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Universality and Differentiation on the SPORTS Training Methods of Health Qigong Exercise and Yoga

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Abstract

This study was conducted in order to explain how Qigong and yoga, which are commonly confused with each other, can be distinguished. For this purpose, this study examined the universality and differentiation of Qigong and yoga. In addition, it sampled the subjects from 150 sports-for-all instructors with experience in Qigong and yoga training and surveyed their responses using an open-end questionnaire based on inductive analysis.

Responses to the questionnaire were classified and categorized according to the procedure of content analysis, and from this process were derived factors by area. For the reliability of analysis results, triangulation was used in the data analysis process, and according to the results of content analysis, a total of 640 responses were identified with regard to the universality and differentiation of Qigong and yoga. The number of responses on the universality of Qigong and yoga was 243, and from them were derived 13 factors of the detailed area and 1 other area, and 9 factors of the theme area. In addition, 5 universality factors were found in the general area for the generalization of content analysis.

When a preliminary scale with 20 questions was constructed from collected data and exploratory factor analysis and reliability test were performed, 5 major factors were found including the use of space, motor control, meditation and breathing exercise, relaxation, and free participation. These results explain universal and differentiated parts in Qigong and yoga, and they are expected to contribute to increasing the population training in Qigong and yoga, the traditional training methods based on Oriental thoughts.

[Keywords] Sports Training Methods, Universality, Differentiation, Qigong Exercise, Yoga

1. Introduction

In modern society, people can enjoy sport for all at anytime, anywhere without distinction of age or sex as leisure is diversified with more income and flexible working conditions. Out of many sport for all, Qigong and yoga are representative sports which are not western sports but are based on oriental philosophy with slow movement, breathing and mental training. As modern people who feel tired easily because the body rhythm goes to the pot owing to overload, stress, lack of sleep and overdrinking pay more attention to health and mental world to remove physical

and mental exhaustion and to pursue stability of body and mind, the interest in traditional exercises to minimize exhaustion and to pursue stability is getting increased[1][2].

Up to now Qigong and yoga have been studied on diversified classes in various previous studies. As Qigong is difficult to measure in standard values or by equipment, it tends to be thought as superstition and non-scientific. However, recent studies on Qigong[3][4][5][6] regarding its psychological and physiological effects on various populations compose scientific grounds. Summarizing the results of these studies, it can be in-

ferred that regular Qigong exercises help participants with psychological and emotional stability as well as physiological health. Additionally, effects of yoga and related exercises are diversely studied. When looking into the research results such as effects of yoga training on physiological variables[7], effects on concentration and study efficiency[8] and effects on mental health[9], yoga exercise makes positive effects on physiological and psychological health.

Qigong and yoga are traditional training method based on oriental philosophy. However, in the field of sport for all people who train oriental sports are often confused with training methods. Some people think that they are not much different and some people think those two traditional sports have similar movement as they both have static movements. However, they have their own characteristics although there are similarities between two traditional sports. The common characteristics that they share can be called universality and differentiation is the opposite concept. It can be used as specialness and uniqueness. Therefore, in this study, universality and differentiation of Qigong and Yoga which are representative traditional sports which are combined with oriental philosophy and are actively distributed in the field of sport-for-all will be discussed based on the ground of objectivity. It is hoped that results of this study will enhance the understanding on traditional sports and contribute to field leaders' class programs in the field of sport-for-all.

2. Methods

In this study, subjects were recruited with the help of Council of Sport for All in S city. They have trained Qigong and yoga for more than 6 months and are working in sport-for-all field as leaders. Subjects were recruited by convenience sampling and judgmental sampling from the sports leaders who attend Qigong and yoga classes held by S City Council of Sport-for-All in 2014. The recruited subjects are 26 males and 124 females and average age is 29.05. By training duration, 65 subjects fit less than 6 months, 29 subjects less

than 2 years, 24 subjects less than 3 years and 28 subjects over three years.

In this study an open questionnaire was used to search for the universality and differentiating factors in training methods of Qigong and yoga. Open questionnaire includes questions asking basic background such as sex, age, region and training experiences of Qigong and yoga and they can write their opinions freely with open questions such as "Please write 3 items about things in common and differences in the training methods of Qigong and yoga".

