



Research Article

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The relationship between academic self-efficacy with level of education, age and sex in Lorestan University students

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ABSTRACT

Academic self-efficacy beliefs represents the confidence of person to her/his ability to successfully accomplishment of academic tasks on a distinctive level. The aim of this study was to evaluate and compare the academic self-efficacy of students on the basis of age, gender and education degree. This study was descriptive and correlational. The study population included all students of Lorestan University in the academic year 93 -94. It was from this community, 196 students were selected (100 men & 96 women). All students were asked to complete College Academic Self-efficacy Scale (CASES, Owen & Froman, 1988). This scale include 33 items that designed to assessing academic self-efficacy beliefs of students. ANOVA test & Turkey test were used to comparison academic self-efficacy in men and women and different educational levels of students. To evaluate the correlation between spiritual intelligence and the age of students the Pearson Correlation Test was used. The results showed that in terms of academic self-efficacy there is a significant difference ($p < 0.01$ and $F = 39/599$) between BA students, MA students and PhD candidate as academic self-efficacy is more in higher level of education. The Average of academic self-efficacy was 40/03 in men and 44/23 in women, that this difference was significant. Also there was a positive significant relationship between academic self-efficacy and age ($p < 0/01$). The results suggested that academic self-efficacy can be in relationship whit some factors include age, sex and level of education. However this finding may not be consonant, but perhaps the different society and research environment is the reason of it.

Keywords: academic self-efficacy, Age, level of education, sex, student.

INTRODUCTION

The concept of “self-efficacy” is at the center of social cognitive theory by Albert Bandura the famous psychologist. According to Albert Bandura (1995), self-efficacy is "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations." In other words, self-efficacy is a person's belief in his ability to succeed in a particular situation. According to Bandura (1994) this belief is a determining factor in one's thinking, behavior and emotion. According to Bandura people who have a strong sense of self-efficacy look at challenges as problems to be mastered and people with a weak sense of self-efficacy avoid challenging tasks (Bandura, 1994).

In social learning theory, the development of self-efficacy means judging about how to do a task in a prescribed condition which is the core concept of human activities (Bandura, 1982). Self-efficacy depends on one's sense of control over his environment and a cognitive belief that determines whether the behavior can make the necessary changes and how much effort is necessary? For how long one can resist against failure?

Self-efficacy is acquired by expertise in a certain field, using other people's experiences, verbal persuasion and biofeedback; knowledge and art of every individual is an important source of self-efficacy (Bandura, 1994; 1997) and parents, peer group and learning environment are involved the development of self-efficacy (Bandura, 2001).

Academic self-efficacy beliefs indicate an individual's confidence in his ability to perform academic tasks at a specified level (Schunk, 1991; Bong and Skaalvik, 2006). According to some researchers, academic self-efficacy indicates one's confidence to his ability to provide correct answers to the questions that measure the content knowledge of a particular lesson such as verbal and mathematical self-efficacy measures (Zimmerman and Martinez-Pons, 1990). Other researchers measure self-efficacy beliefs of the learners based on optimal more general academic behaviors. For example Pintrich and DeGroot, (1990) in their questionnaire that measures learning and motivational strategies have allocated a part to self-efficacy beliefs.

In fact, the concept of academic self-efficacy is a more specific type of self-efficacy used in fields of education and curriculum. Therefore it can have the same features of general self-efficacy such as its effectiveness on performance and here on academic performance, obtained by expertise in a certain field, other people's experiences, verbal persuasion and biofeedback, and its development by parents, peers and learning environment. Also, as mentioned above the general self-efficacy is increased by getting old and higher levels of education. Also like many other variables the amount of which is different in both genders, there is a possibility for academic self-efficacy to be higher in female students than male students (Qeibi et al, 2012). Unfortunately little research has been done about this type of self-efficacy with respect to demographic characteristics, and according to the researchers as this concept can influence individual academic achievements in future (Lavassani et al., 2009) research in this field seems necessary. In this study we sought to examine the issue whether Bandura's belief that "self-efficacy increases with age" applies for the concept of academic self-efficacy in Iran and whether this variable is directly related with age and whether students of different academic levels have varying degrees of self-efficacy. Also we are going to address whether academic self-efficacy is different in two genders.

EXPERIMENTAL SECTION

The present study is a descriptive and correlational investigation. The study population included all students of Lorestan University in the academic year 2014-2015 among which 196 students (100 men and 96 women) from three undergraduate, graduate and doctoral levels were selected by convenience sampling and completed Self-Efficacy scale of students (CASES, Owen and Froman, 1988). Finally the data collected were analyzed by SPSS 19 program and ANOVA tests were used to compare academic self-efficacy at different levels of education and between two genders also Tukey test was used as the post hoc test to compare academic self-efficacy at different education levels and Pearson correlation test was used to evaluate the correlation between academic self-efficacy and age.

