

# Effect of Physical Self Efficacy and Self Regulated Learning on Achievement Goal of Students Participated in School Sports Club

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## Abstract

**Objectives:** This report has purpose of learning how the tendency of achievement goal affects self-regulated learning and physical self-efficacy for middle school students who participate in school sports club activities. **Methods/Statistical Analysis:** Among the students who participate in middle school sports club, total of 674 students composed of 426 male students and 248 female students were selected as target. The measurement of variables was performed using a questionnaire, comparison of related variables (gender, proficiency evasion, proficiency access, execute access, execute evasion, physical ability, self expression) were verified by unpaired t-test and multiple regression analysis. **Findings:** Among the factors of achievement goal according to gender, the proficiency access goal was significantly higher in male students, and the proficiency evasion goal was particularly high for female students. Also, as the factor of achievement goal that influence the inner control of self-regulated learning, it was found that the proficiency access goal significantly affect both male students. The factor of achievement goal that affect the recognized physical ability of physical self-efficacy was found to be the proficiency access goal that positively affect both male and female students. Also, the factor of achievement goal that affect the physical confidence of self-expression was found to be the proficiency access goal that positively affect the male students. **Improvements/Applications:** This research was limited to middle school students and the research method was limited to surveys, which are cross-sectional studies. Therefore, there is a limitation of interpreting the research result as the characteristic of all students.

**Keywords:** Achievement Goal, Physical Self-efficacy, Physical Ability Self-expression, Self-regulated Learning

## 1. Introduction

It is well known fact that participating in school sports club helps students' cultivation of character and promotion of health and physical strength<sup>1,2</sup>. Therefore, MEST (Ministry of Education and Science Technology) has been executing school sports club policy focusing on students' autonomous physical activity participation and satisfactory school environment establishment since 2007.

By activating school physical education club activity into 'school sports club', it intended to establish healthy school culture of studying while playing and playing while studying with the progress direction of switching 'watching sports' into 'playing sports'. The goal of 'school sports club' is to develop students' their own specialized sports that they can enjoy for life, to expand sports culture experience opportunities by preparing the chances of school sports activity participation motivation, and to

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establish all the environment based on “1 school, 1 talent, 1 person, 1 sport” movement expansion’ that they autonomously participate. Participating in school sports club enables students to have target consciousness for health promotion<sup>3-4</sup>.

In general, among the subjects that the field of sports pays attention to regarding goal is achievement goal. It is reported that there can be differences in behaviors related to athletes’ personal achievements such as cognition, emotion and psychological skills<sup>5</sup>. Recently, in<sup>6,7</sup> argued that there is close relation between motivational climate and achievement goal orientation. Among variables on which active researches are performed related to achievement goal orientation, there were physical self-efficacy and self-regulated learning<sup>8-11</sup>. Physical self-efficacy is explained with the term of recognized confidence regarding physical activities. This is divided into recognized physical ability, which means recognized ability that can perform physical skill tasks, and physical self-expression confidence, which means the confidence that can be express own physical ability and can be evaluated by other people. Also, self-regulated learning has been studied as it was regarded as a major resource of improvement of learning ability along with the physical self-efficacy. The self-regulated learning is reported that social support can provide necessary emotional support for self-directed learning ability<sup>12-13</sup>.

Regarding precedent studies<sup>11,14</sup> about this matter, many of the studies about achievement goal orientation have been done in regard to physical education classes of elementary and middle-high schools. Also, precedent studies<sup>4,15</sup> about physical self-efficacy and self-regulated learning, many studies was done in regard to regular sport club participants and middle school students, but not sufficient studies were done targeting middle school students who participate in school sports clubs. Therefore, this study aims to investigate the effect of achievement goal orientation on physical self-efficacy and self-regulated learning middle school students who participate in school sports clubs.

## 2. Materials and Methods

### 2.1 Subjects

The targets of this research were students from Middle School in Gwangju Metropolitan who participate in sports club with total number of 674 students composed of 426 male students and 248 female students. Targeting 674 students, the tendency of achievement goal, self-regulated learning and physical self-efficacy were measured. The

subjects of this study were non-diseased. The individual characteristics of subjects were given in Table 1.

