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# Exploration of Parents' Perception towards Discontinuation of the Participants in Adapted PHYSICAL Education Class in KOREA

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#### **Abstract**

The purpose of this study was to investigate the experience of discontinuation of the participants in the physical education class by using the case study method which is one of the qualitative research methods. As for the participants of the research, 3 people who discontinued among the participants of the physical education class for children with physical challenges at AAA University were selected and in-depth interviews were conducted, and based on the collected data, the following results were obtained through the data analysis. First, the participants participated in the program without an accurate understanding of the program, and after dissatisfaction with various factors of the environment, they were able to find out the process leading to the discontinuation. Second, the participants were found to be restricted in continuous participation due to various factors of the physical education programs other than the program corresponding to this research case. Third, participants recognized the value of participating in physical activity and were found to be desiring a program with limitations to continuous participation complemented.

Despite the quantitative expansion of the program, it was still difficult to find a program that meets their conditions and needs. Therefore, efforts should be made to improve not only the development and dissemination of diverse and systematic programs that can accommodate their diverse characteristics, but also the environment influencing program participation. Furthermore, specialist physical education experts should also pay attention not only to the participants but also to the voice of the people who discontinued and try to achieve better programs.

[Keywords] Adapted Physical Education, Disabilities, Parent's Perception, Drop-Out, Discontinuation

#### 1. Introduction

In recent years, the possibility of various changes through the physical activity participation of the people with disabilities has been affirmed, and its importance has been reported through many studies[1][2][3]. Physical activity of people with disabilities not only improves health, and improves physical fitness, but also reduces physical, psychological and social constraints and contractions caused by disability, and further provides a necessary rehabilitation process for living as a social member alongside occupation and recreational activities through the

physical activity participation[4]. In particular, physical activity of the children with physical challenges is known to carry various educational values such as social development, emotional stability, and intellectual development that can provide a basis for normalization[5], and so the parents with children with physical challenges are participating their children not only in school but also various physical activities outside of school[6].

In order to accommodate this growing need for physical activities as such, the number of physical education classes for the children with physical challenges in private institutions, community-linked institutions, and universities is rising. Of them, the physical education class for the children with physical challenges, which is established in cooperation with the university and the local community, provides opportunity for the children with physical challenges who are alienated from physical activity and also has a great influence on the improvement of the quality of life through development in the physical, affective and cognitive areas, with a such significant value in the respect of giving back to the society from the academic discipline of major program[6].

However, while it was possible to verify a large number of previous studies[7][8][9][10] [11], there is a voice raised that the quality of the program's effectiveness and the satisfaction of the parents and the stakeholders are not following the quantitative growth[12] [11]. In fact, it is reported that there are still difficulties in participating in the physical activities for the children with physical challenges for reasons such as a lack of diversity of physical activity programs, economic burden, lack of professionalism of teachers, lack of physical facilities, and lack of equipment [13][14][15][16].

Furthermore, the ratio of incomplete practitioners with disabilities in physical education in 2013 increased by 8% to 57% year on year[17], and the number of people who discontinued their participation despite their participation in physical activity programs was affirmed in fact through many studies [18][19][20][21][22][23][3][24]. This was because the researches in the past focused on quantitative aspects such as providing physical activity opportunities for the disabled, verifying effects, presenting surveys and presenting plans, and lacking interest in the participants' voices in the actual field[25] [11][5], and so the number of the opportunities for physical activity for the disabled has increased, it can be judged that it still feels difficult to participate continuously.

Despite the precondition that it should be regular and continuous to achieve the effects of physical activity[26], many people with dis-

abilities have failed to participate in continuous physical activity. The discontinuation of the participants brings economic, education, and psychological loss to the participants in addition to the program providing institutions[27], and especially for the youth in their developmental stage, discontinuation of physical activities causes not only sleeping problem but also adverse emotional impact[28]. Therefore, it is urgent to establish a plan for participating in physical activity for the children with physical challenges through a more concrete and systematic approach concerning the discontinuation of physical activity participation by the children with physical challenges.

Despite such importance, there is a lack of studies on the discontinuation, and the present study in progress does not reflect the specificity of the children with physical challenges because it is presented only in the comprehensive aspect over the entire age or entire disability area, and there will be limitations to explain the essence of the phenomenon of discontinuation in further depth.

Following this need, this study carried out a case study on the discontinuation of the participants of the physical education class for the children with physical challenges. In this way, it would be possible to provide basic data to help the children with physical challenges to participate in the physical activity and further promote the operation and activation of the physical education class by understanding the cause and finding essential characteristics.

#### 2. Methodology

The purpose of this study is to investigate in depth the discontinuation experience of the participants of physical education class for the children with physical challenges. In order to understand the process and experience of the discontinuation of the participants in the physical education class, qualitative research method was adopted and a case study approach was applied. Case study is a method by which a researcher delicately and deeply collects various data on one or several

cases over time and reports on the characteristics of the case based on the collected data[29]. In particular, case study is an approach that is used when it is desirable to understand a particular case within a context, which is an ideal approach to understand the experience of discontinuation of the participants in a particular context of physical education class for the children with physical challenges.

#### 2.1. Subjects

Participants selected for this study voluntarily participated in the physical activity program(parents participated dance sports class) conducted at A university, yet discontinued participation. In order to select participants, the researcher discussed the purpose and significance of the research through interviews with the manager of the program. Thereafter, the program manager explained the purpose and significance of the study to the participants of the total of 7 teams of discontinuation. Of them, the final 3 teams agreed to participate in the study, and the other participants did not participate in the study due to their personal reasons. Children with developmental disabilities were excluded from the study because of their intellectual disabilities, and only their fathers or mothers who participated in the program and made the majority of decisions were selected as study participants.

Participants in this study were 2 mothers and 1 father of the children with developmental disabilities. The characteristics of the research participants observed during the interview process are shown in <Table 1> below.

**Table 1.** Characteristics of research participants.

	Parent A	Parent B	Parent C
Gender	Male	Female	Female
Age	Mid 40s	Mid 40s	Late 30s
Occupa- tion	Firefighter	Human rights lecturer	House- wife

### 2.2. AAA University's adapted physical education class

The physical activity program in which the researcher participated had the children with physical challenges and their parents with the aim to overcome constraints on the physical activity for the children with physical challenges by improving their awareness of the physical activity. A total of 14 children participated in the program, all with developmental disabilities. The program consisted of warmup exercises(physical strength exercise and physical strength exercise), main exercise(line dance and dance sports) and organized exercise for 90 minutes, for 3 times a week for a total of 8 weeks. One team leader and three assistant teachers participated in each individualized education in accordance with the type of disability and the degree of disability of the children with physical challenges. <Table 2> shows the specific programs of the physical education classes for the children with physical challenges.

**Table 2.** Overview of adapted physical education class.

AAA University's physical education class for children with physical challenges				
# of children		- 14 children, - 14 parents of them		
# of partio		- 4 special physical education teachers		
Class hours	and form	<ul> <li>90 minutes 3 times a week, and 3:1 lessons</li> </ul>		
Place of in:	struction	- AAA University dance hall		
	1-3 weeks	- Line dance		
	4 weeks	- Mountain climbing activity		
Program details	5 weeks	- Line dance		
	6 weeks	- Line dance, cha-cha-cha		
	7-8 weeks	- Line dance, cha-cha-cha, jive		

#### 2.3. Data collection

In-depth interviews useful for practically perceiving and describing experience were used to collect data. Interviews were conducted with the parents of the children with physical challenges participating in the physical education class program once for each participant. The selection of the interview schedule and the place of interview was made considering the date and place desired by the

research participant. The interview was conducted based on semi-structured questionnaires in order to extract in-depth and concrete contents in a natural atmosphere. Even if the talks strayed away from the question, the interviews were continued naturally so that participants could freely express their thoughts.

The semi-structured questionnaires were classified according to time elapse, before program participation, after program discontinuation, after discontinuation of program, past experience of physical activity program, questions about perception, questions about this program, and changes in life after discontinuation and perception. The semi-structured questionnaire was used after correction and supplementation after review by 3 specialists of special physical education who have been operating the physical education program for the children with physical challenges for many years. The contents of the interview were recorded through mobile devices with the consent of the participants. The recorded files collected after the interviews were transcribed into the Hangul program, and all of the participants' names were marked with pseudonyms. The contents of the questionnaire used during the in-depth interview are as provided in <Table 3> below.

**Table 3.** Details of the questionnaire.

Classification	Questions
Before program participation	Experience and perception of the past physical education program participation     Application procedures and expectations of the program
From program participation to discontinuation	<ul> <li>Pros and cons of the program</li> <li>Constraints on continuous participation</li> </ul>
After discontinuation	- Life of children after discontinuation - Ideal physical education program they imagine

#### 2.4. Data analysis

In this study, a data analysis was performed based on the 4 steps of the spiral data analysis(1. data organization, 2. reading and

taking notes, 3. technology, analysis, and interpretation, 4. data presentation and visualization) proposed by Creswell(2013) [29]. First, the collected data was transcribed through the Hangul program, and the transcribed data was examined in detail and primary coding was performed. Thereafter, the categorization process was performed to reduce to 3 categories. The categorized contents were reviewed and the contextually meaningful data was finally categorized to derive final theme words and quotations. Thereafter, the analyzed data results were described by subject.

