The Relationship between the Stage of Exercise Behavior Change and Physical Self-Concept and Self-Efficacy of Casino Security Employees

카지노 시큐리티 종사자의 운동변화단계에 따른 신체적 자기개념과 자기 효능감의 관계

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<Abstract>

This study was designed to investigate the relationship between the stages of exercise behavior change and physical self-concept and self-efficacy of security employees in hotel casinos. The sampling was drawn from employees at 8 casinos which had more than 30 employees. Participants were selected by convenience sampling method and they completed questionnaires about Physical Self-Concept and Self- Efficacy by self-administration method under supervision of trained researchers

SPSS 16.0 (Statistical Package for the Social Science) was used for data analysis in the present study. Reliability and validity were examined for the present study. The principle component factor analysis and varimax rotation were used for the present study. Eigen value 1.0 was the criterion for selecting factors. Chi-square (X) 2 test was utilized for measuring the difference in gender and types of job duties at the stages of exercise behavior change. One-way ANOVA was employed to examine the relationship between the stages of exercise behavior change as an independent

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variable and physical self-concept and self-efficacy as dependent variables. The Scheffe method was used to determine mean differences of groups as a follow-up test. Multiple regression analysis was utilized to test the difference of physical self-concept as dependent variable and self-efficacy as independent variable. To verify hypothesis for the study, a statistical significance level of α=.05 was used.

The results were as follow: first, there were differences found for gender and types of job responsibilities in the stages of exercise behavior change. Secondly, as security employees progressed through the stages of exercise behavior change, their physical self-concept and self-efficacy improved. Finally, physical activity and body fat had significant main effects on self-efficacy.

Key Word : Casino, Security Employees, Stage of Change of Exercise, Behaviors, Self-Concept, Self-Efficacy

I. Introduction

The Korean government has adopted a five-working day per week since 2007. This enforcement decree has had a significant impact on the life style of Korean people. They have increasingly become aware of the importance of regular exercise(Jung, 2006). This active life style has played a significant role in leading the current trends of our society. People have become more interested in their physical appearance and the concept of well-being has become more important in their lives. Exercise is considered seriously as a means of promoting physical and mental health in society(Lim, 2007).

There are many beneficial claims about physical and mental health related to physical activities, such as self-confidence, well-being, reduced anxiety, and it's positive effects on depression(Nam, 2005), and these effects would enhance social behavior in our society(Kim, 2003). The current social system is a complex set of multi cultures. That interacts in many different ways. People have relationships with each other and withoutside systems. The behavior of one individual can have an impact on the behavior of others in the system (Kim, Nam, Lee, & Ban, 2000).

In recent years, private and public security industries have developed tremendously in the nation. Due to the characteristics of the security industry, it is necessary for security employees to be equipped with high levels of physical ability in order to protect their customers and themselves(Chun, 2007). Security employees working for hotel casinos and leisure facilities which are frequently overcrowded are required to improve their physical abilities.

Despite the growing awareness of the importance of physical and mental fitness of security industry employees, there have not been many attempts to study about exercise behaviors of employees in the field on self-concept and self-efficacy. Consequently, an interest emerged regarding the relationship between exercise behaviors, the self-concept and self efficacy of employees in hotel casinos. The purpose of this study was to investigate the relationship

between the stage of exercise behavior change and self- efficacy and physical self-concept of security employees in casinos.

Ⅱ. Theoretical Background

1. The Stage of Exercise Behavior Change

Regular exercise involvement has been considered a vital tool to maintain and enhance healthy lifestyles. Outcomes of regular exercise are associated positively with physiological and psychological benefits(Lee, 2008). Even though the benefits of exercise have been realized in the world, few people engage in exercise on a regular basis. It is a critical issue that many people are at health risks due to the low rates of physical activity participation(Yang, Lee, Kim, & Hyun, 2006).

In order to promote physical activity participation rates, it is necessary for exercise practitioners to be aware of how people change their exercise behaviors. Knowing the processes of change of exercise behavior enables them to predict a certain behavior and develop a further plan. With this knowledge, practitioners could develop a suitable intervention(Lee, 2004).

