle School Graduation	16	2.8
	High School Graduation	194	33.6
	College/2-year University Graduation	164	28.4
	University Graduation or Higher	168	29.1
	Graduate School or Higher	36	6.2
Occupation	Specialized Worker	74	12.8

Teacher or Public Official	38	6.6
Technical Worker	46	8.0
Self-Employed	44	7.6
Office Worker	132	22.8
Agricultural or Fishery Worker	14	2.4
Service Employee	66	11.4
Housewife	118	20.4
Others	46	8.0
Total	578	100.0

2. CAM Awareness According to General Characteristics

Table 3 shows CAM awareness status according to the research participants' general characteristics.

Regarding gender, 140 (64.8%) men and 212 (58.6%) women were found to have awareness on CAM ($\chi^2=2.220$, $p<0.01$) with statistically significant gap.

As to age, 56 (58.3%) participants aged 30 or younger; 80 (53.3%), between 31 and 40; 100 (67.6%), between 41 and 50; 78 (70.9%), between 51 and 60; 38 (51.4%), 61 or older were found to be aware of CAM. The group aged between 51 and 60 showed the lowest awareness level whereas the group aged 61 or older presented the highest awareness, with a statistically significant gap ($\chi^2=14.097$, $p<0.01$). 138 (62.7%) single participants and 214 (59.8%) married participants were found to have awareness on CAM, indicating a slightly higher awareness level in singles ($\chi^2=0.498$). The high school graduation group had 110 (56.7%) members with CAM awareness, the lowest among all groups while the group with graduate school or higher had 30 (83.3%) members with CAM awareness, the highest, representing awareness difference ($\chi^2=9.962$, $p<0.05$). As for occupation, 54 (73.0%) specialized workers, 32 (72.7%) self-employed workers, 30 (65.2%) technical workers were found to be aware of CAM, in order, showing over 50% of all occupational groups had awareness ($\chi^2=13.976$).

Table 3. CAM Awareness According to General Characteristics

General Characteristics		CAM awareness		Total	χ^2
		Yes	No		
Gender	Male	140(64.8)	76(35.2)	216(100.0)	2.220**
	Female	212(58.6)	150(41.4)	362(100.0)	
Age	30 or Younger	56(58.3)	40(41.7)	96(100.0)	14.097**
	Between 31 and 40	80(53.3)	70(46.7)	150(100.0)	
	Between 41 and 50	100(67.6)	48(32.4)	148(100.0)	
	Between 51 and 60	78(70.9)	32(29.1)	110(100.0)	
	61 or Older	38(51.4)	36(48.6)	74(100.0)	
Marital Status	Unmarried	138(62.7)	82(37.3)	220(100.0)	0.498
	Married	214(59.8)	144(40.2)	358(100.0)	
Academic Background	Middle School Graduation	10(62.5)	6(37.5)	16(100.0)	9.962*
	High School Graduation	110(56.7)	84(43.3)	194(100.0)	
	College/2-year University Graduation	104(63.4)	60(36.6)	164(100.0)	
	University Graduation or Higher	98(58.3)	70(41.7)	168(100.0)	
	Graduate School or Higher	30(83.3)	6(16.7)	36(100.0)	
Occupation	Specialized Worker	54(73.0)	20(27.0)	74(100.0)	13.976
	Teacher or Public Official	20(52.6)	18(47.4)	38(100.0)	
	Technical Worker	30(65.2)	16(34.8)	46(100.0)	
	Self-Employed	32(72.7)	12(27.3)	44(100.0)	
	Office Worker	74(56.1)	58(43.9)	132(100.0)	
	Agricultural or Fishery Worker	8(57.1)	6(42.9)	14(100.0)	
	Service Employee	42(63.6)	24(36.4)	66(100.0)	
	Housewife	62(52.5)	56(47.5)	118(100.0)	
	Others	30(65.2)	16(34.8)	46(100.0)	
Total		352(60.9)	226(39.1)	578(100.0)	

Chi-Square Test, * $p < 0.05$, ** $p < 0.01$.

3. CAM Recognition and Experience Types

Multiple response analysis results are as follows regarding the participants' recognition and experience types of CAM.