#### 2.5. Integrity of the Research

In order to ensure the integrity of the data during the data collection and analysis process, this study was reviewed by the constituents in consultation with experts[29]. In order to minimize the bias of the researchers, we also checked as to whether the collected data was randomly derived from the review among the constituents. And in order to ensure the accuracy and integrity of the data, an expert council consisted of 1 professor of special education major and 2 PhDs of special education major was established and the consultation about the whole data collection and analysis was conducted before and after the research, and efforts were made to try to bring about the essential meaning of the experience of the research participants themselves while preventing against subjective analysis based on the researcher's bias.

#### 3. Results and Discussion

The purpose of this study is to present the results of the analysis of the data collected by the in-depth interview with the research participants in order to explore the experience of discontinuation of the participants in the physical education class of the children with physical challenges.

### 3.1. From voluntary participation to discontinuation

For the children with physical challenges, there is a difference between the physical

function and learning ability that can be performed according to the type and degree of disability of each individual, and a program that considers these factors thoroughly is required for effective education[30]. However, research participants were able to discover that they did not have an accurate understanding of the program. Even if the contents and process of the program were not understood or the characteristics of the children and the contents of the program were not consistent with each other, there was a tendency to participate and see how things unfolded.

- I do not remember exactly. They just said that there it was. Time was right. I do not know exactly what I went for but I think I went there after hearing that B University had a good program for dance. But I did not know how difficult it was, and I went there anyway.
- I thought I was doing special athletics only.
- Yes. I did not know it was a dance.
- Anyway, this was an AAA University program and I was going to try it because it was a short program during school break. ... (omitted) I do not like the classes where parents participate.
- But it's just that. OOO needs to get along all together. In that respect.

The research participants who participated in the program only to satisfy the educational need without a correct understanding of the program expressed dissatisfaction with the program such as for the difficulty of the program, the number of the teachers and the facility incompatibility. The program run in such an environment could not satisfy the educational desires of the parents and also found that the interest in participating in physical activity was lost.

- Yes. It was more difficult than I thought.
- I was somewhat physically struggling, and time was running out. I was tired.
- I think it was almost meaningless when I look at it.
- I do not think there were enough teachers.
- It wasn't much interesting.

- But OOO learned to dance. ... (omitted) ... It's impossible.
- It must be eye to eye with the kids, but they were so busy catching up with the teacher ... (omitted) · · · I went there a few times, and it would've been better if they did something easier for better interaction.
- As I said earlier, it was good knowledge and good interaction, but it should be easier and fun.
- It was cold on the floor. It soon got warmer, but it was cold ... (omitted) ... There was too much dust.

Such results are consistent with the findings that various problems in the daily physical training environment cause not only the loss of interest in participation in sports for all, but also make it impossible to make continuous participation[31], which is also consistent with the research results of Cho, Oh, & Koo(2009)[32] that suggested that the level of satisfaction is a critical variable in the continuing participation of the people with disabilities who are participating in the existing physical activities.

#### 3.2. Limitation, limitations, and limitations

The research participants found that continuing participation was limited in the physical education programs other than the physical education program for the children with disability of AAA University, which corresponded to the case of this study, due to various factors.

- There's no insurance for this. It's 30-40 minutes, and you get charged 25,000 won, 30,000 won. We do not have insurance coverage. We are all insured. But there's no insurance for this. ..(omitted) .... I do not know. I cannot do picketing because I'm a public servant. I do not really understand. There is support of 120,000 won a month. If it is 12,000 won, it is 4 times, and 4 times won't be enough. So now, it's more helpful for mom than staying home, as making money is helpful for KKK.
- I'm trying to participate a lot by following around. But economic activities come first as a restriction... (omitted) ... But you can't do it if voucher mother isn't correct.
- It's expensive. It costs almost 400,000 to 500,000 won including admission to swimming pool per month.

- Almost neglected. If I went to work, then the kid stays home almost all the time.

Despite the fact that children with developmental disabilities require their parents to keep an eye on them because of their unpredictable characteristics, even their mother, including their father, had to resort to economic activities to help reduce the economic burden of education. This can be confirmed as a factor that brings about a vicious cycle in which the children with physical challenges could not be cared for and they must stay home neglected. Such results are consistent with the findings of Lee, Lee, Ha, & Joo(2009)[33], who report that economic difficulties in the participation of children with intellectual disabilities as the most serious challenge.

In addition, we found various factors that restrict the continuing participation such as programs that can digest various characteristics of children, lack of diversity of teachers, and lack of dedicated sports facilities, among others.

- As I said before, the kids' characteristics are so diverse.
- The reason I can't allow swimming is because there is only a male teacher and no female teacher. The contact itself is uncomfortable. B just touches here and there, and pulls pants down, and that must be uncomfortable for the teacher, you know.
- But backstroke was pretty long so I quit after a while ... (omitted) ... My mother said that it's too hard going back and forth.
- I talk to every person I meet, but they say that there's nothing kids can do during school break.

Such results indicate that the parents of the children with intellectual disabilities have a greater need for their kids' participation in physical activity than the parents with children without disabilities, but in fact, is consistent with the research results that engaging the children with intellectual disability in physical activity has more difficulties than having those without disabilities participate[33]. Furthermore, it is also consistent

with previous researches that pointed out that the lack of dedicated sports facilities, lack of diversity of programs and lack of professionalism, lack of professional leaders, and economic burden, among others, are the problems in the daily physical training environment for the people with disabilities[34] [35][14].

### 3.3. If you do not let them, they will degenerate

While research participants may have been dissatisfied with the participation program in the physical education program, they were found to have experienced a variety of physical and psychological effects such as improvement of the athletic ability, sociability, and energy consumption, among others. And they were also found to be eagerly hoping to open a new program to complement the various limitations.

- If you do not let them, they will degenerate. It does not get better, but keeps it constant and it gets a little better. Really a little by little. But if you do not let them, they will degenerate. Growth does not stop, it degenerates. Compelling them to do certain things like inline skating, that suggests that your kid uses brain, right? Jump roping and everything. If you let them still, they seem to generate.
- SSS has been undergoing speech therapy for 7 years, and she can not speak. But she knows what her counterpart is saying. I guess that's what she learned from repetition. ... (omitted) ... I think that's the effect of education... (omitted) ... It does cost money, but it does teach you how to interact with society.
- It's physical exhaustion. It's physical exercise. I think it would be better for B to play and roll, and I think that you are doing brain exercise. I think that gives you a stimulus. It improves your athletic performance. Hula hoops and rope jump, and they develop even slowly at least, as they will degenerate if you let them.
- SSS is big. But there aren't many places to discharge his energy. ... (omitted) ... He's irritated because he can't discharge his eneray.
- I hope you can plan this year and open it once in the next year. I will cooperate.
- Please do a program for girls. Boys are playing soccer, so why for girls?

Such results are consistent with the research results that the physical activity participation by children with physical challenges brings about diverse effects[36][1][37][38] [2]. Also, a systematic physical education program that is tailored to the ability and level of the children with physical challenges would help the children, yet the most important factor that affects the participation in daily physical training is the participation environment, which is consistent with the research findings of Ku, Han, & Oh(2011)[39].

In the end, discontinuation can be seen as a practical limitation of the educational demand of the parents of children with physical challenges and the lack of ability to accommodate them. In order to meet such educational needs, many researchers as well as government agencies and local autonomous bodies are working together[6], however, due to various existing limitations, it was affirmed that the continuing physical activity participation by the children with physical challenges could only be difficult at best. That said, the previous research results are not enough to be used as a means to participate for the successful physical activities of the children with physical challenges[14], and to this end, an even more diverse array of researches must be conducted in line with the real world outside in greater depth.

#### 4. Summary and Recommendation

The purpose of this study was to investigate the experience of discontinuation of the participants in the physical education class by using the case study method which is one of the qualitative research methods. As for the participants of the research, 3 people who discontinued among the participants of the physical education class for children with physical challenges at A University were selected and in-depth interviews were conducted, and based on the collected data, the following results were obtained through the data analysis. First, the participants participated in the program without an accurate understanding of the program, and after dissatisfaction with various factors of the environment, they were able to find out the process leading to the discontinuation. Second, the participants were found to be restricted in continuous participation due to various factors of the physical education programs other than the program corresponding to this research case. Third, participants recognized the value of participating in physical activity and were found to be desiring a program with limitations to continuous participation complemented.

Despite the quantitative expansion of the program, it was still difficult to find a program that meets their conditions and needs. Therefore, efforts should be made to improve not only the development and dissemination of diverse and systematic programs that can accommodate their diverse characteristics, but also the environment influencing program participation. Furthermore, specialist physical education experts should also pay attention not only to the participants but also to the voice of the people who discontinued and try to achieve better programs.

This research has limitations in that it does not reflect various characteristics from selecting 3 people who discontinued as research participants. Therefore, in the future researches, it would be necessary to study various cases such as adaptation and discontinuation beyond the physical activities with the participation by the children with physical challenges who have even more diverse characteristics or their parents.

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### The Ethical Issues Confronting KOREAN SPORT Organizations

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#### **Abstract**

The aims of this research are: to identify the ethical issues confronting Korean sport organizations, to find factors influencing the decision making to deal with the ethical issues, and, finally, to suggest development plans for managerial ethics in Korean sport organizations. In particular, the research addresses the following questions: what kind of ethical issues confronting Korean sport organizations? What are the factors influencing decision making to deal with the ethical issues? What are the development plans for managerial ethics in Korean sport organizations? Semi-structured interviews were conducted with participants working for Korean sport organizations(N=8). Results revealed that Korean sport organizations have been faced with various ethical issues, consisting of two main themes: athlete and coach, and organization. While former was related to management and supervision of athlete and coaches, and latter was pertaining to organization's internal issues. Regarding the factors influencing decision making to deal with the ethical issues, organization's regulations and obeying boss were identified. In additions, as the tool of ethics management and organizational policy, ethics training programmes and the code of ethics were not applicable and not practical. Finally, improvement of administrative system and eradication of factionalism were suggested for the development plans for managerial ethics in Korean sport organizations.