### 2.2 Experimental procedure and Design

This study used questionnaire as a measurement tool to investigate the effects of achievement goal orientation of middle school students participating in school sports clubs on physical self-efficacy and self-regulated learning. All the items of the questionnaire were composed according to the purpose of this study based on the previous research<sup>8,16-19</sup>. As for research method, 2x2 achievement goal survey developed by<sup>16</sup> was used to learn about the tendency of achievement goal by gender and the physical achievement goal survey developed by<sup>17</sup> were modified and used in accordance with the purpose of this research. As survey for learning the physical self-efficacy, Physical Self Efficacy (PSE) developed by<sup>8</sup> and translated by<sup>16</sup> was modified and used in accordance with the purpose of this research. As survey for learning the self-regulated learning, Self-Regulated Questionnaire-Exercise (SRQ-E) developed by<sup>18</sup> was used according to the double translation of<sup>19</sup>.

### 2.3 Statistical Analysis

Measurements obtained in this study were the average and standard deviation was calculated for the metrics using SPSS Ver. Using 20.0. The differences between factors according to genders of the students participating in school sports clubs were analyzed with unpaired t-test, and through multiple regression analysis, the relationships between achievement goal orientation, physical self-efficacy and self-regulated learning were analyzed.

## 3. Results and Discussion

### 3.1 Difference among Factors by Genders

The result of comparing the average between variables by gender is shown in Table 2.

**Table 1.** Individual characteristics of subjects

Item Group	First grader	Second grader	Third grader	Total
Male (n=426)	146 (55.7%)	132 (63.5%)	128 (62.7%)	426 (63.2%)
Female (n=248)	116 (44.3%)	76 (36.5%)	56 (37.3%)	248 (36.8%)

□ Male ver. Female Ratio (%)

In achievement goal orientation between genders, proficiency evasion and execute evasion were significantly higher on female students than on male students, and proficiency access goal was significantly higher on male students. In self-regulated learning between genders, inner regulation was significantly higher on male students. In physical self-efficacy male students showed significantly higher recognized physical ability and physical self-expression than female students. This result indicates that this study is supported by the study of<sup>20</sup>, which targeted high school athletes and the study of<sup>21</sup>, which targeted athletes. It also shows similarity as studies targeting dance majors and the study of<sup>22</sup> targeting elementary school students, whose results showed no difference between genders. The reason that various results can be drawn according to studies is the factors of achievement goal orientation consist of content dimension and attitude dimension, so the inclination of study targets can have various influences on study results.

### 3.2 Effect of Achievement Goal on Physical Self-efficacy

The Table 3 is the result of multiple regression analysis about each of 4 factors of achievement goal as independent variables and 2 factors of self-efficacy as dependent variables.

Regarding male students, only physical ability and proficiency access had a significant effect with positive correlation, but in self-expression only proficiency access had a significant effect with positive correlation. In case

**Table 2.** Difference among variables by genders

Variables	Gender	M(SD)	t-value
P.E	M	4.03(1.35)	-2.781 <sup>□</sup>
	F	4.45(1.75)	
P.A	M	5.62(0.91)	3.544 <sup>□</sup>
	F	5.25(0.96)	
E.A	M	4.83(1.21)	0.215
	F	4.80(1.00)	
E.E	M	4.25(1.27)	-2.076 <sup>□</sup>
	F	4.53(0.96)	
I.C	M	5.42(0.89)	5.178 <sup>□</sup>
	F	4.90(0.93)	
E.C	M	2.88(1.01)	-.0260
	F	2.91(0.93)	
Ph.A	M	3.52(0.66)	9.262 <sup>□</sup>
	F	2.83(0.63)	
S.E	M	3.44(0.45)	5.433 <sup>□</sup>
	F	3.16(0.43)	

Values are means ± standard deviation, <sup>□</sup> ( $p < .05$ ), <sup>□□</sup> ( $p < .01$ ), P.E; proficiency evasion, P.A; proficiency access, E. A; execute access, E. E; execute evasion, I. C; internal control, E.C; external control, Ph.A; physical ability, S.E; self expression, M; male, F; female

of female students, in physical ability, only proficiency access had a significant effect with positive correlation. This result indicates that this study is supported by the study of<sup>23,1,11</sup>, whose result showed that groups with high physical activity amount had high physical self-expression and recognized physical ability confidence.

