Journal of Human Kinetics volume 27/2011, 190-203 DOI: 10.2478/v10078-011-0015-z 190
Section III – Sport, Physical Education & Recreation

ACADEMIC SELF-EFFICACY OF TURKISH PHYSICAL EDUCATION AND SPORT SCHOOL STUDENTS

by

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This study investigated the academic self-efficacy of physical education and sport school students. The research group consisted of 518 students. The research data was collected following the "Academic Self Efficacy Scale" principle. Results indicated that physical education and sport school students obtained high academic self efficacy scores. While no significant difference was observed with regard to gender, class level and sport branches with gender, a significant difference was observed when considering only sport branches.

Key words: *academic self efficacy, physical education and sport school, student*

Introduction

Bandura's self efficacy structure, used in different application fields of psychology, is known to have a significant influence on human behavior. Self efficacy is an important concept of Social Cognition. Bandura introduced the concept of self efficacy as "beliefs in one's capacity to organize and execute the courses of action required to produce given attainments" (Bandura, 1997). Since that time, diverse research has demonstrated the power of efficacy perceptions in human learning, performance, and motivation. For instance, efficacy beliefs are related to giving up smoking, sticking to exercise routines and diet programs, political participation, and academic achievement (Bandura, 1997).

Efficacy is defined as an individual's decisions about how to think, feel, motivate oneself and act. Efficacy includes four basic processes: cognitive, motivational, emotional, and selection processes. These processes have vital roles in the perception of efficacy. They can prevent the development of undesirable behaviors or they could encourage desirable behavior. Bandura (1994) states that beliefs regarding our efficacy can be enhanced through four sources, which are all experiences like successes and failures; physical and emotional cases like excitement and fear; indirect experiences like witnessing successes and failures

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Authors submitted their contribution of the article to the editorial board.
Accepted for printing in Journal of Human Kinetics vol. 27/2011 on March 2011.

of social models; and oral persuasion by family, friends, colleagues and others (Bandura, 1977; 1994; 1995). Scholars mention that the most effective way to create a strong sense of efficacy is through mastery experiences (Bandura, 1982; Pajares, 1996; Pintrich & Schunk, 1996).

There are several self-efficacy perceptions pertaining to many behaviors emerging from Bandura's four sources. One of the more important of these behaviors is academic self-efficacy. Specifically, when teaching and learning activities are considered, the academic self-efficacy concept gains more importance (Ekici, 2009).

The studies carried out in education related to self-efficacy beliefs are discussed under three categories. The first category deals with the effects of self-efficacy beliefs when a person selects a profession and area of expertise. The second category studies to teachers' self-efficacy beliefs and the relationship between their implications and various student outcomes. The final category studies the effects of self-efficacy beliefs on academic achievement and performance (Hazır Bıkmaz, 2004; Pajares, 1997).

Self-efficacy is one of the outstanding concepts appearing when the individual's self assessment and predictions are expressed. In this context, it could also be discussed with regard to university education. In this sense, studies on academic self-efficacy can be a tool which enables us to see new perspectives (Braun & Gusy 2004; Yılmaz et al., 2007).

According to this opinion, to improve physical education and sport school students' educational lives and help them deal with the problems they encounter in their education, academic self-efficacy is extremely important. From this point, our study examines physical education and sport school students' academic self-efficacy.

Academic self efficacy

Schunk (1991) defines academic self-efficacy as individuals' confidence in their ability to successfully perform academic tasks at a designated level. Academic self-efficacy has been reported to improve academic achievement directly and also indirectly by increasing academic desires and prosocial behaviors (Bandura et al., 1996).

Academic self efficacy, alternatively, is defined as students' beliefs in their ability to complete an academic task successfully (Solberg et al., 1993; Zimmerman 1995). According to Zimmerman (1995) academic self-efficacy is defined "as personal judgments of one's capabilities to organize and execute courses of action to attain designated types of educational performances".