[Keywords] Sport, Sport Organizations, Ethical Issues in Sport, Managerial Ethics, Ethical Tools

#### 1. Introduction

Korean sport organizations have been increasingly criticized for their lack of transparency, accountability and corruption. In other words, Korean sports have confronted serious ethical issues. The Korean female curling team's assistant coach, who offered to resign after accusations that he sexually abused team members, was slapped with a life time[1]. On top of that, the case of Viktor Ahn ignited the controversy on ethical issues in the country. Ahn, the most decorated short trackers in the Olympic Games, won three gold medals at the Winter Olympics in Sochi, became a Russian citizen under the name of Victor Ahn. His family claimed that the skater fell victim to fractional feuds within the sport in

South Korea and that led to his decision to become a Russian[2]. This issue led to the government's action which to plans to clean up sports-related corruption. The Korean Ministry of Culture, Sports and Tourism has set up a joint task force with the prosecution, the police, the National Tax Service and the education ministry[3]. Park Geun-hye, former South Korean president, ordered her officials to get to the bottom of the case to learn why a skater "with the best skills could not seek his dream in his native country".

Uncovering 337 different corrupt practice at 493 Korean sport agencies, including accounting fraud, nepotistic hiring of executives and embezzlement can all serve here as reminders of the fact that the subject of ethical issues in Korean sport organizations has acquired a central degree of importance in the recent[4].

What is ethics? Ethics is the area of philosophy that deals with questions with regards to morality and assesses the rightness or wrongness of actions and decisions[5]. Concepts like truth, justice, honesty, rights, and fairness are part of the language of ethics[6]. However, actually the term "ethics" has been very widely used, with different meanings and purposes. Dr. Jacques Rogge, former president of the International Olympic Committee(IOC), stated regarding ethics in sports in his one presentation on ethics and Olympism[7].

It is in style to say that ethics have disappeared in sports; ethics are an indefinable concept, and the base is respect for others. However, sport might be a universal language that is approached from very different angles by different cultures and nations. The vision of ethics is not universal therefore let us be very careful in approaching ethics.

According to Morgan and Meier[8], moral and ethical concerns related to sport need not be limited to such areas as sportsmanship, the use of performance-enhancing drug, violence, and cheating. Those involved sport management are also responsible for addressing ethical and moral questions pertaining to professionalism, equity, legal and financial management, personal concerns, governance and polices, legal and franchise issues, and matters of social justice associated with all aspects of sport[6].

The majority of literature concerning ethics and sport has focused on ethical issues confronting sport participants[9]. Only few authors have specifically conducted studies on ethical issues facing the area of sport organizations[6][9][10]. However, although these studies introduced different ethical issues and ethical management activities in sport industry, including Korean sport organizations, none have specifically examined the unique ethical issues regarding sport organization, focusing on its differences according to departments and responsibilities.

The aims of this research are: to identify the ethical issues confronting Korean sport organizations, to find factors influencing the decision making to deal with the issues, and, finally, to

suggest development plans for managerial ethics in Korean sport organizations. This will enhance understanding of ethical issues in sport organizations can contribute to development of more effective policies for achieving managerial ethics in sport organizations. In particular, the research addresses the following questions: what kind of ethical issues confronting Korean sport organizations? What are the factors influencing decision making to deal with the ethical issues? What are the development plans for managerial ethics in Korean sport organizations?

The method section provides information on participants, materials, procedures, instrument, and dada analysis. Finally, the research finishes with discussion of findings, limitations of this research, and conclusionary comments.

#### 2. Methods

This qualitative study focused on understanding and identifying the phenomenon of ethical issues confronting Korean sport organizations and the factors influencing the decision making to deal with the issues. It also suggested development plan for managerial ethics in Korean sport organizations. There were three research questions posed: What are the ethical issues confronting Korean sport organization? What are the factors influencing decision-making to deal with the issues? What can be development plans for managerial ethics in Korean sport organizations? To address these three research questions, qualitative research was conducted consisting of 8 semi-structured interviews with participants working for Korean sport organizations. The interviews concentrated on participant direct or indirect experiences with regard to the ethical issues faced in their tasks, the decision-making to handle the issues as well as their opinion on the development plans for managerial ethics in Korean sport organizations.

#### 2.1. Participants

Participants were purposefully selected for this study which allowed us to discover, understand, and gain insight into this phenomenon[11]. Since it was expected that each sport organizations and its departments would face different ethical

issues, participants were selected from different Korean sport organizations and responsibilities, including marketing, selection of athletes funding, planning sporting events, athlete right, and so on. This ensured that they were qualified to provide necessary data regarding various and unique ethical issues from different departments and duties in Korean sports organizations. The author sent e-mail to participants to inform them of the study and directed them to contact the author if they were willing to be interviewed. Once they consented to participate in the study, the author arranged a date and time for the interview to take place.

#### 2.2. Procedures

Research ethics approval was obtained from Russian International Olympic University and the interviews were held in February 2014 during the Sochi 2014 Winter Olympics. As some of the participants were in Sochi, Russia to participate in the Sochi 2014 Winter Olympic Games, face to face interview was conducted for them at the Olympic park. But telephone interview was also conducted for remaining participants because they stayed in Korea at that time.

With each interviewee's permission, audio-recording and taking note were administered. This process enabled the collection of an accurate and unbiased record of the participants, allowed for the use of direct quotes in the interpretation of the qualitative material. However, as some of the questions regarding ethical issues are considered sensitive, such as relating to corruption, some participants did not want their interviews to be audio recorded. In this case, only taking note was administered.

Each interview lasted approximately 30 minutes on average, and began with a series of introductory questions to establish rapport[12]. In case of that the participants have never heard of and considered the term of ethical issues in sport organizations, the material containing the example of current ethical issues in sports fields was provided to them before given the detailed and specific questions. In addition, for the participants conducted by telephone interview, the material was sent to the participants by e-mail

before the interview. This process helped participants understand the topic to provide useful data.

#### 2.3. Materials

The list of questions was structured to elicit participants' direct or indirect experiences in terms of ethical issues confronting Korea sport organizations, factors influencing decision-making to deal with the issues as well as the suggestions for development plans for managerial ethics in sport organizations. Moreover, the questions regarding organization's ethics training programme and the code of ethics were structured to find whether the tool of ethics management or organizational policies help handle the ethical issues. The interview schedule was used with each interview, but questions were asked in such a way as to follow from the responses provided by the individual interviewees[13].

#### 2.4. Instrument

Interviews are particularly useful for receiving the story behind a participant's personal experiences and it can pursue in-depth information around the research topic. The author decided to conducted semi-structured interview among the three interviews most frequently used for qualitative research: structured, semi-structured and unstructured interview. Involving both open-ended and closed questions, semi-structured interview does not limit respondents to a set of pre-determined answers (unlike a structured questionnaire)[14], which allows respondents to discuss and raise issues that interviewer may not have considered.

However, a structured interview is a research method commonly used in survey research that often just require 'yes' or 'no' answers to the questions - or they may be questions which require a set answer[15]. This would be limited to identify the ethical issues facing the participants in their experiences. In addition to unstructured interview, According to Yan Zhang and Barbara [16], the purpose of inquiry is theory development and it is not useful when we already have a basic understanding of a phenomenon and want to pursue particular aspects of it. As this research is not meant to be theory development

and aims at identifying such particular aspects, unique and different ethical issues confronting Korean sports organizations, unstructured interview does not fit for this research.

#### 2.5. Data analysis

Each interview was transcribed, but as all interviews were conducted in Korean, quotes were translated to be included in this research. Content analysis was used for this research. Content analysis usually refers to analyzing text such as interview transcripts or documents[17]. More generally, however, it is used to refer to any qualitative data reduction and sense-making effort that takes a volume of qualitative materials and attempts to identify core consistencies and meanings[17]. After reading all of the interview transcripts to get a general sense of the data, the transcripts were read again initiating open coding, which involved the examination and categorization of the data to identify recurring theme. During open coding, the researcher examined the transcripts line by line and underlined significant statements, many of which became codes and initial categories in the analysis. During coding, the researcher read through the transcripts again to compare and re-conceptualize the categories. Then the researcher interpreted the emerging themes.

#### 3. Results

The results are categorized into four sections, identification of the ethical issues, the factors influencing decision-making to deal with the ethical issues, the tool of ethics management and organizational policy, and development plans for managerial ethics in Korean sport organizations. Pseudonyms are used in place of participants' names to introduce quotations. For additional demographic and background information relating to each participant quoted, please refer to <Table 1>.

### 3.1. Identification of ethical issues in Korean sport organization

Participants felt that Korean sport have confronted severe ethical issues. Particularly, they all pointed out and were concerned about corruption in Korean sport organizations. Based on their direct and indirect experiences, the ethical issues facing Korean sport organizations were revealed. Two main themes of athletes and coaches, and organization were identified. For a listing of each theme, with corresponding subthemes, please refer to <Table 2>.