The types of CAM recognized by the participants are as in Table 4. 560 (10.5%)

respondents said they were aware of colon Therapy; 208 (9.5%), cupping and moxa; 494 (9.2%), foot reflex zone therapy; 492 (9.2%), herbal medicine therapy; and 486 (9.1%), chiropractic, in order. Table 5 displays CAM measures experienced by the research participants. 482 (34.5%) of them said they had experienced colon Therapy; 252 (18.0%), chiropractic; 156 (11.2%), cupping and moxa; 130 (9.3%), foot reflex zone therapy, in order.

Table 4. CAM Recognition Types

Type	N	%
Qigong	462	8.6
Meditation	174	3.3
Hypnosis Therapy	268	5.0
Dance Therapy	10	.2
Art Therapy	4	.1
Medical Herb Therapy	492	9.2
Fast	154	2.9
Aroma Therapy	288	5.4
Ayurveda Therapy	32	.6
Placenta Therapy	348	6.5
Placenta Therapy	186	3.5
IMS(intramuscular stimulation)	104	1.9
Urine Therapy	32	.6
Acupressure	62	1.2
Foot Reflex Zone Therapy	494	9.2
Taping	120	2.2
Massage	264	4.9
Chiropractic	486	9.1
Colon Therapy	560	10.5
Color Therapy	26	.5
Acupuncture	38	.7
Cupping and Moxa	508	9.5
FCST(Functional CerebroSpinal Technique)	222	4.2
Others	8	.2
Total	5342	100.0

Table 5. CAM Experience Types

Type	N	%
Qigong	36	2.6
Meditation	10	.7
Hypnosis Therapy	2	.1
Dance Therapy	2	.1
Art Therapy	110	7.9
Medical Herb Therapy	16	1.1
Fast	12	.9
Aroma Therapy	2	.1
Ayurveda Therapy	40	2.9
Placenta Therapy	12	.9
Placenta Therapy	4	.3
IMS(Intramuscular Stimulation)	2	.1
Urine Therapy	2	.1
Acupressure	130	9.3
Foot Reflex Zone Therapy	42	3.0
Taping	34	2.4
Massage	252	18.0
Chiropractic	482	34.5
Colon Therapy	4	.3
Color Therapy	4	.3
Acupuncture	156	11.2
Cupping and Moxa	38	2.7
FCST(Functional CerebroSpinal Technique)	6	.4
Total	1398	100.0

4. CAM Awareness Levels

As Table 6 shows about CAM awareness levels, the most frequent answer was that therapeutic effect could be maximized by the use of CAM with 4.02 ± 0.61 . followed by CAM gains increasing interest not only from patients but also from the general public, with 3.96 ± 0.67 ; and CAM use needs to be openly discussed with doctors, with 3.89 ± 0.77 . Lower levels awareness were recorded in items such as Utilizing both CAM and hospital treatment in parallel does not cause side effect or toxic effect, with

3.12±0.80; CAM therapeutic effect is more excellent than that of modern medicine, with 3.37±0.75; and CAM is a supplementary therapy for modern medicine, with 3.40±0.82.

Table 6. CAM Awareness Levels

CAM Awareness Levels	Mean±SD
CAM therapeutic effect is more excellent than that of modern medicine.	3.37±0.75
CAM is a supplementary therapy for modern medicine.	3.40±0.82
CAM is helpful for emotional comfort and well-being.	3.46±0.81
CAM is a different therapy separated from hospital treatment.	3.67±0.80
CAM bases on scientific evidence.	3.57±0.70
Therapeutic effect could be maximized by the use of CAM.	4.02±0.61
Utilizing both CAM and hospital treatment in parallel does not cause side effect or toxic effect.	3.12±0.80
CAM gains increasing interest not only from patients but also from the general public.	3.96±0.67
General people also often use CAM to improve or maintain their health.	3.73±0.77
CAM use needs to be openly discussed with doctors.	3.89±0.77
CAM is believed to treat diseases.	3.71±0.72

5. Status of Chiropractic Use

1) Chiropractic Recognition Path

As in Table 7, regarding the recognition path of chiropractic among the CAM methods, 336 (58.1%) participants said they came to know chiropractic by their family members or neighbors followed by 146 (25.3%) participants who said they did so by looking at media such as newspapers or magazines.