When we categorize academic self-efficacy according to study fields, we confront various specific types of self-efficacy. Physical education and sport school students' academic self-efficacy is also a specific product of self-efficacy.

Specific self-efficacy is defined as an individual's belief in his ability to stimulate his

motivation, information sources, and activities according to the needs of a given situation (Wood & Bandura, 1989). In line with this definition, physical education and sport school students' academic self-efficacy can be defined as the athlete's self-evaluation related to his own successful learning about the field of physical education and sports, and victory in competitions.

One of the most important predictors of an individual's success in a course might be his strong belief that he will be successful in that specific course. As Berry and West (1993) mention, self-efficacy theory predicts that students who have high efficacies will frequently try to take part in learning activities. They also try to spend more effort on challenging learning tasks and persist longer when they meet difficulties (Zimmerman & Martinez-Pons, 1990; Bandura, 1986; Schunk, 1991). In addition, they are resistant to difficulties and can cope with adversity (Pajares, 1996).

An individual's self-attitude and way of academic self-perception can be based on his environment as well as the way teachers, parents, and friends judge his learning background. It cannot be expected that anyone who encountered failures in school can develop a positive attitude toward learning in school (Senemoğlu, 2003).

Most university students might fail at the end of the academic year. Preventing their failures depends on determining the factors that affect achievement. It is thought that if the important factors affecting success are known, the causes of failures can be controlled (Özgüven, 1974). Many studies reveal that among students who possess the same academic skill levels, the students with high self-efficacy perform better (Zimmerman, 1995).

Similarly, Schunk and Pajares (2002) state that "Compared with students who doubt their learning capabilities, those who feel efficacious for learning or performing a task participate more readily, work harder, persist longer when they encounter difficulties, and achieve at a higher level".

Many studies also show that self-efficacy highly affects academic motivation, learning and achievement (Pajares, 1996; Schunk, 1995). Also many researchers report that there is a direct positive relationship between academic self-efficacy and academic achievement (Bandura et al., 1996; Chemers et al., 2001; Greene et al., 2004; Pintrich & DeGroot, 1990; Schunk, 1994; Sharma & Silbereisen, 2007; Zimmerman & Bandura, 1994).

Studies point out that students who have strong academic self-regulatory and self-efficacy beliefs are better at organizing their learning and resisting the excitements and social pressures to engage in behaviors that can retard their academic achievements. As a consequence, in our time, strong self-efficacious students are more apt to complete their education successfully and better prepared with a range of professional options in the society (Bandura et al., 2001; Zimmerman, 1990).

Methods

Participants

During the study, convenient sampling method was used to choose the participants. In this context, the research group was comprised of students enrolled in Aksaray University and Gazi University School of Physical Education and Sport in the 2009-2010 academic years. The total number of student participants in this study was 518. There were 214 females (41.3%) and 304 males (58.7%). Other demographic details are shown in Table 1.

Instruments

In this study, two scales were used to collect data. In the first scale, which was developed by the researcher in order to define the demography of participants, gender, class year and sport branches were included.

The second survey is "Academic Self Efficacy Scale" developed by Jerusalem and Schwarzer (1981). This original scale, including one specific dimension, is comprised of seven items that show a significant structure in terms of academic self-efficacy. Items in the scale are in the form of "four option likert type scale" (completely agree, agree, disagree, and completely disagree). The original scale was developed based on the data obtained from 68 medical students and Cronbach alpha coefficient was found .87 (Jerusalem and Schwarzer, 1981).

The adaptation of this scale to Turkish was done by Yılmaz et al. (2007). In the adaptation process of scale the Academic Self Efficacy Scale was translated into Turkish and administered to 672 university students. Validity and reliability analyses were done. According to the results, it was seen that the efficiency of the original scale, which consisted of seven items, was preserved in the Turkish form. Results of the factor analysis determined that Turkish scale also had one specific dimension like the original scale. Cronbach alpha reliability value of the Turkish scale was found to be .79 (Yılmaz et al., 2007). The reliability and validity analyses were revised for this study and it was observed that the scale of seven items had been preserved and consisted of one dimension. Additionally, the Cronbach alpha reliability coefficient was computed 0.712 for this study.