**Table 1.** Participant profiles.

Gender	Pseudonym	Years of working	Position	Responsibilities
Male	Jack	2	Manager	Marketing
Male	Matt	12	President	Overseeing overall tasks
Male	Tom	3	Manager	Overseeing referees
Female	Tiffany	5	Staff	International cooperation
Female	Jane	5	Manager	Planning sporting events
Female	Jessica	4	Board members	Female athlete right
Female	Betty	9	Administrator	Athlete right
Female	Amanda	5	Manager	Athlete support

**Table 2.** Matrix display of themes and subthemes.

Themes	Subthemes	
	a. Disciplinary action for athletes and coaches	
1. Athlete & coach	b. Selection of athlete support programme	
	c. National team selection procedure	

	d. Education	
	a. Gender equality	
2. Organization	b. Sponsorship selection	
Z. Organization	c. Judgment of competition	
	d. Factionalism	

#### 3.1.1. Athletes and coaches

The first theme to emerge from the interviews was coaches and athletes, with corresponding four subthemes, disciplinary action for athletes and coaches, selection of athlete support progammes, national team selection procedure, and education.

### 3.1.1.1. Disciplinary action for athletes and coaches

As a sport governing body responsible for control and managing athletes and coaches, it has right to take disciplinary actions. Although the organizations must be neutral when investigating incidents and arbitrating between coaches and athletes, it seems likely that they make unfair judgment regarding imposing sanctions. Unexpected findings that emerged were unfair judgment on imposing sanctions on sexual abuse between coaches and athletes. This was described by Betty:

It seems that sport organizations are not neutral and unfair when they take a disciplinary action. They are on coach's side rather than athletes. This is because many organization's members such as board members and executives have a close relationship with coaches. For example, one Korean sport organization investigated a case of sexual abuse because a female athlete claimed that she suffered from sexual harassment from her coach. But during the investigation, one of the executives shouted to her, "You seduced him first!" The organization also tried to conceal the issue.

Matt also had a similar observation:

I heard about the case that coach asked his female athlete to come his room and was about to rapping her. But she fled so that she could avoid the rape. After that, the organization's executive pushed her not to say that incident to public because it would be negative effect to the organization. The executive also promised that he could support and help her athlete career such as joining a professional team if she did not take action against this incident.

Another finding to emerge was unfair judgment on imposing sanctions on violation of regulations for outstanding athletes.

One athlete left training camp without permission. According to our regulation, he must be expelled from training camp and suspended for following competition. But since he is promising athlete, the federation decided to conceal his fault and allowed him to take part in the competition. (Betty)

We had camp training before participating in important competition. According to our regulation, athletes are not allowed to invite opposite sex people in athlete accommodation because they are teenagers. However, one female athlete had sex with her boyfriend at her room. She had to be punished but our federation concealed the issue because she was outstanding athlete. If she was punished and could not take part in the competition, the team might be weakened. (Betty)

### 3.1.1.2. Selection of athlete support programmes

Another subtheme that emerged was selection of athlete support programmes. Sport organizations support athletes for their athletic performance and career transition assistance, offering not only financial support but also training programmes. Yet, Tiffany pointed out unfair distribution of athlete funding:

Although athlete funding should be distributed equally to all athletes regardless of their abilities, the organization tends to grant funding to only outstanding athletes because of achieving good results.

One participant whose duty was selection of athlete funding faced dilemma over giving the selection criteria to the athletes who have a close relationship with. Amanda stated:

The organization I have worked provides athletes funding and has specific process to select applicants. For fair selection process, I was not allowed to give information regarding selection criteria to applicants. However, even though I didn't do it, I have faced dilemma over giving the selection criteria to the athletes who have personal relationship with me. This could be a good advantage for them to be selected for receiving funding.

#### 3.1.1.3. National team selection procedure

Sport organizations have specific regulation to select national team athletes such as their records, competition achievement and ranking system. The coaches and the board members have also right to select some of national team athletes regardless of the regulation. National team selection procedure was identified as another ethical issue. Matt described:

If coaches or the board members think athletes have great potentials, they can select them as national team members. Through using the advantages, some of them took bribery from athletes' parents with the promise to select their sons or daughters for national team.

Interestingly, Tiffany stated that personal relationship with sport organizations can be the important factor for selection of national team.

I saw and heard about many cases that personal relationship largely influences on selection of national team athletes and coaches. If athletes and coaches have a close relationship with the organizations, such as the executives or presidents, it can be huge advantages to be national team.

#### 3.1.1.4. Education

Many Korean student athletes spend excessive amounts of time playing sports neglecting their education. But if they quit playing their sports due to some reasons, such as injuries, they are faced with significant difficulties, academic performance and deciding and planning future careers. The interesting finding to emerge was that even though the organization decided to offer educational programme to student athletes as a career support assistants, team coaches and managers objected to the plan. This was mentioned by Matt:

I decided to provide student athletes with computer education programme for their future career. However, many coaches and managers disagreed on it because the computer education could be hindrance for athletes to practice their sports. So the computer education programme was not implemented for student athletes.

In addition, Jane pointed out that a lake of ethic education because of some restrictions such as organization's budget. She stated:

Many ethical problems like violence and sexual abuse occurs in Korean sport fields. Although education is needed to prevent the problems to athletes and coaches, the organizations have not had enough efforts to educate them. More training programmes and campaigns on ethical problems should be implemented.

#### 3.1.2. Organization

The second theme to emerge from the interviews was organization, with corresponding four subthemes, gender equality, sponsorship selection, referee judgment, and factionalism.

#### 3.1.2.1. Gender equality

There is a considerable imbalance between women and men with regard to who holds influence in the management of sport organizations[18]. Korean sport environment have also faced the same issues. Within sport organizations, gender ratio is highly unequal. Tiffany described the problems caused by gender equality within Korea sport organizations:

Korean sports organizations have lacked of female executives. Nowadays, Korean

sports have faced severe women's right issues such as sexual harassment and abuse, and gender equality. However, sports organizations in Korea have lacked of the female executives representing female athlete right. To deal with those problems and improve female athlete right, we need more female executives in the sports organizations.

#### 3.1.2.2. Sponsorship selection

Sport sponsorship is a transactional relationship through which commercial benefits accrue for the sponsor partner and financial or service benefits for the sponsored sport partner, which is considered as one of the sport organization's imperative source of revenue. However, controversial issues on sport sponsorship agreement have been increasingly raised. The marketing of tobacco, fast-food chains and alcoholic beverages should be eliminated from the sporting events. This is, such products conflict with the stated purpose of the sports. In particularly, it could be enormously appeals to children. Korean sport organizations also encounter the issues and the participant had a clear perception of the issue. This was described by Matt: When we hosted competition, tobacco and alcoholic beverages companies proposed our organization for sponsorship. But I refused the agreement because of its harmful impact on student athletes.

Another interesting finding regarding sponsorship selection to emerge was preference of the national brand company for sponsors. It seems likely that this tendency is related to patriotism. Jack described this:

I faced dilemma over sponsorship agreement. During selection process of sponsorship, one foreign company proposed more amount of biding money for our event than others. But my umbrella organization suggested the Korean brand company as the sponsor.

#### 3.1.2.3. Judgment of competition

Judgment of competition was mentioned as the ethical issues confronting Korean sport organizations. Tiffany indicated the bribery scandal of referee. She said:

It is common that many team coaches and managers offer referees bribe. Especially, they bribe a head of the referee committee because he has a right to assign referees for matches and he has also power to influence on referees. It is common sense for team managers to give referees gifts on Korean tradition holidays.

Furthermore, interestingly, this is not always pertaining to personal corruption. Matt indicated this point:

\*\*\* is unpopular sport in Korea so there are few teams in the country. One team manager told the president of federation that his team would disband if it did not win this game. Finally, the team won the game with biased judgment.

#### 3.1.2.4. Factionalism

In Korean sport environment, factionalism was identified as one of the ethical issues. This was mentioned by Tiffany:

School relation is so important in Korean sports. Each sport organization in Korea has factions according to alumni. One sport is a good example. \*\*University team's athletes are much easier to be selected for a national team because many federation's officers and the referees are consisted of its alumni. Other sports in Korea are the same. To be successful in Korea sports, the university people graduated is one of the most important factors than other abilities.

On the other hand, Tom mentioned that factionalism brings about positive impact on sport organizations. He said:

My organization and my sport have also some factions according to alumni and regions. But I don't think it is a problem. This factionalism is beneficial. Each faction has fair competition, which help develop not only my organization but also sport.

### 3.2. The factors influencing decision making to deal with ethical issues

Today's sport administrators face the difficult

task of operating departments and organizations in a business climate in which winning and profits are often valued above all[5]. To find out the factors influencing ethical decision-making, participants were asked to discuss how they make decision when faced with ethical issues in their everyday operations. A list of the factors is presented in <Table 3>.

More than half of the participants mentioned organization's regulation as the factors. This was followed by organization's benefits and obeying boss. Amanda described her situation of decision making within the workplace. Amanda stated:

I think it is a Korean culture that people must follow their bosses within a workplace. I had no right to make decision and I had to obey my boss' direction. I tried to make decision according to organization's regulation, but my boss asked me to change the regulation. I knew that it was not ethical, but I did not have any right to make decision.

