



RESEARCH ARTICLE

The relation of educational self-efficacy and motivation among Medical Education students

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Abstract

Introduction: One of the factors effective on learning being helpful on students' academic achievement is self-efficacy and motivation. Self-efficacy has powerful effect on motivation, choices, efforts and perseverance eventually leading to academic fulfillment.

Materials and Methods: This is a descriptive-analytical cross-sectional study on the relationship between educational self-efficacy on one hand and educational motivation on the other among the students of a virtual course in the field of Medical Education at the Shahid Beheshti University of Medical Sciences in 2014-15. It has been done by an all-out counting. Demographic information questionnaire, Zajacova's self-efficacy and Vallerand's educational motivation questionnaires have been used as factual data. Eventually, the collected data have been analyzed through Excel 2010 and SPSS version 18.

Results: Of 149 people who participated in the study, 87.5% were women and 22.4% male; 18.8% were single and 81.2% married; 20.1% were between 25 and 34 years old, 49% were between 35 and 44 years old and 30.9% older than 45. The mean self-efficacy scores of the students have been (5.77 ± 0.07), 75.8% of them being averagely self-efficient. The mean scores for the educational motivation of the participating student have been (53.7 ± 0.07) which shows 68.5% of them have had sufficiently motivated and only few of them were not so while the variables of external and internal motivation always stood high. A positive and direct relationship has been shown between educational self-efficacy and achievement ($P < 0.05$). Self-efficacy and educational motivation proved to be positively and significantly interrelated as well ($P < 0.05$). Various aspects of the educational motivation have not been shown to have statistically significant relationship with various levels of academic achievement according to the study.

Conclusion: Based on the findings of the study a significant percentage of students have had average to high academic self-efficacy while their educational motivation has been reasonable. Educational self-efficacy has been significantly related to educational motivation, using modern methods of teaching and distance learning as well as effective time management and enhancing motivation eventually can lead to an academic achievement.

Keywords: Educational self-efficacy, Educational motivation, Medical education, Virtual.

Introduction

Self-efficacy is the "beliefs in one's capabilities to organise and execute the courses of action required producing given attainments" [1].

That refers not to the actually abilities of someone's to perform certain tasks but rather to their self-perception of being able to perform certain tasks under given conditions [2]. The degree of self-efficacy is the product of both external (i.e., environment) as well as internal (i.e., cognitive, affective, biological and behavioral) factors [2]. These factors appear to be interrelated and develop individual's personality. Henson pointed out that humans are not the product of either biology or environment but rather the product of the influence of both external and internal factors

[3].

The importance of self-efficacy appears to depend on its ability to affect human's choices and behaviors [3]. Indeed, Bandura supported that self-efficacy plays a key role in the development of human achievements and motivations [1]. Bandura's work strongly supports the notion that human's behaviours, their motivations as well as the outcome of their actions (success or failure) are the product of their self-efficacy [1].

According to Bandura's theory, the way people think, feel, act and motivate themselves is affected by self-efficacy [4]. Researchers studying self-efficacy suggest that people lacking self-efficacy have problems with motivating themselves to carry out tasks. When students have the

impression that they will not be able to complete a certain task, they will not make an effort to fulfill it and they will easily quit [5].

To focus self efficacy for students, academic self efficacy includes various learning and teaching processes. Midgley defines "academic self-efficacy" refers to students' perceptions of their competence to do their class work [6].

According to Schunk, academic self efficacy refers to individuals' convictions that they can successfully perform given academic tasks at designated levels [7]. Likewise, Altunsoy state that the concept of academic self-efficacy includes the beliefs about the capabilities to achieve the tasks in certain academic fields [8].

This belief is closely linked to self-concept which is a general self-descriptive belief that incorporates many forms of self-knowledge and self-evaluative feelings [9].

Motivation, on the other hand, is an inner drive that directs a student's behavior toward the fulfillment of a goal. Motivation is a goal-directed behavior and indicates the willingness of the students to exert high levels of effort toward achieving goals. Motivation influences how and why people learn as well as their performance [10]. Two decades of research have clearly established the validity of self-efficacy as a predictor of student's motivation and learning [11].

