

## Original Article

# Factors Affecting Students' Academic Motivation and Achievement Motivation in Kermanshah University of Medical Sciences

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## Abstract

**Introduction:** Students learn similarly in terms of ability and talent, but they have many differences in academic achievement. These differences can be shown not only in school lessons but also in other extra-curricular activities. The present study aims to investigate the factors affecting academic motivation and achievement motivation in students of Kermanshah University of Medical Sciences (KUMS).

**Methods:** In this analytical, cross-sectional study, the study sample included all students of KUMS studying in various majors in the academic year 2013-2014. A total of 296 (135 male and 161 female) students were selected through stratified random sampling. Herman's achievement motivation scale, Vallerand's academic motivation scale, and factors affecting checklist were used to collect data. The obtained data were analyzed by SPSS-18 software using descriptive statistics (frequency, mean and standard deviation) and inferential statistics (binary regression).

**Results:** Binary regression analysis showed that among studied variables, future better jobs ( $P=0.01$ ,  $\text{Beta}=0.509$ ) and educational facilities ( $P=0.02$ ,  $\text{Beta}=2.46$ ) could play important roles in factors affecting students' achievement motivation, and having a positive self-image ( $P=0.04$ ,  $\text{Beta}=0.501$ ) and tendency to optimism about personal abilities ( $P=0.001$ ,  $\text{Beta}=5.52$ ) could play important roles in factors affecting students' academic motivation.

**Conclusion:** According to the results, it is suggested that consideration should be given to improve the academic achievement of educational facilities; also, the importance of self-efficacy of the students should be noted more. Moreover, motivational workshops on increasing academic motivation of students should be held by universities.

**Keywords:** Achievement motivation, Academic motivation, Students

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## Introduction

Students are often similar in terms of learning ability and talent, but they have many differences in academic achievement. These differences can be shown not only in school lessons but also in other extra-

curricular activities. This aspect of human behavior is related to the field of motivation (1). Academic achievement motivation is something to which some part of the research have been allocated; and psychologists

have mentioned the necessity of motivation in education, due to its effective relationship with learning, skills, strategies and behaviors. One of the constructive blocks which they have provided is academic motivation and achievement motivation (2). Academic motivation is personal comprehensive intrinsic desire which leads person's behavior towards learning and academic achievement and is under the influence of both internal and external factors. Academic motivation is students' stimulation which plays an important role in completing assignments, achieving goals or acquiring a certain degree of competence, and ultimately getting required success in learning and academic achievement (3). In addition to academic motivation, which is considered as an important factor in strengthening the students, achievement motivation is one of the other main factors associated with students. Motivation can be defined as the tendency of an individual to achieve the objectives on the basis of a set of criteria (4).

Achievement motivation, academic motivation, and influencing factors have been considered by psychologists for many years. Students' motivation is influenced by biological, psychological and social factors. The researchers have considered many factors affecting students' academic achievement. But, due to cultural differences and rapid changes over time, specific reasons cannot be addressed as a general rule for all communities, since the rules, cultural context and traditions of each society, people's attitudes to education, parental income level, etc. all are among the factors that specifically affect academic success or failure in a society (5). Academic motivation and achievement for students is affected by many factors such as economic factors (employment, financial support from family and amenities), cultural and social factors (cultural centers, attitudes toward education, family education, family and social status), educational factors (teaching methods, social behavior of lecturers, training facilities, etc.), and geographic factors (the suitability of educational spaces, being away from family, being in the academic environment) (6).

Continuous evaluation of students' academic achievement during education and investigation of the associated factors are essential elements to improve the quality of educational systems especially in universities. This plays an important role in compiling a more appropriate educational program, improving educational quality, and ultimately, correcting and developing the efficiency of relevant authorities (7). Given the importance of academic motivation and achievement motivation in learning and seriousness in their education, it is very important to identify factors affecting these components, especially in medical sciences with high expenditure of resources to provide trained and high qualified health care manpower

for therapeutic and health services. In several studies, personality and social factors influencing people's motivation have been discussed. However, there are not many organized studies on investigating the factors affecting academic motivation and achievement motivation; thus, the present study aims to investigate the factors affecting academic motivation and achievement motivation among students of Kermanshah University of Medical Sciences (KUMS).