**Table 3.** The factors influencing decision-making to deal with the ethical issues.

Pseudonym	The factors
Jack	Organization's regulation
Matt	Organization's benefits
Tom	Organization's regulation
Tiffany	Organization's regulation
Jane	I do not know
Jessica	Organization's regulation
Betty	Organization's regulation
Amanda	Obeying boss

#### 3.3. The tool of ethics management and organizational policy

Kaptein[10] defines that ethics management as a systematic and coherent development of the activities, but also adopting measures in order to achieve the fundamental and justified expectations of stakeholders and to balance conflicts. The main tools of ethics management includes ethic boards and committees, codes of conduct and code of ethics, ethics training programmes, ethics audit and so on. The participants were asked to discuss whether the code of ethics and ethics training programmes help handle the ethical issues in their tasks. However,

overall, the findings that emerged showed that both ethics training programmes and the code of ethics were not applicable to and practical for tasks in Korean sport organizations. The problems were mentioned by Betty, Matt and Jane respectively:

The problem of training programme is to focus more on theory rather than cases or examples. We need a variety of examples or cases in sport fields relating to decision making when facing dilemma and ethical issues. (Betty)

Our ethics training programme is not specialized in sports industry so that it is not practical for my task. I don't think I can apply the knowledge gained from the training programme for my task. (Jane)

I read the code of ethics but I think it is useless because it is too abstract and illegible so that it is hard for me to understand. (Matt)

#### 3.4. Development plan for managerial ethics in Korean sport organizations

Participants suggested development plans for managerial ethics in Korean sport organizations. Two main themes of administration system and factionalism were identified. For a listing of each theme, with corresponding subthemes, please refer to <Table 4>.

**Table 4.** Matrix display of themes and subthemes.

Themes	Subthemes
1. Administration	a. Severe disciplinary action
system	b. Strict monitoring system
	c. Recruitment process
2. Factionalism	a. Eradication of factionalism

#### 3.4.1. Administration

The first theme to emerge from the interviews was administration system with corresponding four subthemes, severe disciplinary action, strict monitoring system, and recruitment process. Overall, participants felt that as Korean sport or-

ganizations do not have well developed administration system, it should be reformed. Jessica pointed out:

It seems to me that Korean sports organizations has poor administration system. This leads to corruption. For example, selection process of national team athletes and coaches is not systematic and not well-organized. So many people consider the process to be not transparent. It is true. It is not fair. If athletes and coaches have a personal connection with people having leadership position in sports organizations, they might become a national team much easier. To prevent this kind of corruption, Korean sport organizations must create and develop systematic system such as specific rules and regulations.

#### 3.4.1.1. Severe disciplinary action

Disciplinary action would aims at preventing misconduct or poor performance, including corruption and irregularity. The types of disciplinary action are warnings and, in serious cases, dismissal. However, disciplinary action can sometimes mean suspension from work, or the removal of certain privileges, or, in rare instances. Severe disciplinary action was suggested for the development plan for Korean sport organizations. This was described by Jack:

For the disciplinary action against officials committing an irregularity or corruption, the punishment is too light. We need much more strong punishment for corrupt officials. When they violate regulations, they are suspended for few months and come back to their leadership position, which causes repeated corrupt practice be in Korean sports organization.

#### 3.4.1.2. Strick monitoring system

Participants pointed out the problems of concealment, protection of victims, and the lack of detection of current ethical issues within Korean sport environment. To deal with and solve them, strict monitoring system was suggested. This was mentioned by Tiffany and Tom respectively, with examples.

Sports organizations tend to conceal such issues of violence and sexual abuse. Because this has negative impacts on not only its sports but

also the organization image if the problems are reported to public. It also leads to punish organizations' members, such as organization's officials and president. That is why Korean sport organizations hide the issues. So I think strict monitoring system would be one of the best development plans to help the organizations be ethical. (Tiffany)

We knew that sexual abuse and violence usually occur between coaches and athletes. However, nowadays, athletes also harass their peers. I know that case one athlete pushed his peer to watch porn movies and pushed his peer touch his body. Some threatened their peers with knife. But we don't know this seriousness. (Betty)

#### 3.4.2. Factionalism

The tendency towards factionalism has been criticized for the longtime but South Korea has yet to solve this problem. Almost all participants claimed that Korean sports should eradicate factionalism. Matt stated:

It is impossible to take disciplinary action against officials in sport organizations due to factionalism. They have a close relationship with each other such as inner circle. They conceal their corruption. It seems that factionalism is related to almost all ethical problems in Korean sport organizations.

#### 4. Discussion

This research identified the ethical issues confronting Korean sport organizations, and the factors influencing decision making to deal with the issues. It also proposed development plans for managerial ethics in Korean sport organizations. Following, findings related to the research questions are discussed in detail.

#### 4.1. Identification of ethical issues

Results indicated that Korean sport organizations have been faced with various ethical issues according to the organizations, departments, and responsibilities. It consists of two main themes: athlete and coach, and organization. While former is related to management and supervision of athlete and coaches, and latter is

pertaining to organization's internal issues. Generally, all participants felt that Korea sports have faced serious ethical issues, especially, the organization's corruption. The result regarding identification of ethical issues appears to be partly consistent with Hums et al.'s research[9] that sport managers in each segment of the sport industry encounter unique and different ethical issues.

One of the striking findings was the organization's disciplinary action for athletes and coaches, particularly, regarding the issue of sexual abuse and harassment. Although sport organizations should play a pivotal role in prevent the incidents and protect victims, they tend to conceal the issues, using organizational power when it occurs. As victims, athletes also lack of knowledge on countermeasures against the incidents. Betty pointed out "athletes consider reporting sexual harassment and abuse to be their final action that decides to quiet playing sports." This finding is consistent with earlier research showing that the reason that a problem of sexual harassment was concealed was the difficulty for the athlete to resist because organization's leaders, including directors and coaches, have an exclusive right related to the athlete's pay and participation in a match[19].

In addition, the current research revealed that winner-oriented was related to the ethical issues in Korea sports. According to UNESCO[20], sports and sports-related organizations have a responsibility to contribute to the promotion of fair play. In other words, sport organizations should guarantee fair competition for athletes. However, the findings indicated that Korean sport organizations tend to give more support to outstanding athletes, such as funding which should be distributed equally to all athletes regardless of such abilities. Moreover, the organizations concealed excellent player's irregularity, such as violation of the organization's roles and regulations. This finding is consistent with Schneider's[5] argument that sport organizations disregard ethical decision making when winning and profits are often valued above all else. He also noted that the reason why sport administrators manage their organizations without regard for ethical standard is winning games generate benefits like improving not only revenue but also its reputation.

Interestingly, the finding suggests that Korean sport organizations have a preference for domestic brand companies as a sports sponsorship. Sport organizations usually contract to the sponsors placing the highest biding money to maximize its revenue, which might be regarded as a common sense in the business operation. However, Korean sport organizations have a tendency towards preferences for domestic brand for sponsorship agreement. The finding appears to be partly consistent with Knight's research[21] indicating that compared to imported goods, consumers appear to prefer domestically manufactured goods and are often willing to pay a higher price for them. In addition, according to Lee[22], the reason over the preference of domestic brand product is patriotic sentiment. It seems likely that with patriotism, Korean sport organizations prefer domestic brand companies as their sponsors.

Factionalism has been deeply rooted in Korean sports and been criticized for a long time. The people like coaches, athletes, and the organizations' officials grouped according to regionalism, school relations, and kinship which were viewed as their ticket to success in Korean sports. Korean mass media including public opinion has pointed out that factionalism was closely related to Korean sport organization's corruption. With overflowing factionalism in Korean sports, the actions against corruption, such as monitoring, reporting, taking disciplinary actions could not be implemented.

### 4.2. The factors influencing decision making to deal with ethical issues

Decision-making is one of the most important functions in any kind of organization. Sport managers face the difficult task of operating departments and organizations in a business climate in which winning and profits are often valued above all else[5].

The finding indicated that most participants considered organization's regulations as the cri-

teria of decision making when confronting ethical issues. However, a very notable finding that emerged from one participant was obeying boss. It is true that staffs holding a low rank of positions should follow superior officer's directions under organization's roles and regulations. Moreover, it is also clear that leadership position has powerful influence over organization's decision making. Yet, the finding suggests that their individual power could be used for their private benefits, changing organization's regulations and roles without any consent.

Hums[9] argued that because of the complex of the sport industry, and the unique ethical issues faced by sport managers in the different segments, it is difficult to pose one particular decision making model as best across the sport industry. But they suggested Zinn's(1994) ethical decision making model which could be applied across the different industry segments:

- (1)Identify the correct problem to be solved.
- (2) Gather all the pertinent information.
- (3)Explore codes of conduct relevant to one's profession or to this particular dilemma.
- (4)Examine one's own personal values and be liefs.
- (5)Consult with peers or other individuals in the industry who may have experience in similar situations.
- (6)List decision options.
- (7)Look for a "win-win" situation if at all possible.
- (8)Ask the question "How would my family feel if my decision and how I arrived at my decision where printed in the newspaper tomorrow?"
- (9)Sleep on it. Do not rush to a decision.
- (10)Make the best decision possible, knowing it may not be perfect.
- (11)Evaluate the decision over time.

### 4.3. The tool of ethics managerial and organizational policy

The code of ethics represents the specification

of norms and beliefs of an organization and the values to be followed employees and managers[10]. According to UNESCO[20], the basic principle of the code of sports ethics is that ethical considerations leading to fair play are integral and not optional elements, of all sports activity, sports policy and management, and apply to all levels of ability and commitment, including recreational as well as competitive sport. In addition, ethics training programmes help also employees to deal with ethical issues and to understand the values shown in the code of under a common behavior[10].