According to Kim(2001), exercise behavior change is a series of processes of change occurring over time. These processes revolve around both unintentional and intentional exercise participation. Also, he explains that processes of change occur in three stages as precedence, adoption, and maintenance(Kim, 2001). Further, Kim(2002) employed the trans theoretical model(Prochaska & Dicilemente, 1983) to support his study. He(2002) proposed the model of exercise behavior change in a series of five stages: 1) pre-contemplation, 2) contemplation, 3) preparation, 4) action, 5) maintenance. Pre-contemplation is the stage in which people have no intention to take action for the foreseeable future, measured as next six months. Contemplation is the stage in which people have intention to change in the next six months. In this stage, people become aware of pros and cons of the change of their behaviors. Preparation

is the stage in which people intend to take action in the near future, measured as next six months. These individuals prepare a plan of action based on previous actions. Action is the stage in which people have modified specific action for their lifestyles in the previous six months. Maintenance is the stage in which people work to avoid relapse. They do not change the process of action as much as people do in action. The model(Kim, 2002) explains how people modify a problem behavior to obtain a positive behavior.

2. Self-Concept and Self-efficacy

Self-concept and self-efficacy have been well documented across various fields of study(Cheon & Pyo, 2006; Choi, 2005; Kim, 2002). Self-concept is a composite of ideas, an abstraction, a pattern of perceptions including cognitive and affective components about self(Combs, 1971). Self-concept is multifaceted and influenced by the appraisal of significant others(Marsh & Shavelson, 1985). Self-efficacy is the perception that people evaluate their ability in a successful performance(Bandura, 1977, 1997). Self-efficacy was developed in the social cognitive theory that explains behavior change (Bandura,1997). The theoretical frame has formed for performance oriented research in the field of sport psychology(Weinburg & Gould, 2007). Self-efficacy requires skills and sufficient motivation to succeed since self-efficacy alone does not guarantee success. Self-efficacy affects the choice of activities and levels of efforts of athletes. Moreover it can transfer to other similar skills and situations even though it is situation-specific(Weinburg & Gould, 2007).

However, researchers(Bong & Clark, 1999) stated that self-concept and self-efficacy are a dichotomy between some similarities and dissimilarities. Self-concept and self-efficacy are viewed as roughly the same in that these two constructs are mainly focused on cognitive components(Choi, 2005). However, a clear distinction between the two constructs is the type of self-appraisal. Self-concept is influenced by others in comparison when evaluating self while self-efficacy is heavily influenced by one's past performance(Bong &

Clark,1999; Choi, 2005).

3. Exercise Behavior Change and Physical Self-Concept

There have been few studies done previously to investigate the relationship between the stage of exercise behavior change and self-concept (Cheon & Pyo, 2006).

A study by Chen & Pyo(2006) showed that the stages of exercise behavior change(Prochaska & Dicilemente, 1983) were positively related to self-concept. Specifically, high school students in the study perceived appearance, health, flexibility, body fat, physical strength, and endurance as the elements of physical self-concepts to identify the relationship between the stage of exercise behaviors and self-concept. The findings indicated a significant difference in the stage of maintenance. The high school students in the maintenance stage improved their self-concept more significantly than the students in the stages of pre-contemplation, contemplation, preparation, and action.

Similarly, another study(Jung, 2009) identified the relationship between physical self-concept and the stages of exercise behavior change. In this study, sport competence, body fat, physical activity, physical strength, and endurance were key sub components of physical self-concept. The participants in the higher stage improved their perception of physical self-concept more significantly than did others in lower stages.

As shown in literature(Cheon, & Pyo, 2006; Jung, 2009), physical self-concept can progress through the stages of process of changes. That is, people in the higher stage consider physical self-concept more critical.

4. Exercise Behavior Change and Self-efficacy

There have also been attempts to identify the relationship between the stage of exercise behavior change and self-efficacy(Cheon, 2008; Lee, 2004). Lee (2004) classified self-efficacy as three different factors: self-regulation, self-confidence, and self-reevaluation. The findings of this study show that Korean

female adults have a higher degree of self-efficacy in the stage of maintenance than people in the stages of pre-contemplation, contemplation, and preparation. The researcher(Lee, 2004) addressed that strategic interventions were necessary as individuals progressed through the stages.