Research Tools:

The research tools included academic self-efficacy scale of students (CASES, Owen and Froman, 1988). This scale has been developed to measure students' self-efficacy beliefs. Academic self-efficacy scale has 33 items based on 5 point Likert scale. Owen and Froman (1988) implemented the scale to analyze its reliability on 88 students and obtained the reliability obtained by test-retest was obtained as 0.90 within 8 weeks (Quoted in Trevathan, 2002). Choi (2005) obtained the internal consistency as 0.93. The results of Ayiku (2005) also indicated concurrent validity of the scale. Owen and Froman academic self-efficacy scale (1988) had a relatively high positive correlation (0.77) with Solberg et al (1993). In the preliminary validation of Persian academic self-efficacy scale in a sample of students, psychometric properties were reported as follows. The results of exploratory factor analysis showed that CASES questions are based on one factor. Academic self-efficacy scale correlation coefficient and student stressors were 0.74 ($P < 0.001$) which represents the discriminant validity of CASES. The results of confirmatory factor analysis of CASES indicated the acceptable fitness of measuring model with data. Cronbach's alpha coefficient was 0.91 (Fouladvand et al, 2008).

RESULTS

Table 1 presents the descriptive analysis of academic self-efficacy in different academic levels.

Table 1. Descriptive analysis of academic self-efficacy variable

Sample size	The standard deviation	Average	Academic level
128	13.02	40.15	Masters
43	12.62	45.53	Masters
25	11.12	48.09	PhD

According to the results of the above table the highest academic self-efficacy is related to PhD level (With a mean of 48.09 and standard deviation 11.12) and the lowest self-efficacy is related to undergraduate level (With a mean of 40.15 and standard deviation 13.02).

Also the results of analysis of variance in academic self-efficacy based on different levels of education are given in Table 2.

Table 2- variance analysis of academic self-efficacy based on different levels of

	SS	df	MS	F	Sig.
Between groups	10350.23	2	5175.12	32.34	0.000
Within groups	31512.52	195	161.6		
Total	41862.75	197			

According to the results presented in Table 2, it was determined that in terms of academic self-efficacy, there is a significant difference between (students of different educational level) at the level of 0.01.

Table 3 compares the difference of academic self-efficacy of the groups through Tukey test.

Table 3- comparing the academic self-efficacy of the groups through Tukey test

Groups	Mean Difference	Std. Error	Sig.
1 and 2	-5.38	2.9	0.001
1 and 3	-7.94	2.75	0.000
2 and 3	-2.56	3.12	0.002

Group 1: Undergraduate Group 2: Graduate Group 3: Ph.D.

According to the results of Table 3 it was determined that there was a difference between the undergraduate-graduate; undergraduate - Ph.D. and graduate- Ph.D. at 0.01.

Table 4 shows the descriptive study of academic self-efficacy in women and men.

Table 4- descriptive study of academic self-efficacy in women and men

Gender	Average	The standard deviation	Sample size
Male	40.03	11.67	100
Female	44.23	12.38	96

According to the results in Table 4, the mean academic self-efficacy in men and women is 40.03 and 44.23.

Table 5 presents the results of the variance analysis of academic self-efficacy in men and women

Table 5- the variance analysis of academic self-efficacy in men and women

	SS	df	MS	F	Sig.
Between groups	1623.19	1	1623.19	2.225	0.000
Within groups	142950.673	196	729.340		
Total	144573.863	197			

According to the above table it was determined that there is a significant difference between groups (male and female students) in terms of academic self-efficacy.

Also Table 6 has addressed the relationship between age and academic self-efficacy

Table 6- the relationship between age and academic self-efficacy

	The correlation coefficient	Level of significance
age and academic self-efficacy	0.427	0.000

According to the results of this table, the relationship between age and academic self-efficacy is significant at the level of 0.01.

DISCUSSION

The first hypothesis of this study is differences in the level of academic self-efficacy of the students in different levels of education that the findings confirmed the hypothesis. The findings of this study showed that the level of academic self-efficacy differs among the undergraduate, graduate and Ph.D. students' also in this regard there is a difference between the graduate and Ph.D. students. This result is consistent with the results of Saffarinia et al (2014). The reason of these differences may be due to different educational environments and priority of levels of

education. A person who has been able to have a good academic achievement and reach higher levels of education is more likely to trust his academic performance. Of course, this relationship is a reciprocal relationship as according to the findings of Chen et al (2009) on English language students, students with higher self-efficacy showed greater academic achievement. Another cause of increased self efficacy with higher level of education is aging as in another hypothesis of this study the level of academic self-efficacy increases by age which is consistent with the findings of Safari et al (2014), Di Alonso (2004) and Arvens (2010). Naturally, students who are enrolled for higher education are older than the undergraduates which in turn can increase students' self-efficacy. The reason for this can be found in Bandura's theory. Bandura's social cognitive theory introduces self-efficacy as a personal factor that can help a person to overcome barriers to a behavior. He believes that as the person has more successful experiences, he can perform his tasks with higher confidence in his abilities and naturally individual experiences will increase with age (Ghaffari et al., 2011). So we can expect that older people with no disabilities may have higher sense of self-efficacy. In general, Bandura's theory can also explain the relationship between self-efficacy, age and level of education.

Another hypothesis examined in this study was the relationship between gender and academic self-efficacy which was confirmed, which means that the findings suggest that the level of academic self-efficacy is different in boys and girls and it is higher in girls. This finding is consistent with Qeibi et al (2012 and Zabihollahi et al (2012) which indicate higher self-efficacy of girls. One of the possible reasons for higher levels of self-efficacy in girls than boys may be that the girls have higher motivation and passion for education and university admission which is proved by the higher population of female students than male students and the reasons for the occurrence such a phenomenon can be the lack of confidence in the boys' future career after college education. This issue indicates the importance of exploring the reasons of boy's weakness in this variable by researchers and education practitioners.

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