However, the finding that emerged indicated that both the code of ethics and ethics training programmes were not applicable to and practical for the tasks in Korean sport organizations because they were not specialized in sport industry. The problem was pointed out by Amanda. "My organization doesn't have its own the code of ethics. So it is recommended that I refer to Korean public officials' the code of ethics" This finding is consistent with Desensi and Rosenbug's argument[6] that the code of ethics should be organized according to relationship, responsibilities, and type of action of sport managers, organizations, and businesses. Above mentioned, the ethical issues in sport organizations differ from other industries, and are unique and various. Therefore, the tools of ethics management should be also customized.

### 4.4. Development plans for managerial ethics in Korean sport organizations

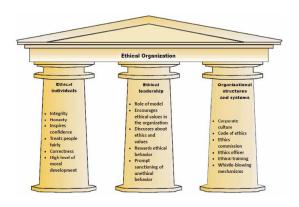
Since the majority of the participants in the present research have not held managerial positions in the organizations, their opinion regarding ethical climates in Korean sport organizations should be interpreted with caution. To explain, they have a strong tendency over criticizing the officials having leadership positions. Overall, participants proposed improvement of administrative systems as the development plans for managerial ethics in Korean sport organizations. It includes developing systematic organization's regulations, strict monitoring system, and reinforcement of disciplinary actions against corrupted official. They pointed out that the current less advanced administrative system has led to

repeated corrupting practices in the organizations.

Some studies on development of Korean sport organizations' administrative system have been conducted. Kim[23] investigated the understanding on advancing Korea sport organizations among people working in the organizations. He noted that reinforcement of effective roles played by sport should be accomplished through functional coordination for sport organizations.

Regarding managerial ethics in organizations, Barbu and Craciun[10] claimed that organizations should be constantly concerned about maintaining the ethical integrity, and ethic should be considered an integrant part of management decision-making process. <Figure 1> shows that ethical organization is consisted of three pillars, ethical individuals, ethical leadership, and organizational structures and systems. Ethical organizations would be achieved by displaying ethics on the three pillars.

Figure 1. Pillars of ethical organization[10].



#### 5. References

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## The Effects of Mentoring on College Golf Major Instructors on Empowerment and SPORTS Confidence

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#### **Abstract**

The purpose of this study is to clarify the effect of mentoring of college golf major instructors on empowerment factor and sports confidence and provide useful data for them to set up clear target goals and improve their performance. In order to achieve this goal, this study selected golf college students in Seoul, Gyeonggi, Daegu, and Gyeongbuk between March and May, 2018 for three months by using a stratified cluster random sampling method. The researcher visited each university and requested explanation and cooperation in the questionnaire. 265 copies of the collected questionnaires were used as the data of this study. For data analysis, the SPSS 22.0 program was used in this study and the hypothesis was verified by frequency analysis, factor analysis, reliability analysis, correlation analysis, and multiple regression analysis.

As a result of analyzing the effects of mentoring on an empowerment factor, the value of explaining power was .237. The effect of independence variables was positively influenced by career factors( $\theta$ =.163), psychosocial factors( $\theta$ =.344), and role model factors( $\theta$ =.226) on empowerment.

Second, the analysis of the effect of mentoring on the factors of sports confidence showed  $R^2$ , the value of coefficient of determination was found to be .198. The effect of independence variables was positively related to the sport confidence ( $\theta$ =.157), psychosocial factor ( $\theta$ =.344) and role model factor ( $\theta$ =.243).

[Keywords] Golf, College Golf Majors, Mentoring, Empowerment, Sport Confidence

#### 1. Introduction

Modern sports focus on the mental strength of athletes such as autonomous control of potential anxiety factors during the game, or control of arousal level, improvement of confidence, and attention concentration so that athletes can maximize their abilities.

With the greater importance of mentoring in the area consisting of different members, more attention is paid to mentoring as a way to improve the efficiency of organization operation and the performance of organizational learning and guidance.

Mentoring can originate from the perception of the importance of mentoring roles that positively influence the attitudes, values, beliefs, individual members, human development, organizational development, and goals as well as the behaviors of sports organization members. It can be concluded that trust is formed through interaction between athletes and instructors, and it is an important factor that can positively cope with any situations confronting within a sports organization[1].

In addition, the performance of college athletes is influenced by various factors, and the instructor factor is recognized as an important factor affecting the performance of athletes because interaction based on mutual trust between athletes and leaders greatly affects the performance of athletes[2].

In this regard, the increasing interest of researchers along with recent studies on mentoring is empowerment. Empowerment refers to an action and a process that promotes the voluntary behavior of members by empowering or motivating the members of the organization to participate in decision making[3]. In addition, empowerment for golf major students is an overall process that acts with positively thinking and active fulfillment of their lives and duties. It forms a positive perception of the surrounding environment so that it is suggested as an important factor influencing positive emotions in the game, training, and overall life of athletes, athletic satisfaction, and sports confidence[4].

The importance of sports psychology has been extensively studied for improving the performance and skills of college golf majors. However, there is insufficient research to analyze the partial effects or impacts of the variables. The purpose of this study is to provide useful data for them to set up clear target goals and improve their performance.

#### 2. Theoretical Background

#### 2.1. Mentoring

Mentoring refers to an action where mentor and mentee mutually discuss and agree, and share experience and knowledge. In other words, it means a process to support each other interactively and dynamically by sharing education, guidance and ideas within the given time, in short- and long-term or both officially and in officially[5].

#### 2.2. Empowerment

Empowerment is the process by which people achieve greater control over their lives. It is a psychological process that promotes the intrinsic motivation of members by perceiving meaning, ability, self-determination, and influence on their duty[6].

#### 2.3. Sports confidence

Sports confidence refers to the belief that a person can perform a desired behavior successfully, which is the degree of certainty of an individual's ability to perform successfully in a sport field. In other words, it is an important factor for predicting what kind of results can be obtained when playing the game.

#### 3. Research Method

#### 3.1. Study subjects

The subjects of this study were college golf majors in Seoul, Gyeonggi, Daegu, and Gyeongbuk. They were selected by means of a stratified cluster random sampling method. The researcher visited each university from March to May, 2018 for three months to ask for explanation and cooperation in the survey. 265 questionnaires among the collected ones were used as the data of this study except 10 questionnaires with no or unsincere answers. The results of the analysis on socio-demographic characteristics of the study subjects are as follows: male(n:198) and female(n:67) in terms of gender, first grade(n: 76), second grade(n:85), third grade(n:55), 4th grade(n: 49) in terms of school grade, and less than 3 years(n:22), 3 to 5 years(n:75), and 5 to 10 years(n:36) in terms of athletic career.

#### 3.2. Survey tools

All the questions were constructed on the basis of previous studies and theories to fit the purpose of the study and the Likert 5point scale was used. The survey on mentoring of college golf majors was composed of a total of 24 questions based on the questionnaires developed by Noe(1988)[5] and modified according to the purpose of this study based on the questionnaire used by Lee Seung-hee(2008)[7] and Lee Joo-ho(2014)[8]. The survey on empowerment was composed of a total of 16 questions in accordance with the purpose of this study based on the questionnaire used by Woo Soo-in(2006)[9] and Kwon Woo-moon(2009)[10] in Korea as a Thomas & Velthouse(1990)[6] model. The survey on sport confidence consisted of a total of 15 questions modified to fit the purpose

of this study based on the questionnaire developed by Vealey(1986)[11] and used by Lee Jeong-ho(2017)[12].

This questionnaire was verified through a specialist conference composed of three persons with a Ph.D. degree in physical education to secure the validity of the questionnaire. After conducting the preliminary survey, the expert meeting was organized once again to review and complete the structure of this questionnaire.

### 3.3. Reliability and validity analysis of measurement tools

Exploratory factor analysis was conducted and Cronbach's  $\alpha$  was derived to ensure the reliability and validity of measurement tools. The exploratory factor analysis was based on factor loading  $\pm 0.6$ , excluding the questions that were overlapped or had low common elements. The reliability analysis evaluated the internal consistency through Cronbach's  $\alpha$ .

As a result of the reliability and validity analysis, the factor loadings of mentoring were .678 $^{\sim}$ .867, Cronbach's  $\alpha$  was .832, the factor loadings of empowerment were .822 $^{\sim}$ 845, Cronbach's  $\alpha$  was .885, the factor loadings of sports confidence were .644 $^{\sim}$ 902, and Cronbach's  $\alpha$  was .853, satisfying the reliability and validity criteria of the questionnaire.

#### 3.4. Data processing method

SPSS 22.0 was used for data processing. Cronbach's  $\alpha$  of Exploratory Factor Analysis and Internal Consistency Method were derived for the reliability and validity of the questionnaire used in the analysis. Frequency analysis was conducted to analyze the sociodemographic characteristics of the sample. Correlation analysis was carried out to derive the correlation between measured variables, and multiple regression analysis was performed to measure the influence relationship between variables.

#### 4. Research Results

#### 4.1. Correlations between variables

As a result of the factor analysis, the correlation analysis based on the derived factors showed that career factors, psycho-social factors and role model factors which are the subfactors of mentoring; influence, self-determination, semanticity and competence which are the sub-factors of empowerment; and ability demonstration, physical and mental, coach leadership and social support which are the sub-factors of sports confidence are all correlated.

### 4.2. Relationship between mentoring and empowerment

<Table 1> shows the results of regression analysis to find out the relationship between mentoring and empowerment. As a result of analyzing the effects of mentoring on the factors of empowerment,  $R^2$ , the value of coefficient of determination was .237. The effect of independence variables was positively influenced by career factors(β=.163), psycho-social factors(β=.344), and role model factors(β=.226) on empowerment.