Data Analyses

Data analyses were carried out by means of Statistical Packet for Social Sciences (SPSS) 13.00 software program. The results were presented as descriptive statistics (frequency f, percentage %, and ($\overline{X}$) mean) and analysis of variance (one-way ANOVA and two-way ANOVA) was used to determine differences between independent variables. Significance level was set at 0.05. For the statement academic self efficacy scale, the degrees of "completely agree, agree, disagree, completely disagree" were used. The scale started with ''completely agree" from 4 to 1 for the positive items, and it started with ''strongly disagree'' from 1 to 4 for the negative items.

Results

In this section, the findings obtained from the data analyses related to the academic self efficacy of physical education and sport school students are given in detail. Findings related to the academic self efficacy of physical education and sport school students are shown in Table 2.

In Table 2, the average scores of physical education and sports school students for each item and whole academic self-efficacy scale are given. It may be observed that while physical education and sports school students had high average scores in total ($\overline{X}$ = 3.14), remarkably, they scored lower on the fifth item than for other items in the scale ($\overline{X}$ = 2.75). Since students do not believe they can be successful in every respect, it may be concluded that their responses tend to be dubious or disagree. With regard to this situation, a hypothesis may be suggested that students feel more confident and comfortable in their own fields of expertise. Physical education and sports school students' academic efficacies were compared in terms of gender (Table 3).

Table 1

Demographic information of the participants

VARIABLES		N	%
Gender	Female	214	41.3
	Male	304	58.7
	Total	**518**	**100.0**
Class year	Freshman	147	28.4
	Sophomore	152	29.3
	Junior	116	22.4
	Senior	87	16.8
	5 th Year and above	16	3.1
	Total	**518**	**100.0**
Sport Branches	Individual Sports	229	44. 2
	Team Sports	289	55.8
	Total	**518**	**100.0**

Table 2

Academic efficacy of physical education and sport school students

	Academic Efficacy	N	Mean	Std. Deviation
1.	In my university education, I am always able to accomplish the work to be done	518	3.30	.643
2.	I always achieve high success when I am adequately prepared for the exam.	518	3.39	.713
3.	To get good grades, I know very well what I need to do.	518	3.25	.738
4.	Even if a written exam is very hard, I know I will succeed.	518	3.01	.822
5.	I cannot think of failing any exam	518	2.75	1.599
6.	I am comfortable in the exam because I trust my intelligence.	518	3.13	.763
7.	When I prepare for an exam, I often do not know how to deal with the topics that I need to learn (-)	518	3.16	.889
	Total	**518**	**3.14**	**.562**

Table 3

Comparison of physical education and sports school students' academic efficacies in terms of gender variable

Variables	N	Mean	Std. Deviation	F	Sig
Female	214	3.08	.549	3.714	.054
Male	304	3.18	.569		
Total	518	3.14	.562		

p>0.05

Table 4

Comparison of physical education and sports school students' academic efficacies in terms of class year variable

Variables	N	Mean	Std. Deviation	F	Sig.
Freshman	147	3.11	.489	2.122	.077
Sophomore	152	3.08	.571		
Junior	116	3.21	.501		
Senior	87	3.24	.721		
5th Year and above	16	2.97	.461		
Total	518	3.14	.562		

p>0.05

Analysis of variance (one-way ANOVA) was used to compare students' academic efficacy according to gender. The comparison analysis demonstrates that there were no significant differences p>.05. According to the results, the female students' average academic efficacy score was $\overline{X}$ = 3.08, while male students' average academic efficacy score equaled $\overline{X}$ = 3.18. In light of these scores, it was seen that males scored higher on average than female athletes.