Cheon(2008) reported that a significant relationship exists between the stages of exercise behavior change and self-efficacy in Korean adolescents. In this study, the researcher utilized individual internal efficacy, situational efficacy, and overcoming obstacles as factors to examine self-efficacy. The findings of this study also showed similar results as the previous study (Cheon, 2008). That is, Korean adolescents have higher levels of self-efficacy as they progress through the stages. Although each study used the different factors to investigate the relationship with the stages of exercise behavior changes, these studies confirmed that relationship existed between self-efficacy and the stages.

Ⅲ. Methodology

1. Subjects and sampling

The participants for this study were drawn from 8 casinos that have more than 30 employees who have security and surveillance related duties. Since casinos that have less than 30 employees were not well- structured, only 8 casinos that were well-structured and had good reputation and formal recognition were selected in order to collect data.

The participants of this study were selected by convenience sampling method and they completed the questionnaires coping with the stage of exercise behavior change and physical self-concept and self-efficacy by self-administration method under supervision of trained researchers.

A total of 420 individuals participated in the survey. Only 373 questionnaires were complete and used for data analysis. Among subjects, 227 (74.3%) were male and 96(25.7%) were female. Also, the questionnaires

contained demographic and socio-economic information including gender, age, income and responsibilities in the casinos. The information is displayed in <table 1>.

<Table 1> Personal characteristics

Variable		Frequency (%)
Gender	male	277(74.3%)
	female	96(25.7%)
Age	20 - 25	34(9.1%)
	25 - 30	204(54.7%)
	30 -35	85(22.8%)
	35 older	50(13.4%)
Income(won)	100 - 200 less	199(53.4%)
	200 - 300 less	127(34.0%)
	300 - 400 less	34(9.1%)
	400 - 500 less	9(2.4%)
	500 more	4(1.1%)
Position	surveillance	97(26.0%)
	security	276(74.0%)

2. Instrumentation

1) Stages of Change for Exercise

In order to conduct this study, the Stage of Change Scale for Exercise (Marcus, Selby, Niaura & Rossi ,1992) was adopted and adapted for Korean version (Kim, 2002). To validate the questionnaire(Kim,2002), reliability and validity were examined and reported as .85 and .81 respectively. The questionnaire was designed to measure the exercise behavior change in the five different stages: 1) pre-contemplation, 2) contemplation, 3) preparation, 4) action, 5) maintenance.

2) Physical Self-Concept

The Physical Self - Concept Questionnaire(PSDQ) developed by Marsh and his colleagues(1994) has been widely utilized to measure the physical

self-concept. It has 11scales and consists of 70 items. In addition, it has 11 factors: Appearance, Strength, Condition/Endurance, Flexibility, Health, Coordination, Activity, Body Fat, Sport, Global Physical, and Global Esteem.

Kim(2001) adapted the questionnaire(March et al, 1996) for Korean version of Physical Self-Description questionnaire designed to measure 10 factors of physical self-concept. The researcher revised and modified the questionnaire to be more appropriate for the present study. 8 factors were developed and used.

3) Self-Efficacy

The self-efficacy scale containing 10 items per factor was developed by Marcus(1992) and later modified by Benisovich(1998). To examine self-efficacy in the current study, a modified Korean version of self-efficacy scale(Kim, 2006) was employed to measure self-confidence and self-regulatory efficacy .The scale included 10 questions stating how confident they felt. It was scored on a 5-Likert scale ranging from “not at all confident” to “very confident”.