Materials are analyzed using the same methods in Scanlan and Stein(1989)[10], and Seong Chang-un and Kim Byeong-jun(1996)[11], which used contents analysis. First of all, responses to open questionnaire are classified and categorized according to the content analysis procedure, integrated into general theme area and then categorized. Especially, when categorizing by area, individual area includes various responses enough regardless of analysis level and to resolve reliability issue at the process of material analysis contents analysis is reviewed with a researcher who majored in Qigong and yoga and had experience in qualitative analysis. To check classification of the area and categorization of Qigong and yoga training methods according to the procedure, triangulation is adopted. When consensus is not made, those responses are classified as "Others".

3. Results

The responses to open questions regarding the universality and differentiation of Qigong and yoga training methods are classified and categorized according to content analysis procedure. From the content analysis, 13 factors and 1 other area are induced in universality from detailed areas which is the first level classification, while in differentiation 16 detailed areas and 1 other area are found. In the second level classification, theme area, 9 factors are induced in universality and 9 factors in differentiation to make 18 factors in total. Finally, in the third classification level, in general area to generalize contents analysis on universality and differentiation of

Qigong yoga training methods 5 factors in universality and 5 factors in differentiation are induced. Total number of responses in the study is 243 in universality and 397 in differentiation to make 640 in total. Universality factors are classified into 5 general theme area excluding other factors such as "Space Use Factor" including restricted space and very narrow space," "Exercise Moderation Factor" including exercise intensity moderation, variety and repetition of movements, stability of exercise, use of Qi and exercise without tools, "Mediation and Breathing Factor" including mediation and breathing exercise, "Relaxation of Body and Mind" including relaxation of body and body and mind exercise, "Participation Factor" regarding whether they participate in or not. Differentiation factors are also classified into 5 general theme areas excluding other factors such as "Movement Characteristics Differentiation Factor" including movement connection, posture maintenance, rhythmical movement and flexibility and repetition of movements, "Exercise Formality Factor" including type of exercise, intensity of exercise and exercise principles, "Difference in Qi Management" including flow of Qi, meridian system and spots on the body suitable for acupuncture, and "Popular Appeal of Training Method" including origin and popularity. Therefore general

theme areas regarding universality and differentiation are summarized as 5 areas respectively.

To search for the structure of universality and differentiation of Qigong and yoga training methods, R Type Principal Component Analysis and Quersprung type Varimax are used for exploratory factor analysis based on open materials. Before factor analysis, skewness and kurtosis analysis is performed but less than ± 2 is not found. Finally, when exploratory factor analysis is performed considering original value of each factor and redundancy and inner consistency of factors, in universality 14 items out of 5 factors such as space use factor, exercise moderation factor, mediation and breathing exercise factor, body and mind relaxation factor and participation factor, while in the exploratory factor analysis on differentiation, 12 items out of 4 factors such as movement characteristics differentiation factor, exercise formality difference factor, breathing method and apprehension difference factor, and popular appeal of training method factor. Exploratory factor analysis and reliability analysis results on universality and differentiation of Qigong and yoga are shown in <Table 1> and <Table 2> respectively.

Table 1. Results of exploratory factor analysis and reliability analysis on universality of qigong and yoga.

Factor	1	2	3	4	5	Cronbach alpha
Space use factor	.92 .88 .75	.15 .12 .12	.05 .15 .11	.11 .21 .21	.11 .25 .15	$\alpha=.86$
Exercise moderation factor	.23 .22 .23	.89 .85 .77	.07 .01 .21	.09 .03 .21	.12 .08 .14	$\alpha=.84$
Exercise moderation factor	.18 .24 .15	.21 .22 .17	.87 .71 .69	.16 .02 .19	.16 .11 .11	$\alpha=.71$
Body and mind relaxation factor	.22 .22 .11	.02 .02 .09	.07 -.02 .11	.88 .82 .79	.06 .12 -.21	$\alpha=.76$
Participation factor	.24 .03	.01 .19	.16 .18	.15 .16	.83 .76	$\alpha=.69$

Original value	6.33	2.11	1.99	1.77	1.33	
variable (%)	41.02	13.01	9.42	7.22	5.22	
Accumulated variable (%)	41.02	54.03	63.45	70.67	75.89	

Note: Kaiser-meyer-olkin measure of sampling adequacy=.771
Bartlett's test of sphericity=5521.145, df=621, Sig.=.000

Table2. Results of exploratory factor analysis and reliability analysis on differentiation of qigong and yoga.