## Methods

The statistical society of this analytical, cross-sectional study included all associate students, bachelor students (nursing, public health), postgraduate students (clinical psychology, clinical biochemistry, nursing, immunology, medical physics), and Ph.D. students (dental, medical, pharmacy) of KUMS in the academic year 2013-2014.

A total of 296 (135 male and 161 female) students were selected through stratified random sampling. First, names of all students in KUMS were listed by means of visiting education offices of each college, and then the number of samples in different academic disciplines was determined according to the ratio of major's number to the whole population of the university. The samples were randomly selected in each field of study. The criteria for inclusion included the willingness of subjects to participate in the study, and an exclusion criterion was filling in the questionnaire incompletely. Objectives of the study were explained to the subjects; after explaining the strict confidentiality of all responses and unlikelihood of disclosing the names of subjects, the questionnaires were completed by the participants.

Herman's achievement motivation scale, which includes 29 items, was made in 1970 to measure people's achievement motivation. The range of scores is 29-116; 29-58 indicates low motivation, 58-87 shows average motivation, and 87-116 indicates high motivation. Questions 5, 6, 7, 8, 11, 12, 13, 17, 18, 19, 21, 22, 24, 25, 26 are scored in reverse (8). The internal consistency of the scale has been reported to be 88% and 82% by Cronbach's alpha coefficient and test-retest measure (9). Therefore, this questionnaire is an appropriate tool to measure the students' achievement motivation.

Vallerand's academic motivation scale was used to measure the students' academic motivation. This scale consists of 7 subscales; three subscales are related to intrinsic motivation that includes motivation to know (questions 2, 9, 16, 23), motivation to accomplish (questions 5, 13, 20, 27), and motivation to experience stimulation (questions 4, 11, 18, 25). Three subscales are about extrinsic motivation that includes integrated

regulation (questions 3, 10, 17, 24), introjections regulation (questions 7, 14, 21, 28), and external regulation (questions 1, 8, 15, 22), and one subscale is about amotivation (questions 5, 12, 19, 26). The academic motivation scale includes 28 items. Scoring is based on mean and standard deviation of the students' scores; scores <114 are considered as low motivation, scores 114-148 as average motivation, and scores >148 as high motivation. With regard to psychometric characteristics, Vallerand reported Cronbach's alpha coefficients of 83%-86% for the subscales of academic motivation; only extrinsic integrated motivation (62%) was not included in this range. The reliability indices of the academic motivation subscales obtained from test-retest method, however, were reported to be 71-83% over one month interval. The results of confirmatory factor analysis confirmed the seven-factor scale and showed that academic motivation scale is an appropriate tool (10).

Factor affecting check list was used to measure factors affecting student's achievement motivation and academic motivation. This scale consists of 4 subscales, such as economic factors (employment, financial support from family, and amenities), cultural and social factors (cultural centers, attitudes toward education, family education, family and social status), educational factors (teaching methods, social behavior of lecturers, training facilities, etc.), and geographic factors (the suitability of

educational spaces, being away from family, being in the academic environment) (11).

The obtained data were analyzed by SPSS-18 software using descriptive statistics (frequency, mean and standard deviation) and inferential statistics (binary regression).

## Results

From 296 studied students, 45.6% were male, with the mean age of  $23.82 \pm 3.93$ , and 54.4% were female, with the mean age of  $22.68 \pm 2.70$ . 78 (26.4%) of them were medical students, 40 (13.5%) were pharmacy students, 43 (14.5%) were dental students, 47 (15.9%) were nursing students, 32 (10.9%) were public health students, 11 (3.7%) were food industry students and 45 (15%) were postgraduate students.

Table 1 shows that among studied variables, having a positive self-image (appearance and abilities) ( $P=0.04$ ,  $Beta=0.501$ ) and tendency to optimism about personal abilities ( $P=0.001$ ,  $Beta=5.52$ ) could play important roles in factors affecting students' academic motivation.

Table 2 shows that among studied variables, future better jobs ( $P=0.01$ ,  $Beta=0.509$ ) and educational facilities ( $P=0.02$ ,  $Beta=2.46$ ) could play important roles in factors affecting students' achievement motivation.