<Table 2> Physical Self-Concept's factor and reliability analysis

Var.	Physical Self-Concept (Factor)								Reliability
	Sport Competence	Appearance	Physical Activity	Body fat	Flexibility	Endurance	Health	Self-esteem	
X 9	.834								.936
X 19	.824								
X 11	.764								
X 39	.748								
X 31	.731								
X 21	.718								
X 1	.707								
X 10	.682								
X 29	.625								
X 20	.610								
X 23		.892							.897
X 3		.858							
X 33		.836							
X 13		.776							
X 40		.581							
X 5			.842						.912
X 25			.838						
X 35			.814						
X 15			.762						

X 22				.891					.898
X 2				.882					
X 12				.850					
X 32				.791					
X 37					.789				.879
X 17					.785				
X 7					.763				
X 27					.699				
X 8						.737			.895
X 18						.707			
X 38						.692			
X 28						.630			
X 14							.816		.831
X 4							.812		
X 24							.774		
X 34							.721		
X 26								.816	.822
X 36								.797	
X 16								.725	
X 6								.722	
Eigen Value	6.560	3.696	3.432	3.186	3.007	2.831	2.771	2.679	
% Variance	16.820	9.477	8.801	8.170	7.710	7.258	7.105	6.870	
% Cumulative	16.820	26.298	35.099	43.269	50.979	58.237	65.342	72.212	

<Table 3> Self-efficacy's factor and reliability analysis

Var.	Self-efficacy (Factor)		Reliability
	Self-confidence	Self-regulatory efficacy	
X 10	.849		.869
X 8	.846		
X 9	.825		
X 7	.768		
X 6	.602		
X 3		.830	.908
X 4		.803	
X 5		.718	
X 1		.703	
X 2		.693	
Eigen Value	3.573	3.548	
% Variance	35.727	35.479	
% Cumulative	35.727	71.206	

3. Data Analysis

SPSS(Statistical Package for the Social Science) 16.0, was used for data analysis in the present study. Reliability was measured using the coefficient of internal consistency(Cronbach's alpha). Factorial analysis(varimax rotation) was used for validity for the present study.

The principle component factor analysis and varimax rotation as factor rotation were used in this study. Eigen value 1.0 was criterion for selecting factors

Chi-square(X^2)test was used for measuring gender and types of job duties at the stages of exercise behavior change and One-way ANOVA was employed to test the stages of exercise behavior change as an independent variable and physical self-concept and self-efficacy as dependent variables. The Scheffe method was used for mean differences of groups as a follow-up test.

In order to test relationship between physical self-concept and self-efficacy, multiple regression analysis was utilized. Physical self-concept was used as dependent variable and self-efficacy as independent variable. To verify hypothesis for the study, statistical significance level was α=.05

IV. RESULTS

1. The stages of exercise behavior change by demographics

The Chi-square(X^2) test was used for measuring a difference in demographic characteristics of security employees as a progression through the series of the stages of exercise behavior change. The results are displayed in <table 4>.

The results showed that there was a difference in stages of exercise behavior change by gender. 52.7% of male participants reported that they were at the stages of action and maintenance while 28.1% of female are at the stages. 43.7% of females were in the stages of contemplation or pre-contemplation in which they did not participate in exercise.

Also the results indicate that types of job duties at the casinos had influences on stages of exercise behavior change(χ^2α=13.79, p<. 01). This finding indicated that half of the workers with security responsibilities were in the stages of action and maintenance compared to 36% of those with surveillance responsibilities. In the stages of pre-contemplation or contemplation, about a quarter of employees with security responsibilities did not intend to exercise. 71.6% of employees with security responsibilities were in the action stage. It indicated that they understood the importance of exercise.

<Table 4> The difference of the stages of exercise behavior change by demographic

		the stages of exercise behavior change					Total
		1 Precontemplation	2 Contemplation	3 Preparation	4 Action	5 Maintenance	
gender	male	17 (6.1)	48 (17.3)	66 (23.8)	62 (22.4)	84 (30.3)	277 100)
	female	15 (15.6)	26 (27.1)	28 (29.2)	19 (19.8)	8 (8.3)	96 (100)
position	surveillance	10 (10.3)	26 (26.8)	26 (26.8)	24 (24.7)	11 (11.3)	97 (100)
	security	22 (8.0)	48 (17.4)	68 (24.6)	57 (20.7)	81 (29.3)	276 (100)
total		32 (8.6)	74 (19.8)	94 (25.2)	81 (21.7)	92 (24.7)	373 (100)