Factor	1	2	3	4	Cronbach alpha
Movement characteristic difference factor	.92	.02	.04	.07	$\alpha=.91$
	.88	.08	.09	.06	
	.82	.12	.08	.18	
	.78	.14	.21	.01	
Exercise formality difference factor	.21	.90	.16	.04	$\alpha=.82$
	.25	.81	-.14	.09	
	.19	.76	.12	.08	
Breathing method and apprehension difference factor	.18	.11	.88	.21	$\alpha=.84$
	.12	-.08	.82	.07	
	.12	.28	.74	.01	
Popular appeal of training method factor	-.26	.01	.01	.86	$\alpha=.81$
	.15	.15	-.08	.81	
Original value	5.86	3.11	2.21	1.44	
variable(%)	33.69	14.26	9.72	7.11	
Accumulated variable(%)	33.69	47.95	57.67	64.78	

Note: Kaiser-Meyer-Olkin measure of sampling adequacy=.771
Bartlett's test of sphericity=5521.145, df=621, Sig.=.000

4. Conclusion and Suggestion

This study is performed to objectively explain the characteristics of universality and differentiation of Qigong and Yoga training methods. For the purpose of the study, sports leaders working in sports-for-all field are asked about common things and differences between Qigong and Yoga training methods with open semi-structured questionnaire. To abstract universality and differentiation in training methods original materials are divided into detailed area, theme area and general area and abstracted factors are through the process to check validity with exploratory factor analysis and reliability analysis. From materials collected from the open semi-structured questionnaire regarding Qigong and yoga training methods, 5 factors such as Space Use Factor, Exercise Moderation Factor, Mediation and Breathing Exercise Factor,

Body and Mind Relaxation Factor and Participation Factor area explored in universality while 4 factors such as Movement Characteristics Differentiation Factor, Exercise Formality Difference Factor, Breathing Method and Apprehension Difference Factor and Popular Appeal of Training Method Factor are explored in differentiation.

Looking into major contents related to universality from the study results, it is found that the result of this study is consistent with previous studies addressing that generally Qigong and yoga can moderate exercise and are safe[12][13]. It is also confirmed that they have common feature that they are exercises circulating Qi of human bodies based on oriental philosophy. In mediation and breathing exercise factor, they are confirmed that they place much importance on spiritual culture and breathing and both of them are based on mediation. It is originated from the fact that

Qigong and yoga are much static comparing to other sports or exercises and emphasize mediation. Qigong takes Three Moderation Rules such as Body Moderation, Breath Moderation and Mind Moderation as basic training principles[14][15], while yoga places importance on breathing and mediation as well as Asana, the physical training method[16].

When looking into major contents related to differentiation, it is found that Qigong performs continuous movement and repetition without stopping but yoga has pause between movements, the posture Anga is called Asana, and has many stretching movements based on flexibility. Additionally, in the difference in exercise formality, yoga has variety of movements from very easy ones to very difficult ones. So beginners can train themselves from easy ones to difficult ones sequentially and apply one movement to other by altering a little bit. On the other hand, Qigong movements are fixed just like gymnastics so they cannot be changed. The difference between non-skilled and skilled participants can be checked with flexibility and stability of the movements. Additionally, yoga has wide fan base but Qigong is usually used as exercise of older adults. Looking into Oriental Health Promotion Project hosted by 85 Health Offices in Korea, it is found that Qigong is widely used for elderly exercise[17]. As Qigong does not need intense exercise and can be moderated, it is popular among the elderly. On the other hand, yoga is used for stretching and is more popular among people regardless of age[18]. Based on the original materials, it seems that yoga is popular among young women.

Characteristics of Qigong and yoga are identified as such in this study. This study is meaningful in that it summarizes characteristics of Qigong and yoga training methods for easy identification. Such efforts imply possibility to provide Qigong and yoga trainers with training methods efficiently and clearly. It is expected that the results of this study will enhance understanding on slow exercise in the field of sport-for-all and contribute to distribution of athletics in public. In the future, supplements should be made in the future

studies from the perspective of leisure and studies on universality and differentiation from the perspective of kinematic effects should be followed.

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