**Table 1. Binary regression for factors affecting on student's academic motivation**

Variables	Beta	S.E	WALD	Sig.	Beta coefficients
Having a positive self-image (appearance and abilities)	-0.692	0.343	4.07	0.04	0.501
Tendency to optimism about personal abilities	1.70	0.415	16.92	0.001	2.52

**Table 2. Binary regression for factors affecting on student's achievement motivation**

Variables	Beta	S.E	WALD	Sig.	Beta coefficients
Better jobs in the future	-0.676	0.263	6.61	0.01	0.509
Educational facilities	0.904	0.390	5.37	0.02	2.46

## Discussion

The results showed that among the factors affecting academic motivation, two factors are significant: a positive image of yourself (appearance and abilities) and tendency to have a positive thinking about personal abilities. Based on Bandura's theory (1996), people's behavior in certain situations depends on the mutual interaction of environmental and cognitive conditions, especially the cognitive factors which influence the opinions of people about what they believe can perform in order to get the desired results in each particular situation, the idea of one's own potential and tendency to optimism about their ability, called self-efficacy by Bandura. In

public opinion, self-efficacy is to believe in their ability to have some control on their performance and on environmental events; those who have less self-efficacy believe that they basically cannot show an important behavior (11).

In Bandura's system (1997), individuals' belief in their own self-efficacy has effects on what they choose to do, the amount of effort they have to perform, the time they face with obstacles and experiences, and resilience after the misadventure; despite the fact that self-efficacy has a strong causal impact on people's actions, it is not the only decisive factor; rather, personal effectiveness for behavior, the environment, individual behavior and other

variables, in particular, depend on the expected outcome (12). In the past two decades, self-efficacy has been a forecast of students' motivation and learning; educators believe that students' opinion of academic capacity has an essential role in their motivation to achieve their goals. Shell et al. defined self-efficacy as the capacity to conduct educational activities, and they considered the expected consequences associated with the value of these activities in achieving different results on employment, social careers, family life, education, and citizenship. Self-efficacy and outcome expectations together estimated 32 percent of the variance in academic achievement (13).

In a study by Akbari Balootbangan on simple and multiple relationships between self-efficacy, achievement goals and achievement motivation in predicting academic achievement of students in Semnan University of Medical Sciences, the results showed that self-efficacy variable can explain 37 percent of variance of academic achievement (14). Furthermore, Pintrich & De Groot in a piece of research and Ozan et al. in another study showed that self-efficacy variable was a predictor of academic achievement (15, 16). In a study by Moulavi et al., devoted to investigate the factors affecting the decrease of students' educational incentive, the results showed that the variables of economic status, self-esteem, hope for the future, the quality of education and marital status are the effective factors on reducing students' motivation (17). The results of the study are incompatible with those of the present study; it can be explained that measuring tools of both studies are different (in the present study, there were more variables); in addition, it can be due to cultural factors and the observed sample.

According to Table 2, Achievement motivation is defined as the individual's desire to achieve goals based on a set of criteria. Regression analysis showed that among studied variables, future better jobs and educational facilities could play important roles in factors affecting students' achievement motivation. The results of this study are in line with Dayeripoor's study who analyzed the individual factors, internal and external factors of the educational institutions (18). The regression analysis in this study showed that the factors within the institution (teachers' approach, space, and school facilities), and factors outside the school (parents' social support and career prospects) play remarkable roles. Predicted variables in this study explained 54% variable variance of the criterion.

In another study by Mohamadi et al., done on students' achievement motivation, the results showed that occupation background and income are among the factors affecting the motivation of nursing students (19). In addition, in similar study conducted by Amini et al., it was demonstrated that the graduates' employment and

social status are important factors affecting students' motivation (20). Nicholls' study indicated that students desiring high achievement motivation choose the main lessons of assets and demand more challenge for their future jobs; however, they select the items and choices according to reality. In contrast, students who have less achievement motivation select either easy or difficult lessons (21).

## Conclusion

This study aimed to assess factors affecting the student's achievement motivation and academic motivation. The results showed that factors such as educational facilities and getting better jobs in the future are important in achievement motivation, while in academic motivation factors such as the tendency to optimism about personal ability to have a positive image of oneself (appearance and abilities) are of particular importance. According to the results, it is suggested that consideration be given to improve the academic achievement of educational facilities; also, the importance of self-efficacy of the students should be noted more. In addition, motivational workshops on increasing academic motivation of students should be held by universities.

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