Persons (%)성별:χ^2α=25.91, p<.001, 근무형태:χ^2α=13.79, p<.01

2. Relationship between the stages of exercise behavior and the physical self-concept and self- efficacy

One-way ANOVA was used to examine relationship between the stages of exercise behaviors and physical self-concept and self- efficacy. The results are shown in <table 5>. The results of ANOVA test revealed that the significant main effects were found for sport competence(F=14.675, p<.001), appearance (F=3.974, p<.01), physical activity(F=77.425, p<.001), body fat (F=4.860, p<.001), flexibility(F=13.593, p<.001), health (F=2,465 p<.05) and self-esteem(F=3.259 p<.05), For Sport Competence, the scores of the stages of

pre-contemplation, contemplation, preparation, and action were lower than that of maintenance. The scores of the stage of maintenance were higher than that of planning and preparing for Appearance. The scores of stages of pre-contemplation, contemplation, preparation, and action were lower than that of maintenance for physical Activity. The stages of pre-contemplation, contemplation and preparation for flexibility and endurance were lower than maintenance. Finally, the stage of maintenance was higher than practicing for health and self-esteem.

As revealed, the perceptions of security employees on physical self-concept were improved as they progressed through the stages of exercise behavior. In other words, the stages of exercise behavior change had impacts on physical self-concept. Thus, more physical activity participation should be encouraged.

<Table 5> The physical self-concept by of the stages of exercise behavior change

Variables		Physical Self-concept							
		Sport Competence	Appearance	Physical Activity	Body fat	Flexibility	Endurance	Health	Self-esteem
The stages of exercise behavior change	1	2.82±.91	3.32±.89	1.80±.65	2.08±.89	2.97±.87	2.60±.94	2.41±.92	2.500±.89
	2	2.87±.62	3.06±.63	1.97±.70	2.39±.99	2.79±.75	2.37±.75	2.35±.79	2.04±.68
	3	3.05±.83	3.10±.69	1.97±.68	2.83±.99	2.76±.78	2.50±.87	2.13±.76	1.83±.72
	4	3.25±.81	3.43±.74	2.90±.80	2.55±.89	3.19±.70	3.06±.82	2.09±.78	1.70±.66
	5	3.66±.71	3.33±.72	3.59±.91	2.59±.83	3.59±.82	3.41±.99	2.07±.70	1.72±.69
F		14.675***	3.974**	77.425***	4.860***	13.593***	20.551***	2.465*	3.259*
Scheffe		1,2,3,4<5	2,3<4	1,2,3,4<5	1<3	1,2,3<5	1,2,3<5	4>5	4<5

*p<.05, **p<.01, ***p<.001

The results of one-way ANOVA for examining the difference of self-efficacy in the stages of exercise behavior change are shown in <table 6>.

The findings show that there were significant differences for self-confidence (F=20.958, p<.001) and self-regulatory efficacy(F=24.496, p<.001).

According to the results of the follow-up test, Self-confidence and self-regulatory efficacy were lower in the pre-contemplation stage compared to the stages of contemplation, preparation, action and maintenance. That is, as they progressed through the higher stages, the higher levels of self-efficacy

resulted for employees. Therefore, the findings of the current study showed that employees with security responsibilities continued to participate in exercise.

<Table 6> self-efficacy by of the stages of exercise behavior change

Variables		Self- efficacy	
		Self-confidence	Self-regulatory efficacy
The stages of exercise behavior change	1	2.94±1.20	2.33±1.17
	2	3.20±.86	2.45±.83
	3	3.40±.90	2.54±.90
	4	3.92±.67	3.07±.81
	5	4.05±.77	3.55±.90
F		20.958***	24.496***
Scheffe		1,2,3<5	1,2,3<5

***p<.001

3. The effects of physical self-concept on self- efficacy

Correlation analysis was conducted among the stages of exercise behavior change and physical self-concept and self-efficacy of security employees.

There was a positive moderate relationship in the sample between stages of exercise behavior change and confidence and self-control efficacy (p<.05). The highest correlation was physical activity and self-regulatory efficacy (r=.657) and the lowest was confidence and self-esteem(r=-.320).