To perceive the relationship between self efficacy and motivation self efficacy is observed to be a major ingredient in motivation [12]. Self in this context is seen as cognitive structures that provide references mechanisms and a set of sub functions for perception, evaluation and regulation of behavior [12].

The purpose of this study is to assess educational self-efficacy and motivation levels among Medical Education students' virtual M.S. courses at Shahid Beheshti University of Medical Sciences and to determine the relationship between educational self-efficacy and motivation. The aims of this study were to define the relationship between educational self-efficacy and motivation, and also to explore the impact of gender, marriage and the age groups on educational self-efficacy and motivation among the above students.

Methods

A. Participants:

The Participants of this research were all Medical Education students' virtual M.S. courses at Shahid Beheshti University of Medical Sciences in 1st semester of educational year 2014-15.

B. Instruments:

Two instruments were administered in the present study. They were as follows:

B1. Academic Self-efficacy questionnaire:

Questionnaire Zajacova, first reviewed the results of previous studies about the academic self efficacy beliefs [13]. This scale contains a list of 27 tasks such as "writing term papers", asking questions in class", and "managing both school and work". For each task, students were asked to rate on an 11-point Likert scale how confident they are that they could successfully complete them (from 0 = not at all confident to 10 = extremely confident). In the study, the Cronbach's alpha coefficients for global factor it's factors consisting confidence in academic performance in class, confidence in academic performance outside of class, confidence in interaction at school and confidence in ability to manage work, family and university were 0.94, 0.88, 0.85, 0.83 and 0.72, respectively.

B2. Academic Motivation questionnaire:

The data collection tool for this study is tests of academic motivation (Vallerand) [14]. This scale is designed based on the theory of autonomy self-regulation) and three main dimensions of motivation examined namely: intrinsic motivation, external motivation and motivation. This scale has 28 questions and by Vallerand in 1992, have 7 scale that 3 of them related to the intrinsic motivation (to know, move to progress and stimulus experience), 3 relating to the external motivation (homologize, projection, extrinsic regulation) and a scale relevant to a motivational. Academic motivation scale include 28 and 4 term is dedicated to each subscale. This test is a self-report and test subjects should be determine a 7-degree Likert scale (from never = 1 up to completely = 7) that any of mentioned words to what extent to her reasons going to school. Vallerand has reported Cronbach's alpha coefficient of academic motivation test subscale from 0.83 to 0.86.

Cronbach's alpha coefficient for this study was depicted in [Table1].

Table1: Cronbach's alpha coefficients.

Variable	Items	Cronbach's alpha coefficients
Student's Educational Motivation	28	0.91
Student's Educational self-efficacy	27	0.94

C. Procedure:

Data were collected from all Medical Education students' virtual M.S. courses at Shahid Beheshti University of Medical Sciences (199 students) that were registered in 1st semester of educational year 2014-15. The researchers distributed the questionnaires to students. Each participant in the survey was informed that the participation was voluntary but encouraged, and that because responses would be returned directly to the researcher by email, no one other than researcher would know it. Students completed a

questionnaire that consists of two parts. The first part asks participants to record their age, sex and marriage status and second part consists of self-efficacy and motivation questions. Incomplete responses to the questionnaires were excluded. A total of 149 usable responses were obtained for an overall response rate of 74.8%. The whole procedure was undertaken with faculty's permission. The data analysis was performed using the statistical software of SPSS 18 and Excel 2010. To analyze the behavior of the variables age groups, and marriage we used the Pearson Correlation and Spearman's rank correlation coefficient. To analyze the behavior of the variable gender we used the T Student test.

Results

Of 149 people who participated in the study, 75.8% were women and 24.2% male; 18.8% were single and 81.2% married; 20.1% were between 25 and 34 years old, 49% were between 35 and 44 years old and 30.9% older than 45. [Table2].

Table2: Demographic Information of Medical Education students' virtual M.S. Courses at Shahid Beheshti University of Medical Sciences.