Physical education and sports school students' academic efficacies were also examined according to their class year, what is presented in Table 4. As can be seen in the above table, no significant difference was found when comparing the students' class year. According to the results, students matriculated in their 5th year or more, in other words repeating students, had lower average scores on the academic efficacy scale than normally matriculating students ($\overline{X}$ = 2.97).

Table 5

Comparison of physical education and sports school students' academic efficacies in terms of their sport branches and gender variable

Variables		Mean	Std. Deviation	N
Female	Individual Sports	2.98	.572	102
	Team Sports	3.18	.511	112
	Total	3.08	.549	214
Male	Individual Sports	3.10	.529	127
	Team Sports	3.24	.591	177
	Total	3.18	.569	304
Total	Individual Sports	3.05	.551	229
	Team Sports	3.22	.561	289
	Total	3.14	.562	518

Source	Sum of squares	df	Mean Square	F	Sig.
Sport Branches	3.739	1	3.739	12.093	.001*
Gender X Sport Branches	.129	1	.129	.417	.519

** p<0.05*

Physical education and sports school students' academic efficacies were examined according to their sport branches and gender as indicated in Table 5.

Table 5 shows the academic self-efficacy of physical education and sports school students in terms of their sport branches and gender. Students who are female and interested in individual sports have an average score of $\overline{X}$ = 2.98 and students who are female and interested in team sports have an average of $\overline{X}$ = 3.18. In addition, students who are male and interested in individual sports have an average score of $\overline{X}$ = 3.10 and students who are male and interested in team sports have an average of $\overline{X}$ = 3.24.

One-way ANOVA showed a statistically significant difference in students' academic efficacy according to their preferred sports branches ($p < 0.05$); two-way ANOVA showed no significant difference in students' academic self efficacy according to their preferred sport branches and gender ($p > 0.05$).

Discussion

The study, which was carried out so as to determine the physical education and sports school students' academic self-efficacy, revealed some important information, findings, and results. As a result of this study, it was concluded that academic self-efficacy shows differences according to demographic and socioeconomic variables. Self-efficacy beliefs were more strongly related to academic achievement (Bandura, 1986). Our study has shown that physical education and sport school students have high academic self efficacy scores.

The results demonstrate that physical education and sports school students have a high level of academic self-efficacy with regard to their average scores for each item and for the whole academic self-efficacy scale. There are many studies that show a positive correlation between self-efficacy and academic achievement (Bandura et al., 1996; Caprara, Barbaranelli, & Pastorelli, 1998; Chemers et al., 2001; Greene et al., 2004; Pajares, 1996; Pintrich & DeGroot, 1990; Schunk, 1994 and 1995; Sharma & Silbereisen, 2007; Zimmerman & Bandura, 1994).

As mentioned before, Berry and West (1993) state that self-efficacy theory predicts that students who have high efficacies usually try to take part in learning activities more often. They also try to give more effort on challenging learning tasks and persist longer when they meet difficulties (Zimmerman & Martinez-Pons, 1990; Bandura, 1986; Schunk, 1991). Furthermore, they are resistant to difficulties and they can cope with adversity tranquilly (Pajares, 1996). Self-efficacy is also a strong predictor of academic achievement and motivation to learn (Schunk, 1991).

The basic requirement to be academically successful is to complete the given tasks and responsibilities. As well as having good motivation, time management and study habits, it is expected that the student concentrate on studying, use effective study strategies and

develop a positive attitude toward hard work and achievement in order to be successful in school. Research shows that disciplined study and completing the assignments in time, instead of cramming overnight, play an important role in achievement. When the results are evaluated in the light of this information, they become more comprehensible (Balkış et al., 2006; Fritzsche, Young, & Hickson, 2003).

In the studies on academic self-efficacy, students generally state that their self-efficacy depends on their failures or successes from a course. Efficacy capacities are formed via direct experiments rather than social comparisons of the individual (Çubukçu, 2008). It is suggested that individuals' beliefs about their efficacy capacities also have an important impact on their motivation, which is an important factor in academic success.