<Table 7> Correlation of the stages of exercise behavior change, physical self-Concept and self-efficacy

	1	2	3	4	5	6	7	8	9	10	11
1. The stages of exercise behavior change	1										
2. Self-confidence	.421***	1									
3. Self-regulatory efficacy	.436***	.712***	1								
4. Sport Competence	.356***	.493***	.485***	1							

5. Appearance	.119*	.296***	.231***	.482***	1						
6. Physical Activity	.626***	.511***	.657***	.493***	.236***	1					
7. Body fat	.109*	.015	.059	.065	-.139**	.004	1				
8. Flexibility	.294***	.424***	.424***	.591***	.365***	.493***	-.087	1			
9. Endurance	.381***	.459***	.453***	.616***	.361***	.614***	-.121*	.586***	1		
10. Health	-.147**	-.298***	-.168***	-.302***	-.118*	-.066	.171***	-.200***	-.193***	1	
11. Self-esteem	-.168***	-.320***	-.189***	-.239***	-.252***	-.033	.318***	-.217***	-.164***	.405***	1

*p<.05, **p<.01, ***p<.001

According to the goodness of fit test in table 8, physical self-concept had significant main effects on confidence(f=33.259, p<.001). And also, physical activity(β=. 350) and Body Fat(β=. 124) had significant main effects on confidence(R^2= .423).

<Table 8> Effects of physical self-concept on self-confidence

Variable		B	SE	β	t
Invariable		2.357	.272		8.677***
Physical self-concept	Sport Competence	.127	.066	.115	1.925
	Appearance	.067	.059	.054	1.141
	Physical Activity	.306	.049	.350	6.620***
	Body fat	.120	.043	.124	2.796**
	Flexibility	.075	.057	.069	1.313
	Endurance	.059	.057	.062	1.035
	Health	-.161	.053	-.138	-3.039
	Self-esteem	-.284	.059	-.225	-4.807
R		.650a			
R^2		.423			
F		33.259			

**p<.01, ***p<.001

The test of the goodness of fit showed in table 9 that physical self-concept had significant main effects on self-efficacy(F=44.309, p<.001). Also, physical self-concept(R^2= .494) had significant main effects on sport competence(β=. 149), physical activity(β=. 574), body fat(β=. 574) and self-esteem(β=. -145).

<Table 9> Effects of physical self-concept on self-regulatory efficacy

Variable		B	SE	β	t
Invariable		1.039	.281		3.702***
Physical self-concept	Sport Competence	.182	.068	.149	2.661**
	Appearance	-.015	.061	-.011	-.252
	Physical Activity	.554	.048	.574	11.612***
	Body fat	.102	.044	.096	2.311*
	Flexibility	.075	.059	.062	1.274
	Endurance	-.045	.059	-.043	-.759
	Health	-.052	.055	-.040	-.941
	Self-esteem	-.202	.061	-.145	-3.312**
R		.703a			
R^2		.494			
F		44.309			

*p<.05, **p<.01, ***p<.001

V. Discussion

The purpose of this study was to investigate the relationship between the stages of exercise behavior change and physical self-concept and self-efficacy. The findings of this study showed that significant relationships existed among factors. The current study was somewhat similar to previous literature(Chen, 2008; Chen & Pyo, 2006; Kim, 2002) guided by trans theoretical model (Prochaska & Dicilemente, 1983). According to the study done by Kim(2002), the participants in the study remained in different stages. 17.5% of participants were in the pre-contemplation stage, 16. 6 % of participants were in the contemplation stage, 20.4% of them were in the preparation stage, 28.3 % of them are in the stage of action, and 17.2% of them were in the stage of maintenance. Another study investigating the relationship between the stage of exercise behavior change and physical self-concept for high school students (Chen & Pyo, 2006) showed that portions of participants for the stages of exercise behavior change were 24.7% in pre-contemplation, 44.3% in

contemplation, 12.9% in preparation, 8.8% in action, and 9.2% in maintenance. Similarly, Chen (2008) reported that young adolescents in his study were 34.1% in pre-contemplation, 30.9% in contemplation, 16.6% in preparation, 7.7% in action and 10.7% in maintenance.