Variable		Number	Percent (%)
Gender	Female	113	75.8
	Male	36	24.2
Marriage	Single	28	18.8
	Married	121	81.2
Age Group	year 25-34	30	20.1
	year 35-44	73	49
	years and older 45	46	30.9

The mean (\pm SD) self-efficacy scores of the students have been (5.77 ± 0.07), 75.8% of them being averagely self-efficient. Of various aspects of the educational self-efficacy, self-confidence in academic achievement has had the highest score (6.99) while that of the confidence in their capacity for interacting with other students has been the lowest (5.03). The means scores for the educational motivation of the participating student have been (53.7 ± 0.07) which shows 68.5% of them have had sufficiently motivated and only few of them were not so while the variables of external and internal motivation always stood high. Self-efficacy and educational motivation proved to be positively and significantly interrelated as well ($P < 0.05$). [Table3].

Table 3: Pearson Correlation test for relation educational motivation and self-efficacy.

Variable	Educational Motivation	
	R	P
confidence in academic performance in class	0.40	0.000
confidence in academic performance outside of class	0.86	0.000
confidence in interaction at school	0.84	0.000
confidence in ability to manage work, family and university	0.74	0.000
Educational self-efficacy	0.88	0.000

Studying demographic factors proved that educational motivation and self-efficacy levels have been a little higher

among women than men as well as among singles than those married.

Table 4: Variance Analysis for studying statistical differences between variables in age groups.

Variable		N	Mean	SD	F	p
year 25-34	Educational Motivation	30	5.74	0.15	4.52	0.012
year 35-44		73	5.20	0.09		
years and older 45		46	5.38	0.12		
year 25-34	Educational Self-efficacy	30	6.06	0.18	2.30	0.103
year 35-44		73	5.65	0.10		
years and older 45		46	5.76	0.12		

The mean educational motivation and as well as self-efficacy in students between 25 and 34 years old have been a little greater than the others. [Table 4].

Discussion

Based on the findings of the study a significant percentage of students have had average to high academic self-efficacy (75.8% average and 22.1% High).

In this study The mean (\pm SD) self-efficacy scores of the students have been (5.77 ± 0.07) while in Jamali, Roohi, Chowdhury and shkullaku were 61.52, (3.31 ± 0.55), (30.28 ± 4.03), (23.14 ± 4.41) and (2.84 ± 0.81) respectively [15-19].

Their educational motivation has been reasonable (68.5% High and 21.5% Average) and there is no student without motivation. The objective of this study was to explore and

examine the relationship between students' self-efficacy and motivation. Self-efficacy provides a useful framework for examining the relationship between students' motivation and their performance in the job. All of the three variables (self-efficacy, intrinsic and extrinsic motivation) under the study proved to be significant statistically ($R = 0.88$) ($P = 0.000$).

The analysis of the data shows that there is a correlation between self efficacy and academic motivation. These results are consistent with previous researches which document that there is a highly significant positive relationship between the two variables [20-24].

Results of the present study confirm that women have higher academic self efficacy than men in this specific content and in a virtual learning system ($P=0.049$) like some of the past researches [25,26] while others were no significant difference between genders [16, 27]. These results meet some studies that indicate statistically significant differences between gender when it comes to self-efficacy associated with the use of computers or the internet [28], reinforcing the stereotype that Internet users are generally perceived as young and males. There are also other studies that found statistically significant differences between men and women when using the virtual space [29]. Marriage and age groups does not affect educational self-efficacy and motivation.

Conclusion

Based on the findings of the study a significant percentage of students have had average to high academic self-efficacy while their educational motivation has been reasonable. The correlation between educational self-efficacy and academic motivation was positive and significant, and it is suggested that an increase in academic motivation could be associated with the promotion of educational self-efficacy in medical education students. The relationship between the academic motivation and educational self-efficacy subscales was significant, too. It should be mentioned that, according to the results of the study, using modern methods of teaching and distance learning as well as effective time management and enhancing motivation eventually can lead to an academic achievement.

Further studies should be done to determine whether the results of this study are representative. In the current study we used surveys to measure students' self-efficacy and motivation. Since students may have answered the questions with socially desirable responses, perhaps interviews with students would have allowed for more contextual and thus more honest responses. In addition, a study design with a greater sample size and also focused on other virtual courses could facilitate the generalization of the results.

Conflicts of Interest

There are no conflicts to declare.

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