**Table 1.** Relationship between mentoring and empowerment.

Depend- ent vari- able	Inde- pendent variable	В	SE	Beta	t	Sig
	(Con- stant)	1.71 1	.160	ı	9.73 3	.000
	Career factor	.132	.053	.163	2.33 2	.001
Empow- erment	Psycho- social fac- tor	.223	.042	.344	5.32 1	.000
	Role model factor	.197	.060	.226	3.33 4	.001

### 4.3. Relationship between mentoring and sport confidence

R<sup>2</sup>=.237, F-value=33.274(sig=.001)

<Table 2> shows the results of regression analysis to find out the relationship between mentoring and sport confidence. As a result of analyzing the effect of mentoring on sports confidence,  $R^2$ , the value of coefficient of determination was .198. The effect of independence variables was positively related to sport confidence(β=.157), psychosocial factor(β=.344) and role model factor(β=.243).

**Table 2.** Relationship between mentoring and sport confidence.

Depend- ent varia- ble	Independen t variable	В	SE	Beta	t	Sig
Sport confi- dence	(Constant)	1.84 1	.185	1	8.51 3	.000
	Career factor	.146	.033	.157	2.42 2	.032
	Psycho- social factor	.140	.058	.344	2.46 5	.011
	Role model factor	.210	.053	.243	3.75 4	.000

R<sup>2</sup>=.198, F-value=33.274(sig=.001)

#### 5. Conclusion

The purpose of this study is to clarify the effect of mentoring of college golf major instructors on empowerment factor and sports confidence and provide useful data for them to set up clear target goals and improve their performance. In order to achieve this goal, this study selected golf college students in Seoul, Gyeonggi, Daegu, and Gyeongbuk between March and May, 2018 for three months by using a stratified cluster random sampling method. The researcher visited each university and requested explanation and cooperation in the questionnaire. 265 copies of the collected questionnaires were used as the data of this study. For data analysis, the SPSS 22.0 program was used in this study and the hypothesis was verified by frequency analysis, factor analysis, reliability analysis, correlation analysis, and multiple regression analysis.

As a result of analyzing the effects of mentoring on an empowerment factor, the value of explaining power was .237. The effect of independence variables was positively influenced by career factors( $\beta$ =.163), psychosocial factors( $\beta$ =.344), and role model factors( $\beta$ =.226) on empowerment.

These results indicate that golf college major students are more likely to increase self-determination and influence in their organizations, and also have an impact on the ability to exert their experience and athletic performance. It suggests that empowerment will be higher through mentoring if not only proper

feedback but also exact criteria and methods are given for them to evaluate individual ability and goal-setting process by themselves in a more autonomous way.

Second, the analysis of the effect of mentoring on the factors of sports confidence showed  $R^2$ , the value of coefficient of determination was found to be .198. The effect of independence variables was positively related to the sport confidence( $\beta$ =.157), psychosocial factor( $\beta$ =.344) and role model factor( $\beta$ =.243).

The results of this study are as follows. First, instructor mentoring perceived by golf college majors is effective to improve performance and confidence, and it needs to make efforts to improve the communication and relationship among college golf majors by creating a better environment and training atmosphere.

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# Effect of 12-Week Senior Qigong TRAINING on Blood Pressure and Blood Lipid Concentration

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#### **Abstract**

This research aims to find out the effects of the senior program participation based on the training method of Dahn-taekwondo that is inherited with the tradition of the original Korean qigong. The targets of this research are 20 women seniors of older than 60. By the classification of the body mass index into the normal and overweight groups, the senior qigong program was carried out for 1 hour a day 3 times a week for 12 weeks. As a result, there was no change in the systolic and diastolic blood pressures in the neutral fat of a normal person among the blood lipid factors. The total cholesterol decreased significantly for both groups, and the high-density lipoprotein cholesterol increased significantly for the overweight group. Therefore, it is proved that the comparably easier senior qigong program participation causes the positive effects on the blood pressure and blood lipid factors, and it can be used as a seniors' health promotion program.

[Keywords] Dahn-Taekwondo, Qigong Training, Blood Pressure, Blood Lipid Factors, Body Mass Index(BMI)

#### 1. Introduction

The medical development and economic growth are accelerating the aging society as well as the life extension of humans[1]. In our country, the over-65-year-old senior population was 7.2% in 2000, which tells it is an aging society. It is expected to reach 20.83% in 2026, which will be the super-aged society. Furthermore, as the increase speed of old people of the age of more than 80 is outstanding, though they were only 1.4% of the total population, they are expected to take up to 14% of the entire population in 2050[2]. Though many problems can occur in the super-aged society, the most representative one is expected to be the increased death rate by the cardio-cerebrovascular diseases. There should be some attentions and appropriate preparations for this matter[3]. The senior health problems have the common characteristic that they are usually complicated and led to the chronic diseases[4]. One of the factors that cause the senior health problems is the decreased strength due to the in sufficient physical activity[5]. The regular physical activity of the seniors can prevent the sarcopenia that appears due to the muscle loss[6], and provide the positive effect on the blood lipid[7][8][9], high level of immunity, and decreased risk of the chronic diseases. It is an effective method to slow down the aging[10]. Especially, for women, the blood cholesterol and neutral fat figures drastically change around the period called the menopause, and this change is found to be in relation with the increased risk of the cardiovascular diseases[11]. The physical inactivity is closely related to the health risk factors[12], and the senior health promotion includes the positive effect on the reduction of medical fees[13]. The aging causes the decrease in the body composition and physical activity[14], and the muscle loss and body fat increase are the main changes of the body composition due to the aging[15]. The age

group that gets the most benefits from the regular exercise is the senescence[16], and the regularly planned exercise program participation are reported beneficial to the increased muscle strength[17][18] and the decreased body fat[19][20]. In the results of the meta-analysis related to the senior exercise effects since 2011, the effects on the risk factors of cardiovascular diseases [21] emphasize on the importance of the exercise program participation and the necessity of the customized exercise programs. Especially, in the senescence, the importance for the healthy body is unconditional[22]. There are various exercise methods for the senior health promotion, but the qigong training among the suitable exercises is the exercise for the increased general physical adaptability, correct posture maintenance, flexibility recovery, and strength training of the abdominal and back muscles. The qigong means the training to reach the complete human state by training and administering the spirit. The basic elements of qigong are Josin(調身: Correct posture and motion to correctly move), Josik(調 息: Correct breathing), and Josim(調心: Correct concentration)[23]. Yooasa Yasoh(1992) says the gigong training decreases the pain, injuring ability of the cancer cells, and catecholamine[33]. Xing and Pi(1993) reported there was the mental effect in regard of the physiologic function such as the heart rate, body temperature, sympathetic nerve function, and gastrointestinal function, exercise, and perception[34]. In regard of the qigong, Kim Jong-hyun(2010) said that the air comes in and out in our body, and the breathing is the procedure that confirms the life existence[24]. Yoon Tae-gi(2012) said the gigong can prevent and cure the diseases through the body balance and harmony, and increase the level of immunity[25]. In our country where the aging is progressing faster than in any other country, the feminization of the seniors is also getting serious, and the women health problems and adaptable problems seem to happen differently from the male seniors as well. This research aims to find out the effects of the application of the 12-weeks 'Senior Qigong Program' invented by the Dahn-taekwondo trainer with long training experience, which requires the whole-body movement for the female seniors mainly, on the blood pressure and blood lipid concentration which are included in the risk factors of the cardio-cerebrovascular diseases.

#### 2. Methods

#### 2.1. Research target

The target of this research is the group of 20 female seniors of the age over 60, who live in G city, K do. Only the people who volunteer to participate after listening to the sufficient details about the objectives and contents of this research are experimented. The physical characteristics are described in <Table 1>.

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

Group	Age(yrs)	Height(cm)	Weight(kg)	BMI(kg/m²)	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. Exercise program

The subjects were trained by the Dahntaekwondo senior qigong program which is the modernized version of the previous Korean training for an hour a day 3 times a week for 12 weeks at the S senior citizen community, and the training details are described in <Table 2>.

Table 2. Dahn-taekwondo senior qigong program.

Time (min)	Contents	Effect	Level
15	Hitting danjeon, intestinal exer- cise, hitting wa- ter curtain, infi- nite spinning, tapping the whole body	Sooseung- hwagang	Introduction
30	7 Ascetic Gym- nastics includ- ing 8 Joints Massage and Stretching the whole body	12 Meridian Circulation	In develop- ment
15	Wagongyeon- dan, relaxation	Chukgi and re- laxation	Finalization

As described in the table, the training hour by disparity was set to be 60 minutes, and the 15 minutes in the first step focused on building the body condition to perform 5 basic dahn-taekwondo motions, and Sooseunghwagang. The 30 minutes in the second step focused on circulating the spirit by 12 meridian system with the 8-joints message and stretch of whole body. In the 15 minutes in the third step, the chukgi was performed by Wagongyeondan and relaxation training, and the mind and body were relaxed as the spirit went down.

#### 2.3. Research target

Before and after the application of this program, the height, weight, stabilized blood pressure examinations, and blood collection were performed for the subjects at G health center. The blood was collected through the brachial vein after the 12-hour empty stomach. To prevent the coagulation after the 10 ml blood collection, it was heparinized. Then, it was stored at -70°C until the next analysis after the centrifugation for 10 minutes at 3,000rpm. The blood lipid(Glucose, TG, TC, HDL-C, and LDL-C) concentration was measured by the enzymatic analysis with the use of the Kit of the Sigma company.