Table 7. Chiropractic Recognition Path

Recognition Path	N	%
Newspapers, Magazines and Other Media	146	25.3
Patient Education, Seminars, and Lectures	24	4.2
Family Members or Neighbors	336	58.1
Alternative Therapy Experts	26	4.5
Hospital Doctors	2	.3
Hospital Employees	4	.7

Others	40	6.9
Total	578	100.0

2) Chiropractic Experience and Related Disease

As shown in Table 8, 529 (91.3%) participants were found to have actually experienced chiropractic among those aware of it. They used chiropractic due to diseases such as low back pain or frozen shoulder as answered by 386 (49.4%), the largest number; followed by physical correction, 148 (18.9%); joint pain, 104 (13.3%); and headache, 100 (12.8%) in order as explained in Table 9.

Table 8. Chiropractic Experience Status

Chiropractic Experience	N	%
Yes	529	91.3
No	49	8.7
Total	579	100.0

Table 9. Related Disease in Chiropractic Use

Related Disease	N	%
Blood Pressure Problem	8	1.0
Stroke	2	.3
Headache	100	12.8
Low Back Pain, Frozen Shoulder	386	49.4
Joint Pain	104	13.3
Physical Correction	148	18.9
Others	34	4.3
Total	782	100.0

3) Status of Chiropractic Use

Table 10 describes details of chiropractic use by the 529 participants who had chosen chiropractic among the CAM methods. 298 (51.6%) of them answered they were very

much satisfied with chiropractic and 186 (32.2%) said satisfied, indicating 83.8% of the whole were satisfied at least. Regarding experiencing side effect, 502 (95.1%) said they had not experienced one. As for financial burden of CAM use, 160 (30.3%) respondents replied expensive; and 314 (59.5%) said expensive but worth it, showing many were feeling financial burden.

Table 10. Status of Chiropractic Use

Status of Chiropractic Use		N	%
Chiropractic Satisfaction	Very Much Satisfied	298	51.6
	Satisfied	186	32.2
	Fair	8	1.4
	Unsatisfied	10	1.7
	Much Unsatisfied	27	4.5
Side Effect Experience	None	502	95.1
	Yes	27	4.9
Financial Burden	Expensive	160	30.3
	Expensive but Worthy	314	59.5
	Affordable	48	9.1
	Cheap	7	1.1
Total		529	100.0

4) Awareness Difference According to Chiropractic Experience

Table 11 explains awareness levels on chiropractic among CAM measures.

Although the most frequent answer to the effectiveness of chiropractic therapy (compared with that of the modern medicine) was fair, of the participants with chiropractic experience, 143 (27.0%) said they agreed, and 50 (9.5%) said they agreed very much, representing a higher ratio than those without chiropractic experience ($\chi^2=4.356$). Regarding the understanding that chiropractic is a secondary therapy for the modern medicine, 265 (50.1%) of experienced respondents were found to agree and 14 (2.6%) of them, agree very much whereas 29 (59.2%) of the non-experienced

participants said to agree. The ratio was higher in the non-experienced group but without a statistically significant difference ($\chi^2=4.190$). As to the items that chiropractic is helpful for mental comfort and well-being, non-experienced respondents were found to have a higher awareness ($\chi^2=3.647$). The awareness that chiropractic use maximizes therapeutic effect was higher in the experienced group than non-experienced group ($\chi^2=5.297$). Concerning the understanding that chiropractic has fewer side effects and toxic effect, the non-experienced group showed a higher level than the experienced group without statistical significance ($\chi^2=1.599$). The awareness aspects that chiropractic gains interest not only from patients but also from general public ($\chi^2=7.908$), chiropractic use needs to be openly discussed with doctors ($\chi^2=8.345$), and disease can be treated by chiropractic ($\chi^2=3.358$) were all highly recognized in the experienced group.

Concerning the awareness that chiropractic is a different therapy separated from hospital treatment, 282 (53.3%) experienced participants said they agreed, and 66 (12.5%) said they agreed very much. The number was higher than 26 (53.1%) in the non-experienced group with a statistically significant gap ($\chi^2=9.586$, $p<0.05$). As for the awareness aspect that chiropractic effectiveness is based on scientific evidence, 237 (44.8%) experienced respondents said they agreed and 46 (8.7%) said they agreed very much which was higher than that of the non-experienced group with 25 (51.0%) with statistical significance ($\chi^2=7.632$, $p<0.05$). For the aspect that general people also use chiropractic often to improve and maintain health, the experienced participants were found to have a higher awareness than non-experienced participants with statistical significance ($\chi^2=9.794$, $p<0.05$).

Table 11. Differences in Awareness on Chiropractic.

Items	Chiropractic Awareness					Total	χ^2
	I don't agree at all.	I don't agree.	It is okay.	I agree.	I agree very much.		