According to Rothstein (2000), learning is a product not only of formal schooling, but also of families, communities and peers. Social, economic and cultural forces affect learning and thus school achievement. Studies have shown that individual student characteristics such as student well-being, perception of the school environment, motivation, involvement in scholastic activities, student effort, gender, work and students' perception of parental support and involvement all significantly affect a person's school achievement (Engin Demir, 2009).

The study shows that while gender and class year caused no statistically significant differences, the sport branch variables did show statistically significant differences. When the gender variable was examined, it was revealed that male athletes had higher average scores than females. According to this, it can be claimed that male students have a higher academic self-efficacy. However, although male students had higher average scores than their female counterparts, it was not a statistically meaningful difference.

In many social sciences, gender has always been a concern. The same holds for research on academic self-efficacy. According to the results of many research studies, males tend to have more academic self-efficacy than females, especially in academic fields such as mathematics, science and technology (Meece, 1991; Pajares & Miller, 1994; Wigfield, Eccles, & Pintrich, 1996). In these areas, a masculine orientation is associated with confidence and achievement because masculine self-perceptions are imbued with the notion that success is a masculine imperative (Eccles, 1987; Hackett, 1985). On the other hand, in other fields like language and arts, both males and females show similar confidence although the success of girls is usually higher (Pajares & Valiante, 2001). Koç, Avşaroğlu, & Sezer (2004) state that when students are asked to evaluate themselves, males generally state that they find themselves more successful than female students. The findings of this study also support this statement. However, Ercoşkun and Nalçacı's (2009) study showed a significant difference between their academic scores in favor of female students enrolled in primary school teaching training departments.

Another comparison done in this study was physical education and sports school students' academic self-efficacy according to their class years. We observed that there were no statistically significant differences. Arıoğlu's (2009) study on ELT students and Spittle, Jackson, & Casey's (2009) study on physical education department students in order to determine the students' academic motivation also showed that there were significant differences when controlled for class year. This finding does not concur with our study. One can conclude from our result that the students who could not manage to graduate from the university in four years because of incomplete coursework scored lower on the academic self-efficacy scale. This condition may be explained as university burnout, which can affect the academic self-efficacy. Another outstanding finding of the study is that junior and senior year students had higher scores on the scale. Arıoğlu (2009) states that normal matriculation and academic experiences are important factors that maintain the students' interest level in their career.

Comparison of sport branches revealed that students who were interested in team sports had significantly higher academic self-efficacy than those who were interested in individual sports. In the review of the literature, there was no directly comparable research, based on academic self efficacy and sport branches. However, in some studies, it was reported that teachers interested in team sports had higher-level self-efficacy than those dedicated to individual sports (Feltz and Lirgg, 2001; Myers and Feltz, 2007). These findings are consistent with those of the present study. However, in another study, Ünlü (2008) observed that sports branch was also one of the variables in the efficacy of physical education teachers, and it was found that the sport branch variable showed no statistically significant differences. The study also found that, in terms of gender, both female and male students tended more towards team sports than individual sports, but it was not observed to be a statistically significant difference.

In teams characterized by higher levels of system interdependence and also in team sport, the performance of the team connected all the member of the group; individual members of the groups can affect the group performance; or, if anyone within the group failed, another member of the groups would encourage him/her to do his/her best to overcome the failure, which originated from a friend. However, such a team supports structure is not available to those involved in individual sports, where performance is only related to the individual. At the same time, solidarity in team sports, confidence in a teammate, cooperation, intra-group work and mutual adaptation are shown similarity with the elements on the basis of academic achievement These elements of team sports are important for success in comparison to individual sports.

Academic self-efficacy is an important determiner for investigating students' success. Examining and determining the academic self-

efficacy level of the physical education and sport school student may contribute to improvements in this area of university education and increased academic success. If physical education students become more productive and effective, they might be strongly motivated for their education and for problem solving. The research finding is limited to participants' answers relating to the academic self-efficacy scale. Future qualitative research which covers the test having multi-variables on academic self- efficacy could be performed.

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