#### 2.4. Data processing

For the systematic processing, the average and standard deviation of each measurement variable were computed with the use of the SPSS 21.0 program.

To compare the average values before and after the program participate in the normal weight and overweight groups, the paired ttest was executed. To compare the average values after the program participation in two groups, the Analysis of Covariance: ANCOVA was performed. The significance level was set to be p<.05.

#### 3. Results

### 3.1. Blood pressure change after senior qigong training

The changes in the systolic and diastolic blood pressures after the dahn-taekwondo

senior qigong program participation are described in <Table 3>. The significant statistic difference could not be found. The average values of the systolic and diastolic blood pressures before the program participation of two groups have shown the statistically-significant difference. The results of the analysis of covariance that compares the average values of the blood pressures of two groups before and after the program participation didn't show the significant change either.

**Table 3.** Change in blood pressures after senior qigong training.

	SBP(mmHg)		DBP(mmHg)		
	Pre	Post	Pre	Post	
Normal	125.25±1	125.35±15.	85.75±11.	82.38±13.	
weight	2.56	33	99	19	
Over-	132.58±1	128.58±13.	92.92±8.8	88.42±13.	
weight	7.05	09	7	73	

Note: Value are mean±SD.

### 3.2. Change in blood lipid concentration after senior qigong training

1)Change in blood sugar and neutral fat concentration after senior qigong training

The change in the blood sugar and neutral fat concentration after the dahn-taekwondo senior qigong program is shown in <Table 4>. The blood glucose concentrations before and after the training were 112.75 $\pm$ 16.62(mg/d $\ell$ ) and 107.96±9.26(mg/ $d\ell$ ), respectively, in the normal weight group. In the overweight group, they were 114.58±13.05(  $\ensuremath{\mathrm{mg}}\xspace/\,\mathrm{d}\ell$  ) and 108.58 $\pm$ 8.54(mg/d $\ell$ ), respectively. Taken the advance measurements of two groups as the covariate variables, the analysis of covariance was performed. However, there was no statistically-significant difference. The blood neutral fat concentration was found to be significantly reduced from 113.63 $\pm$ 40.81(mg/d $\ell$ ) to 89.47±24.63( $mg/d\ell$ ) after the training in the normal weight group. In the overweight group, it went down from 143.67±48.54(mg/  $d\ell$ ) to 142.83±47.36( mg/ $d\ell$  ), which is not quite significant in the statistical perspective. Taken the measurements before the program participation in two groups as the covariate variables, the program was executed. In the analysis of covariance that compared the average of the blood neutral fat concentrations

of two groups didn't find any statistically significant-difference.

**Table 4.** Change in blood sugar and neutral fat after senior qigong training.

	Glucose(mg/dℓ)		TG(mg/dℓ)	
	Pre	Post	Pre	Post
Normal	112.75±1	107.96±9.	113.63±4	89.47±24.
weight	6.62	26	0.81	63*
Over-	114.58±1	108.58±8.	143.67±4	142.83±47
weight	3.05	54	8.54	.36

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

2)TC, HDL-C, LDL-C changes after senior qigong training

The changes of the total cholesterol, highdensity lipoprotein cholesterol, and low-density lipoprotein cholesterol after the dantaekwondo senior qigong program participation are shown in <Table 5>.

The total blood cholesterol concentrations before and after the senior qigong training 176.41±32.26( mg / dl ) 140.25 $\pm$ 29.97( mg /  $d\ell$  ). For the overweight group, it decreased from 197.25 $\pm$ 43.76(mg/d $\ell$ ) to 169.00 $\pm$ 40.15(mg/d $\ell$ ). For both groups, it decreased statistic-significantly (p<.05, p<.001). The concentration of the high-density lipoprotein cholesterol seemed to increase from 30.63 $\pm$ 8.85( mg / d $\ell$  ) to 36.38 $\pm$ 8.14(mg/d $\ell$ ) after the program in the normal weight group, but there wasn't any statistically-significant difference. For the overweight group, it significantly increased from 27.58 $\pm$  10.23(mg/d $\ell$ ) to 40.75 $\pm$ 16.52(mg  $/d\ell$ ) in the statistical perspective(p<.05). In the analysis of covariance which compared the averages of two groups after the program participation with the measurements before the program participation of two groups as the covariate variables, the statistically-significant difference was not found. The lowdensity lipoprotein cholesterol concentrations in the normal weight group and overweight group seemed to decrease from 112.25 $\pm$ 46.92(mg/d $\ell$ ) and 88.67 $\pm$ 49.78(mg/d $\ell$ ) to  $88.38\pm75.28 (mg/d\ell)$  and  $80.83\pm33.26 (mg/d\ell)$  $d\ell$ ), respectively. However, there was no statistically-significant difference. There was no significant difference in the averages of the

measurements of two groups in the analysis of covariance as well.

**Table 5.** Changes of TC, HDL-C, LDL-C after senior qigong training.

	TC(mg/dℓ)		HDL-C(mg/ $\mathrm{d}\ell$ )		LDL-C(mg/dl)	
	Pre	Post	Pre	Post	Pre	Post
Normal Weight	176. 41±3 2.26	140. 25±2 9.97*	30.6 3±8.8 5	36.3 8±8.1 4	112.2 5±46. 92	88.38 ±75.2 8
Over- weight	197. 25±4 3.76	169. 00±4 0.15*	27.5 8±10. 23	40.7 5±16. 52*	88.67 ±49.7 8	80.83 ±33.2 6

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

#### 4. Discussion

The systolic and diastolic blood pressures before and after the 12-weeks dahntaekwondo senior qigong program did not have a significant difference, and yet it decreased after the program. For this matter, in comparison with the results of the previous researches, Jeon Yeong-seon(2004) reported the taegeuk health qigong gymnastics participation didn't significantly affect the systolic and diastolic blood pressures, and Lee Gangok and Kim Duk-joong(2003) report that the hypogastric breathing could not reduce the systolic pressure of the women of the age over 60 with the high blood pressure [26][27]. However, in the results of other previous research[28][29][30], the blood pressure was founded to be decreasing, which is contradictory to the results of the above research. In the research results of Kim Duk-joong(2004), it was reported that the 12-weeks hypogastric program(4 times a week, 60 minutes a time) statistically lowered the systolic and diastolic blood pressures of the obese males with the high blood pressure by lots[28]. Jeong Yeon-soo also said the systolic blood pressure of female adults could be reduced through the oriental medicine qigong[29]. Choi Jang-yu(2010) reported the oriental medicine qigong can reduce the systolic and diastolic blood pressures of old obese females[30]. In general, the regular and consistent physical activity is known to be beneficial for the blood pressure reduction. However, this effect might not appear in the group of young people with good physical ability or people of the normal blood pressure[31]. This kind of reports agree with the results of this research. The systolic and diastolic blood pressures before and after the program were all found to be normal in the normal weight group, and they were found to be at the normal boundary in the overweight group. The conformity and discordance with the results of the previous researches mean that the exercise program effect can vary depending on its characteristic(exercise period, exercise frequency, exercise type, exercise intensity) and the characteristics of the subjects that participate in the exercise program(metabolic disease condition, gender, age). In this research, the dahn-taekwondo senior gigong program was performed for 60 minutes a day and 3 times a week for 12 weeks. It doesn't directly conform to the research method of the previous researches. Therefore, it is hard to discuss about the exercise program effects directly. Furthermore, the standardization of the exercise program intensity was not conducted, and the research of the initiative and completeness of the individual exercise program participation was not done as well. There is clearly a restriction for the direct discussion. The total cholesterol figure among the factors in blood was found to be significantly reduced in both groups by statistics. Along with the significant increase of the high-density lipoprotein cholesterol concentration in the overweight group, there were some positive changes in other factors in blood. However, there was no significant statistical difference. This kind of results tend to agree with the results of the previous research[25][26][32]. Kwon ook(2000) reports that the blood lipid and HDL-C of the senior females are significantly reduced after the taekeukwon participation based on the measurements before and after the program participation[25]. Jeon Yeongseon(2004) reports that the participation of the taegeuk health qigong gymnastics did not bring a significant difference in blood sugar[26]. In general, the regular exercise participation is known to help improve the blood pressure and blood elements. However,

many elements such as the food intake behaviors and stress removal are also know to affect the blood pressure and blood lipid concentration. In this research, the regulation for the variables other than the senior qigong program seems to have affected the results of this research. However, through the discussion with the previous researchers, it was found that the dahn-taekwondo senior gigong program was the program that positively affected the blood pressure and blood variables. The dahn-taekwondo senior qigong program is the senior-customized program that includes many dynamic and static motions, and is constituted of dynamic qigong programs, unlike other researches. As confirmed in the results of this research, the dahn-taekwondo senior gigong program did not only increase the concentration of the high-density lipoprotein cholesterol which is known to be a positive factor for the reduction of the blood glucose and neutral fat concentration and the prevention of the hardening of the arteries, but also significantly reduced the cholesterol concentration in both normal and overweight groups.

#### 5. Conclusion

The purpose of this research was to analyze the effects of the 12-weeks senior gigong program participation on the blood pressure and blood lipid concentration for a group of 20 female seniors of the age over 60, and the results are as follows. First, the significant systematic difference in systolic and diastolic blood pressures could not be found. Second, in the neutral fat among the blood. The highdensity lipoprotein cholesterol was found to be significantly increased in the overweight group. To summarize the results of this research, the senior qigong program participation of comparably low intensity benefits on the blood pressure and blood lipid variables, and therefore, it can be utilized as the senior health promotion program.

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