Excellence of Chiropractic Therapeutic Effectiveness (Compared with Modern Medicine)	Yes	2(4)	34 (6.4)	300(56.7)	143 (27.0)	50(9.5)	529 (100.0)	4.356
	No	-	4 (8.2)	34(69.4)	9 (18.4)	2(4.1)	49 (100.0)	
Chiropractic is a Secondary Therapy to Modern Medicine.	Yes	22(4.2)	40 (7.6)	188(35.5)	265 (50.1)	14(2.6)	529 (100.0)	4.190
	No	-	4 (8.2)	16(32.7)	29 (59.2)	-	49 (100.0)	
Chiropractic Therapy is Helpful for Mental Comfort and Well-Being.	Yes	8(1.5)	58 (11.0)	184(34.8)	249 (47.1)	30(5.7)	529 (100.0)	3.647
	No	-	2 (4.1)	18(36.7)	27 (55.1)	2(4.1)	49 (100.0)	
Chiropractic is Different Therapy Separated from Hospital Treatment.	Yes		50 (9.5)	131(24.8)	282 (53.3)	66(12.5)	529 (100.0)	9.586*
	No		4 (8.2)	19(38.8)	26 (53.1)	-	49 (100.0)	
Chiropractic Effectiveness is Based on Scientific Ground.	Yes		26 (4.9)	220(41.6)	237 (44.8)	46(8.7)	529 (100.0)	7.632*
	No		-	24(49.0)	25 (51.0)	-	49 (100.0)	
Chiropractic Use could Maximize Therapeutic Effectiveness.	Yes		6 (1.1)	68(12.9)	359 (67.9)	96(18.1)	529 (100.0)	5.297
	No		2 (4.1)	10(20.4)	29 (59.2)	8(16.3)	49 (100.0)	
Chiropractic has Fewer Side Effects and Toxic Effects.	Yes	10(1.9)	96 (18.1)	264(49.9)	141 (26.7)	18(3.4)	529 (100.0)	1.599
	No	-	10 (20.4)	22(44.9)	15 (30.6)	2(4.1)	49 (100.0)	
Chiropractic Gains Interest not only from Patients but also from General People.	Yes	4(8)	10 (1.9)	78(14.7)	343 (64.8)	94(17.8)	529 (100.0)	7.908
	No	-	-	8(16.3)	39 (79.6)	2(4.1)	49 (100.0)	
Many General People also Use Chiropractic often to Improve and Maintain their Health.	Yes	2(4)	30 (5.7)	149(28.2)	272 (51.4)	76(14.4)	529 (100.0)	9.794*
	No	-	-	21(42.9)	26 (53.1)	2(4.1)	49 (100.0)	
Chiropractic Use needs to be Openly Discussed with Doctors.	Yes	4(8)	12 (2.3)	128(24.2)	275 (52.0)	110(20.8)	529 (100.0)	8.345
	No	-	4 (8.2)	10(20.4)	29 (59.2)	6(12.2)	49 (100.0)	
Disease could be	Yes	2(4)	24	158(29.9)	289	56(10.6)	529	3.358

Treated by Chiropractic.	No	-	(4.5)	18(36.7)	(54.6)	4(8.2)	(100.0)
					27 (55.1)		49 (100.0)
Total		2(.3)	24 (4.2)	176(30.4)	316 (54.7)	60(10.4)	578 (100.0)

Chi-Square Test, * $p < 0.05$.

V. Discussion

Recently, as many broadcasting media report diversified complementary and alternative medicine measures that have not been known to us before, not only patients but also the general public pays more attention to such therapies. CAM ranges widely from traditional oriental medicine-based therapies such as acupuncture, cupping, moxa and medicinal herbs to unconventional ones in South Korea such as chiropractic. However, studies on CAM status in the country are less than sufficient.

In this recognition, the study investigated people living in a region in Japan where chiropractic was legally recognized to observe their awareness on CAM and chiropractic as well as their use of such therapies.

