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Effect of High-School ATHLETIC Majors' Self-Leadership and Self-Efficacy on Exercise Adherence Intention

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Abstract

Korea rose to the status of sports powerhouse in the world arena as it ranked high place in 88 Seoul Olympic Games and has since remained as elite in sports within 10th place. Elite school sports policy has worked as an important foundation for Korea to have become a sports giant. Especially, Special Athletic Talent System which began as athletic talent education from 1971 has discovered talented student athletes in early age, developed their talents and help athletes to exercise them.

Especially, when excessive stress is placed on young athletes, they not only lose sense of satisfaction and interest but, in extreme cases, they also reach the stage of abandoning their future as athletes due to negative thinking.

Recently, with growing interest in social and psychological factors related to athletes' performance, various studies have reported their results. While interest in and concern for student athletes' exercise adherence intention has been rising, leaders raising them tend to be interested only in enhancing their performance while neglecting their duty to establish system to provide the athletes with psychological stability to continue their athletic career.

Preceding studies have found that, in order for students to consistently maintain athletic career path, self-leadership, which enhances confidence and performance by exercising influence on athletes themselves and helping them to achieve their goals, and self-efficacy, which enables the athletes to be aware of their high competency and expect corresponding behaviors and results, are vital. Therefore, the purpose of this study is to verify the causal relationship among high-school athletic majors' exercise adherence intention and their self-leadership and self-efficacy and, through this, provide basic material for studies to boost exercise adherence intention.

The subjects of this study were 410 students of athletic high school selected through convenience sampling. Students were led to respond to the questionnaires in self-administration method and answered questionnaires were collected on the spot. Data were analyzed by using SPSS 20 and Amos 20. Validity and reliability of the measurement tools were verified through confirmatory factor analysis and reliability analysis. In order to examine subjects' demographic characteristics, technical statistics were conducted and, in order to find out correlation among variables, correlation analysis was conducted. To verify goodness-of-fit of study model and causal relationship among variables, structural equation model was used.

In order to verify validity of test, confirmatory factor analysis was conducted and for reliability analysis, Cronbach's α coefficient was calculated. Excluding items with low SMC (Squared Multiple Correlations) for each factor, TLI value was .903~.927, CFI value was .909~.930 and RMSEA value was .067~.070, confirming the goodness-of-fit of the model. As the result of reliability analysis, value of Cronbach's α was .761~.826, securing reliability.

[Keywords] Sport, Republic of Korea, Athletic, Self-Leadership, Exercise Adherence Intention

1. Introduction

Korea rose to the status of sports powerhouse in the world arena as it ranked high place in 88 Seoul Olympic Games and has since remained as elite in sports within 10th place. Elite school sports policy has worked as an important foundation for Korea to have become a sports giant. Especially, Special Athletic Talent System which began as athletic talent education from 1971 has discovered talented student athletes in early age, developed their talents and help athletes to exercise them[1][2].

Especially, when excessive stress is placed on young athletes, they not only lose sense of satisfaction and interest but, in extreme cases, they also reach the stage of abandoning their future as athletes due to negative thinking[3].

Recently, with growing interest in social and psychological factors related to athletes' performance, various studies have reported their results[4]. While interest in and concern for student athletes' exercise adherence intention has been rising, leaders raising them tend to be interested only in enhancing their performance while neglecting their duty to establish system to provide the athletes with psychological stability to continue their athletic career[5].

Preceding studies have found that, in order for students to consistently maintain athletic career path, self-leadership, which enhances confidence and performance by exercising influence on athletes themselves and helping them to achieve their goals, and self-efficacy, which enables the athletes to be aware of their high competency and expect corresponding behaviors and results, are vital[6][7].

The purpose of this study is to verify the causal relationship among high-school athletic majors' exercise adherence intention and their self-leadership and self-efficacy and, through this, provide basic material for studies to boost exercise adherence intention.

2. Theoretical Background

2.1. Self-leadership

Self-leadership means the process of each member motivating and influencing oneself to change and grow[8]. It has positive effect on and enhances individual performance[9].

2.2. Self-efficacy

Self-efficacy refers to awareness of ability of oneself to organize[10] and execute necessary behaviors and to perform set form of actions[11].

2.3 Exercise adherence intention

Exercise adherence means participating in and obsession and continuation of athletic activities regularly including exercise frequency, intensity and duration[12].

3. Study Methods

3.1. Study subjects

The subjects of this study were 410 students of athletic high school selected through convenience sampling. Subjects' demographic characteristics were as follows; male students were 55.4%(n:227) while females students were 44.6%(n:183), and freshmen were 36.8%(n:151) and junior were 29.8%(n:122) while senior were 33.4%(n:137).

3.2. Study procedure and data processing

Study contacted the school in advance informing about the study and, with the cooperation of school authority, students and teachers, conducted questionnaire survey by visiting the school in person. Students were led to respond to the questionnaires in self-administration method and answered questionnaires were collected on the spot. Data were analyzed by using SPSS 20 and Amos 20. Validity and reliability of the measurement tools were verified through confirmatory factor analysis and reliability analysis. In order to examine subjects' demographic characteristics, technical statistics were conducted and, in order to find out correlation among variables, correlation analysis was conducted. To verify goodness-of-fit of study model and

causal relationship among variables, structural equation model was used.