However, 71% of participants of the current study were already beyond the stage of preparation. Since security employees have better work environments than young adolescents, they could participate in physical activities more than young adolescents. Interestingly, differences were found in the types of their job duties. Specifically, employees with surveillance responsibilities participated in less physical activities than employees with security responsibilities. It indicated that work environment of surveillance responsibilities was less accessible to participate in physical activities. It is necessary to encourage employees with surveillance responsibilities to participate in physical activities and increase awareness of importance of exercise. Thus, they need a proper intervention to promote their participation rates. Also, it could be possible that the employees perceived the need for exercise differently in the characteristics of their job responsibilities as they progressed through the stages of process of change. Especially, employees with security responsibilities are required to have higher fitness levels because most of their job duties require more physical effort. Thus, security employees have the higher degree of perception on the importance of exercise.

On one hand, security employees in this study had lower levels of perception on sport competence and physical activities in the stage of pre-contemplation, contemplation, and action in comparison with those of others at the stage of maintenance. For flexibility and endurance, they had lower levels of perception in the first three stages than those of others at the maintenance stage. In addition, they had lower levels of perception on self-esteem and physical condition than those who were in the maintenance stage. These findings can be interpreted as perception and action on the need of exercise have influence on perception of physical self-concept.

Likewise, a previous study(Chen & Pyo, 2006) supports the findings of the current study. In this study, physical self-concept of high school students were

relatively higher on flexibility, physical strength, self-confidence, endurance in the stage of maintenance than students in the rests of four stages. Moreover, Han(2009) conducted a similar study for college students. College students in the stages that they participated in physical activity have higher levels of physical self-concept on sport competence, physical activity, flexibility, physical strength, endurance, and their bodies than non participants in physical activity in the study.

A similar study of martial art participants(Lee, You, & Kim, 2008) showed that more experienced participants had higher levels of physical self-concept on sport competence, flexibility, physical strength, and their bodies. Consequently, physical activity participants could recognize the change of their bodies easily so that they could take action and make efforts to maintain their physical condition better.

As revealed in previous literature, physical activity participation of security employees in this study could also play a significant role in perceiving physical self-concept. It is evident that physical health could affect mental health positively and it is beneficial for all physical activity participants.

In the previous studies identifying the relationship between the stage exercise behavior change and self-efficacy, Kim(2002) reported that as the stages of exercise of adolescents progressed, their self-efficacy continuously improved. Such continuous improvement of self-efficacy could be affected in the stages of exercise behavior change. Another study for female adults (Lee, 2004) showed similar results, indicating that those participants in action and in maintenance stages have a higher degree of self-efficacy than others in the other three stages.

Chen(2007) argued that self-confidence and physical self-concept play a key role in promoting physical activity participation. In his study, old people made efforts to improve their self-concept and efficacy in regular physical activity participation. They believed that physical activity participation would allow them to achieve positive health outcomes. Chen and Pyo (2008) consented to the finding of the study(2008) in their study.

Congruent with previous research(Cheon & Pyo, 2008; Choi, 2007 Kim,

2002), the findings of the present study revealed that employees had higher levels of self-efficacy and physical self-concepts in the stage of maintenance and also they improved physical self-concept and self-efficacy as they progressed through these stages. Accordingly, casino security employees in the present study need to have accessible environment where they can continue to participate in physical activities. As findings indicated, physical activity and body fat affect the physical self-concept of security employees. The characteristics of their jobs require to face their customers and to cope with emergency situations frequently. The priority of their job is to protect their customers and they need to meet the demand of customers. Especially, employees with security responsibilities should be physically capable to conduct their jobs due to frequent visits of upscale people and travelers.

However, employees with surveillance responsibilities had lower perception on the importance of regular exercise. Their job duties did not require meeting with customers compared to employees with security responsibilities. Although employees with surveillance responsibilities do not have higher perception on the need of regular exercise, casino administrators encourage them to participate in regular exercise and to adopt policies that will allow them to conduct jobs more effectively and successfully.