As a result, the research participants were found to have 60.9% level of awareness on CAM and experience colon therapy, chiropractic, cupping and moxa and foot reflex zone therapy in order of frequency. Regarding their understanding of CAM, the awareness that CAM use could maximize therapeutic effect was recognized the most while the awareness that using CAM together with hospital treatment in parallel does not have side effect and toxic effect had the lowest level of recognition. In terms of general characteristics, it was found that the older (Lee & Son, 2002; Chang et al., 2006), the more educated (Moon, 2004) and the more financially stable (Choi et al., 1998); the more the participants used CAM. Regarding related diseases, if more diseases were related (Joo, 2004) or if diseases lasted longer, more patients tended to use CAM (Jun et al., 2000; Lee, 2001; Hwang et al., 2006; Wang, 2007). Also according to the research by Mok & Cho (2004), in the case of complex diseases, CAM use went up and it was viewed that the number of diseases is an influence factor of CAM. In a diabetes patient group, 62% said they decided to use CAM because of the reliability on CAM (Lee, 2001). In the base theoretical study by Son & Suh (2000), it was found

that chronic liver patients tried every possible method to treat their disease including CAM, revealing that patients approached CAM for the purpose of disease treatment from a different perspective from conventional medicine.

Chiropractic generated in the US has spread across nations to be covered by some national medical systems now. Although in South Korea, it has yet to be institutionally recognized, its effectiveness in easing low back pain and improving physical functions has been widely known to attract rising domestic interest among other CAM measures (Manga et al., 1993).

In this research, it was found that the largest number of the participants came to know about chiropractic through their family members or neighbors. Among those who recognized chiropractic, 91.3% were found to have experienced it, a very high level, to treat low back pain and frozen shoulders most frequently. Their chiropractic satisfaction was as high as 83.3% in the chiropractic-experienced group and a mere 4.9% said they experienced side effect. Of the understanding of chiropractic, respondents said they understood that chiropractic is different therapy separated from hospital treatment, signaling the settlement of awareness on complementary and alternative medicine.

In the study by Jo & Yuk (2007), general training institute students were examined to understand their chiropractic awareness and found 68.1% of them were aware of it. According to the study by Gang (2008) on chiropractic awareness of university students with physical therapy major, 63.6% of them were aware of chiropractic. In the study by Kim (2006) on alternative therapy use status, 51.61% of the participants said chiropractic was first introduced by family, friends and other acquaintances - the most frequent recognition path for them, followed by advertisement and internet information consistently with the present study findings. Although, it was not about chiropractic uses, Park & Hyeon (2011) reported in their study on factors affecting chronic disease patients' CAM use that the more the involved diseases, the longer the disease lasted, and the larger the relevant monthly cost, people were more likely to use CAM. Coupled

with this research finding that the respondents found CAM use expensive but worthy, such a result indicates a correlation between CAM users' intention to re-use and disease treatment.

The rising domestic interest in CAM including chiropractic results in university department establishment for further specialization and systemization. Given the growing CMA use, it is deemed necessary to accurately identify the demand of national people including patients and accept CAM as an extension of medicine without negative approach.

As the study investigated local residents in Japan, a follow-up study is necessary to view domestic people. In this process, the gaps in awareness levels and situation regarding CAM and chiropractic of people in the two countries will need to be compared properly.

VI. Conclusion

This research surveyed 900 local residents in the 42 region of Japan to understanding their chiropractic use status, awareness thereof and satisfaction. As a result the followings are presented herein;

1. It was found that 60.9% were aware of CAM and their awareness showed difference according to the general characteristics of gender, age and academic background.
2. The research participants were found to recognize colon therapy, cupping and moxa, foot reflex zone therapy, medicinal herb therapy and chiropractic in order of awareness. CAM measures experienced by the participants were colon therapy, chiropractic, cupping and moxa and foot flex zone therapy in order of frequency.
3. Regarding the understanding of CAM, the item that CAM use could maximize therapeutic effect was found to be most widely understood whereas the aspect that using CAM with hospital treatment in parallel does not cause side effect or toxic effect showed the lowest awareness among all.
4. The most common chiropractic recognition paths were their family or neighbors and media such as newspapers or magazines.
5. Of the participants aware of chiropractic, as high as 91.3% said they had actually used it. 49.4% of them said they used chiropractic to treat low back pain and frozen shoulder, accounting for the largest part, followed by physical correction, joint pain and headache.
6. Those who experienced chiropractic showed higher satisfaction level including 51.6% answering very satisfied and 32.2%, satisfied. A very low level of 4.9% of the respondents said they experienced side effect. Many found chiropractic use financially burdensome.

7. The participants with chiropractic experience showed higher awareness than those without in aspects that chiropractic is different therapy separated from hospital treatment ($p<0.05$); chiropractic effectiveness is based on scientific ground ($p<0.05$); and general people also use chiropractic often to improve and maintain their health ($p<0.05$).