### 3.3 Effect of Achievement Goal on Self-regulated Learning

The Table 4 is the result of multiple regression analysis about each of 4 factors of achievement goal as independent variables and 2 factors of self-regulated learning as dependent variables

In case of male students, in the factors predicting inner control, proficiency access had the most significant effect with positive correlation followed by execute evasion, and in the factors predicting external control, execute evasion had the most significant effect with positive correlation followed by proficiency evasion, proficiency access and execute access. Proficiency access showed negative correlation on external control, and the factors of proficiency evasion, execute access and execute evasion showed significant effects with positive correlation. In case of female students, only proficiency access, which is the variable predicting inner control, had a significant effect on the positive correlation, while in

**Table 3.** Analysis of achievement goal and physical self- efficiency

Item	Gender	Physical Ability		Self Expression	
		$\beta$	t	$\beta$	t
P.E	M	-.062	-.776	-.199	-.2477 <sup>□</sup>
	F	-.237	-1.999	.144	1.194
P.A	M	.289	4.204 <sup>□□</sup>	1.91	2.773 <sup>□□</sup>
	F	.283	2.546 <sup>□□</sup>	.137	1.209
E.A	M	.034	.4939	-.040	-.568
	F	.013	.124	.031	.3018
E.E	M	-.104	-1.310	-.087	-1.086
	F	-.088	-.784	-.118	-1.045
	M	R <sup>2</sup> =.091, F=5.249 <sup>□□</sup>		R <sup>2</sup> =.086, F=4.914 <sup>□□</sup>	
	F	R <sup>2</sup> =.083, F=2.716 <sup>□</sup>		R <sup>2</sup> =.052, F=1.667	

\* ( $p < .05$ ), \*\* ( $p < .01$ ), P.E; proficiency evasion, P.A; proficiency access, E. A; execute access, E. E; execute evasion

**Table 4.** Analysis of achievement goal and self-regulated learning

Item	Gender	Internal Control		External Control	
		$\beta$	t	$\beta$	t
P.E	M	-.029	.512	.211	2.901 <sup>□</sup>
	F	.013	.137	.406	3.655 <sup>□</sup>
P.A	M	.630	11.70 <sup>□□</sup>	-.170	-2.719 <sup>□□</sup>
	F	.595	6.263 <sup>□□</sup>	-.282	-2.706 <sup>□□</sup>
E.A	M	.026	.486	.155	2.428 <sup>□</sup>
	F	-.053	-.591	-.040	-.408
E.E	M	.137	2.199 <sup>□</sup>	.290	3.991 <sup>□□</sup>
	F	-.060	-.639	.162	1.556
	M	R <sup>2</sup> =.442, F=42.381 <sup>□□</sup>		R <sup>2</sup> =.245, F=16.913 <sup>□□</sup>	
	F	R <sup>2</sup> =.325, F=14416 <sup>□□</sup>		R <sup>2</sup> =.193, F=7.131 <sup>□□</sup>	

\* ( $p < .05$ ), \*\* ( $p < .01$ ),

P.E; proficiency evasion, P.A; proficiency access, E. A; execute access, E. E; execute evasion

external control, proficiency avoidance had a significant effect on the positive correlation, and proficiency access showed a negative correlation. In achievement goal factors influencing inner control of self-regulated learning was found to have a statistically significant effect on the proficiency access goal in both male and female students. This indicates that the result of this study is supported by the study of<sup>17</sup>, whose result showed that male students, who are relatively more athletic than female students, are more confident and expectant in physical education class.

## 4. Conclusion

Through this research, it was found that proficiency access goal positively affects self-regulated learning and physical self-efficacy. Based on the results of this study, suggestions are as follows. First, the subjects of this study were limited within middle school students in a certain area, so there is limitation to be considered as general characteristics. Therefore, through collection of nationwide samples, detailed and generalized data should be provided. Second, because the study was performed through self-administered measurement tools, there is possibility of distorted result. Qualitative research that can compensate this is required.

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