VI. Conclusion and recommendations

The purpose of this study was to identify the relationship between the stage of exercise behavior change and physical self-concept and self-efficacy. In the light of findings of the present study, the following conclusion was drawn. Firstly, there was a difference in gender of employees and in the type of job responsibilities. Secondly, physical self-concept and self-efficacy were improved as casino employees progressed through the stages from preparation to maintenance. Lastly, among the factors of physical self-concept, physical activity and body fat affected significantly self-efficacy.

In addition, the participants of the present study were limited to employees

in casinos, so it does not present conclusive information. Rather, it provides implications for consideration by prospective researchers who will expand this field of studies. Thus, it is recommended that future research need to focus on job satisfaction and immersions of employees in hotel casinos and sport leisure facilities since the present study investigated only employees in casinos.

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Abstract

카지노 시큐리티 종사자의 운동변화단계에 따른 신체적 자기개념과 자기 효능감의 관계

전용태 · 오중일

본 연구는 카지노 시큐리티 종사자의 운동변화단계에 따른 신체적 자기개념과 자기효능감의 관계를 규명하는데 목적이 있다. 연구의 목적 달성을 위하여 전국 카지노 17개업체중 시큐리티 관련업무 30명 이상을 고용하고 있는 8개의 업체를 모집단으로 설정하여 표본을 추출하였다 이 연구에서 시큐리티 종사자 30명 이상을 고용하고 있는 업체를 선정한 이유는 30명 이하의 영세한 업체에서 조직구성 및 직무체계와 환경이 대체적으로 차이가 있으므로 이에 따른 연구결과를 일반화하기에는 다소 제한적이라고 판단되기 때문이다.

편의 추출법(convenience sampling)에 의하여 대상을 표집 하였으며, 선정된 연구대상자는 본 연구의 취지 및 설문조사 교육을 받은 조사원을 통해 운동변화단계에 따른 신체적 자기개념과 자기효능감의 관계 설문지를 자기평가 기입법(self-administration method)에 따라 설문조사를 실시하였다.

연구 조사 자료의 결과를 처리하기 위하여 Window SPSS 16.0프로그램을 이용하여 분석하였으며, 측정도구의 타당성을 검증하기 위해 탐색적 요인분석(factor analysis)과 신뢰도 검증을 위하여 하위 척도별 내적 일관성 계수(Cronbach's alpha)를 산출하였다. 주성분 분석(principle component factor analysis)을 이용하였으며. 요인회전방법으로 직각회전방식(varimax rotation)을 이용하였다. 초기 고유값(Eigen value) 1.0을 요인 추출의 준거로 삼았다.

운동변화단계에 있어 성별, 근무형태의 차이를 알아보기 위하여 운동 변화단계에 대한 차이를 검증하기 위해 χ^2을 실시하였다.

운동변화단계에 따라 신체적 자기개념과 자기효능감의 차이를 알아보기 위하여 운동변화단계를 독립변수로 신체적 자기개념과 자기효능감을 종속변수로 하는 일원변량분석(one-way ANOVA)을 실시하였다. 집단간의 평균차를 검증하기 위하여 사후검증으로 Scheffe 검증을 실시하였다.

신체적 자기개념이 자기효능감에 미치는 영향을 알아보기 위하여 먼저 상관관계분석을 실시하였고, 신체적 자기개념을 독립변수로 하고 자기효능감을 종속변수로 하는 다중회귀분석(multipie regression analysis)을 실시하였으며, Enter 방식으로 처리하였다. 이와 같은 방법과 절차에 따른 자료 분석을 통하여 얻은 결론은 다음과 같다.

첫째, 카지노 시큐리티 종사자들의 운동행동변화단계는 성별과 근무형태에 따라 운동행동

변화단계에 차이가 있었다. 둘째, 운동행동변화단계에서 유지단계로 이행 할수록 신체적 자기개념과 자기효능감을 지각하는 정도가 높게 나타났다. 셋째, 신체적 자기개념의 하위요인 중, 신체활동과 체지방에 대한 정도가 자기효능감에 유의한 영향을 미쳤다.

Key Word : 카지노, 시큐리티종사자, 운동행동변화단계, 신체적자기개념, 자기효능감

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