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국문초록

본 연구는 보완대체의학과 카이로프랙틱의 이용경험 실태 및 인식도를 알아보고자 시도되었다.

그 결과 보완대체의학의 인식도는 60.9%였으며, 실제 경험한 보완대체의학은 장요법, 카이로프랙틱, 부황 및 뜸, 족부반사요법 순으로 나타났다. 보완대체의학에 대한 인식도는 보완대체요법의 사용으로 치료효과를 극대화할 수 있다는 인식이 가장 큰 것으로 나타났으며, 보완대체요법과 병원치료의 병행은 부작용 및 독성을 일으키지 않는다는 인식이 가장 낮은 것으로 나타났다.

보완대체의학 중 카이로프랙틱에 대한 인지 경로는 가족이나 주변사람을 통하여 알게 되는 경우가 가장 많은 것으로 나타났으며, 카이로프랙틱을 인지하고 있는 경우 실제 경험자는 91.3%로 매우 높았으며, 주요 이용 질환은 요통 및 오십견 등이 가장 많았다. 카이로프랙틱을 경험자의 만족도는 83.8%로 높았으며, 부작용 경험자는 4.9%로 매우 낮은 것으로 나타났다. 카이로프랙틱에 대한 인식도는 ‘카이로프랙틱은 병원치료와는 다른 별개의 치료법이다 ($p<0.05$)’, ‘카이로프랙틱의 효과는 과학적 근거를 바탕으로 한다 ($p<0.05$)’, ‘건강유지 증진을 위해 일반대중들도 카이로프랙틱을 많이 이용한다 ($p<0.05$)’에 대하여 카이로프랙틱 비경험자에 비하여 경험자의 인식도가 높게 나타났다.

Key Words: 보완대체의학, 카이로프랙틱, 인식도, 인지도

Alternative therapy	v	Alternative therapy	v	Alternative therapy	v
Qigong		Meditation		Hypnosis therapy	
Dance therapy		Art therapy		Yoga	
Medicinal herb therapy		Fast		Gerson therapy	
Mineral therapy		Aroma therapy		Ayurveda therapy	
Cell therapy		Placenta therapy		Enzyme therapy	
IMS (intramuscular stimulation)		Urine therapy		Acupressure	
Foot reflex zone therapy		Taping therapy		Massage	
Chiropractic		Magnetic therapy		colon therapy	
Color therapy		Acupuncture		Cupping/moxa	
FCST (Functional CerebroSpinal Technique)		Others ()			

4. Please give your frank answers to the following items on CAM understanding.

Proposition	I don't agree at all.	I don't agree.	It's okay.	I agree.	I agree very much.
CAM therapeutic effectiveness is more excellent than the modern medicine.					
CAM is a secondary therapy to modern medicine.					
CAM therapy is helpful for mental comfort and well-being.					
CAM is different therapy separated from hospital treatment.					
CAM effectiveness is based on scientific ground.					
CAM use could maximize therapeutic effectiveness.					
CAM has fewer side effects and toxic effects.					
CAM gains interest not only from patients but also from general people.					
Many general people also use CAM often to improve and maintain their health.					
CAM use needs to be openly discussed with doctors.					
Disease could be treated by CAM.					

III. CAM awareness

1. How did you come to know chiropractic?

- 1) media such as newspapers, TV or magazines
- 2) educational opportunities
- 3) family members or neighbors
- 4) CAM experts
- 5) hospital doctors
- 6) hospital staff
- 7) others()

2. Have you ever used chiropractic? 1) Yes 2) No

2-1. If yes, why did you use it? Did you have any specific discomfort?

(Please specify in the Others, if there is no corresponding answer.)

Alternative therapy	v	Alternative therapy	v	Alternative therapy	v
Blood pressure problem		Stroke		Headache	
low back pain, neck pain, frozen shoulder, etc.		joint pain in elbow, wrist, knee, etc.		Physical correction, etc.	
Others()					

2-2. How did you find its effect?

- 1) very satisfied
- 2) satisfied
- 3) I don't know(fair)
- 4) unsatisfied
- 5) very unsatisfied

2-3. Have you had any side effect? 1) None 2) Yes

2-4. How do you think about chiropractic cost compared to other medical institutional service?

- 1) expensive
- 2) expensive but worthy.
- 3) affordable
- 4) cheap