3.3. Validity and reliability of measurement tools

In order to verify validity of test, confirmatory factor analysis was conducted and for reliability analysis, Cronbach's α coefficient was

calculated. Excluding items with low SMC(Squared Multiple Correlations) for each factor, TLI value was .903~.927, CFI value was .909~.930 and RMSEA value was .067~.070, confirming the goodness-of-fit of the model. As the result of reliability analysis, value of Cronbach's α was .761~.826, securing reliability.

Table 1. Result of confirmatory factor analysis and reliability analysis.

Factor	TLI	CFI	RMSEA	Cronbach's α
Self-leadership	.911	.930	.070	.801~.826
Self-efficacy	.903	.910	.067	.788~.819
Exercise adherence intention	.927	.909	.078	.761~.820

4. Study Result

4.1. Correlation analysis

As for the result of correlation analysis, there was positive(+) relationship between

self-leadership and self-efficacy($r=.370$) and there was also positive(+) relationship between self-leadership and exercise adherence intention. In addition, there was positive(+) relationship between self-efficacy and exercise adherence intention as well($r=.569$).

Table 2. Result of correlation analysis.

Factor	Self-leadership	Self-efficacy	Exercise adherence intention
Self-leadership	1		
Self-efficacy	.370***	1	
Exercise adherence intention	.363***	.569***	1

4.2. Goodness-of-fit of structural model

Table 3. Goodness-of-fit of structural model.

X2	Q	RMSEA	NFI	CFI	GFI	AGFI	P
108.327	8.412	.066	.992	.996	.946	.900	.001

In order to verify causal relationship among causal relationship among high-school athletic majors' exercise adherence intention, their self-leadership and self-efficacy, this study analyzed structural equation model. As

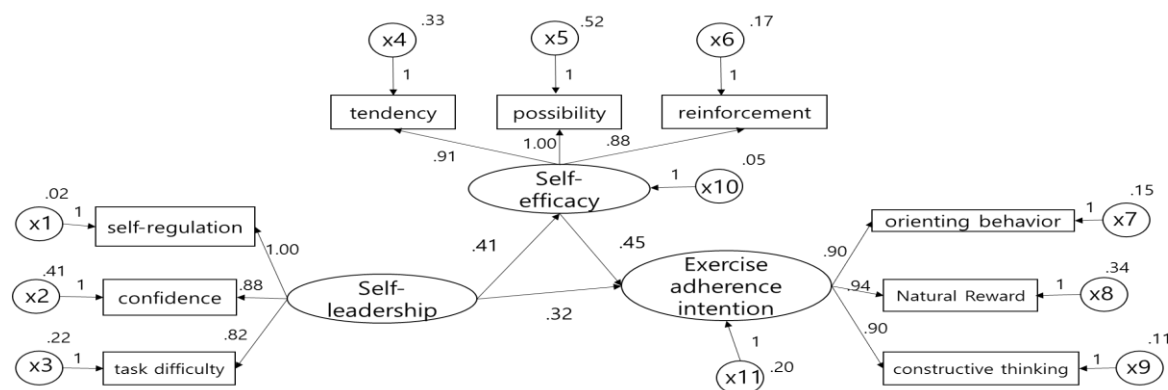
for goodness-of-fit for the structural model, $X^2=108.327$, $Q=8.412$, $RMSEA=.066$, $NFI=.992$, $CFI=.996$, $GFI=.946$, $AGFI=.900$ and $P=.000$, verifying its goodness of fit.

4.3. Causal relationship among variables

Table 4. Result of path test.

Course	β	S.E	t	P
Self-leadership → Self-efficacy	.411	.047	8.780***	.001
Self-leadership → Exercise adherence intention	.452	.037	10.053***	.001
Self-efficacy → Exercise adherence intention	.321	.072	6.233***	.001

Figure 1. Result of research model.



Results of verification on causal relationship among variables are as follows; there was positive(+) causal relationship in the path between self-leadership and self-efficacy with .411($t=8.780$, $p<.001$) and there was also positive(+) causal relationship in the path between self-leadership and exercise adherence intention with .452($t=10.053$, $p<.001$). There was positive(+) causal relationship in the path between self-efficacy and exercise adherence intention with .321($t=6.233$, $p<.001$).

5. Conclusion

As the result of analysis on the effect of high-school athletic majors' self-leadership and self-efficacy on exercise adherence intention, self-leadership had causal relationship with self-efficacy and exercise adherence intention, and self-efficacy had causal relationship with exercise adherence intention, which corresponds with the result of preceding studies. Therefore, various education and training methods are required to enhance high-school athletic majors' self-leadership and self-efficacy and, through this, it is

necessary to boost their psychological stability together with performance, not just their performance alone.

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