

Factors effective on academic achievement of the students in Shahrekord University of Medical Sciences to enhance them, especially among the students with academic failure

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Abstract: Background: This study was aimed to identify the factors effective on academic achievement of the students in Shahrekord University of Medical Sciences to enhance them, especially among the students with academic failure. Methods: Statistical community included 416 students of different disciplines in faculties of medicine with 174 (41.8%), Nursing and Midwifery with 115 (27.6%), Paramedicine with 78 (18.8%), and Health with 49 (11.8%). The present study is descriptive-analytical and the data were gathered through questionnaire and examination of academic status of the students. The reliability of the questionnaire was confirmed through Cronbach alpha test, comments given by experienced experts, and piloting with the students. Results: Individual factors, the factors associated with the university, the faculties, the professors, environmental factors, and socioeconomic factors were effective, measured as 27%, 27%, 23.5%, and 22.5%, respectively. In addition, the students with no occupation were more successful compared to the students who were employed. Conclusion: Individual factors including belief in God, motivation, and being hopeful about future, diploma grade average point, planning and time management, methods of studying, teaching methodologies, the location of studying, the emotional environment of education, the relationship between parents, family members' attitude toward education, and educated siblings had the largest contribution to academic achievement. Therefore, holding training sessions on time measurement, religion, and life skills (management of stress and interpersonal relationship), and workshops on appropriate methods of studying and learning are suggested.

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1. Introduction

Discussing and examining academic achievement has a long history. At first, two points of view were raised. One attributed the success to heritage and the other to the environment. Among supporters of environment's effect on academic achievement was Alpos de condol (1894-1997) who considered the well-organized primary, and particularly, secondary, and academic studies as effective on academic achievement. Of other supporters of this viewpoint is Alfred Darwin (1864-1894) who considered good studies as a factor contributing to success.

In contrast to these, France Galton, in an article published in 1865 entitled "the art and inherited moral characteristic", considered heritage as more important than environment in academic achievement (Pourkazemi, 1974; cited from Webster & David).

What seems important is that each of these factors alone could not be effective on emergence of interpersonal differences; rather, both together affect emerging attributes and characteristics and one of them could not be supposed as being more important than the other. However, sometimes the effect of one of them is more pronounced compared to the other.

In an unsuitable environment, even the best inherited factor cannot flourish and vice versa. Everyone who is deprived of necessary context and gift to do something cannot grow up even in the best surroundings.

Among the investigations conducted in relation to academic achievement UNESCO study (1992) could be named. This study showed that some factors like educational environment, lecturer characteristics, and learner and family characteristics are effective on academic progress.

Delamini (1995) examined the associations between academic and family variables and their effect on academic performance in Switzerland's students, indicating grade point average (GPA) and science score among 11 variables had the largest impact on academic performance. In this research, no family factor had a significant effect on academic progress. Wong as cited in Bloom (2002) attributes academic progress to three factors: the first one is cognitive input behavior which in his belief explains 50% of the academic progress. The second variable is student's motivation for learning new material explaining a difference of 25% among students' academic progress. The third variable is training

quality provided by trainers, predicting a 25% difference in student's academic progress.

Johnson's study (1991) indicated that some characteristics of students such as gender, the number of mathematics lessons passed, the GPA of agriculture lessons' score, and farm experiences are associated with their progress in agricultural machines course.

Randel et al. (1993) investigated the association between applied agricultural curricula and academic progress and concluded that among the variables of previous experiences in agriculture, membership in F.F.A agricultural trainings, interest in agriculture, GPA, and socioeconomic status, only GPA of previous course was effective on their academic progress.

In a study by Drana Spatz (2004) motivation was found to be effective, and in Keting's study (2004) counseling was effective, with emphasis on regular programs in William Jenus (2003) study, on family factors in Gonzalez and Blanco study (2003), on cognitive input behavior and trainer's methodology in Senmuk and Fajelman's study (2003), on family's education and study habits in Ardila's study (2001), on diploma GPA, admission examination scores and father education in Hejazi's study (1381), and on learning method in Cook's study (1990). These studies have found the role of several (family, social, and educational) factors in academic achievement.

Looking at the studies conducted on academic achievement, we found four main factors, individual and familial characteristics, environmental characteristics, and the content of curriculum are particularly important, differently affecting student's academic achievement based on the conditions.

The general purpose of the present study is to determine the effect of factors on academic achievement of students in Shahrekord University of Medical Sciences (SKUMS). The specific purposes followed by the present study are as follows: 1. determining the effect of individual and personality factors on academic achievement; 2. determining the effect of socioeconomic status of students on academic achievement; 3. determining the effect of environmental conditions on academic achievement; 4. determining the effect of educational status of the university, the faculties, and professors on academic achievement; 5. investigating the association between GPA, gender, occupation, place of residency, and marital status and academic achievement.

2. Material and methods

For this descriptive-analytical study, 416 students of SKUMS in 2010-2011 were enrolled and their demographic, academic, and family data were

gathered through a reliable and valid questionnaire. The students with a GPA of 14 and higher were considered as successful and the students with a GPA of lower than 12 as unsuccessful. The data were analyzed by chi-square and ANOVA.

The method of conduction: descriptive-analytical. Statistical community: the students of SKUMS were divided into four groups of A, B, C, and D based on GPAs of <12, 12-15, 15-17, and >17 (including 1217 students).

Sampling: Clustering based on the faculty and GPA according to convenience randomization among the clusters.

Sample size: 416 students enrolled based on the populations under study according to this equation:

$$p=q=50$$

$$d=0.05$$

$$a=0.05 \quad N = (1.96)^2 \times 0.5 \times 0.5 / (0.05)^2$$

and 416 students were distributed among faculties separately according to GPAs' classification.

The independent variables of this study included individual characteristics (gender, diploma GPA, study hours, study method, motivation, belief in God, planning, being hopeful about the future, marital status, occupation, and determination and industriousness), socioeconomic status (father's job, mother's job, parents' level of education, the level of training aids' utilization at home and in the faculty), physical and emotional environment of education (place of study, study conditions, parents' attitude toward studies, family members' attitude toward studies, the relationships between parents in the family, the relationships among other family members, educated siblings, and planning of the university, faculties, and professors [curriculum content, professors' methodology, faculty's educational status, emotional relationship with students, guidance provided by the professors and other educational professionals] and the dependent variable was academic achievement (students' GPA).

The tool for gathering data was a 42-item questionnaire whose reliability was confirmed through Cronbach alpha test after its reliability had been confirmed by knowledgeable professors. Accordingly, 419 (35.8% of the) individuals considered individual factors as effective on academic progress.

Socioeconomic factors were considered as being effective on academic achievement by 149 individuals. The same number of individuals considered environmental factors as effective on academic achievement. 149 (35.8% of the individuals) also considered the factors related to the planning by the university, faculties, and professors as effective on academic achievement.

Having coordinated with professors, been present in dormitories and other students' accommodations, an education expert handed out the

questionnaires among the students and collected them after filling out. Students' GPA was obtained from the university's Calculation Center.

Table 1: Frequency of Individual, socioeconomic, environmental, and planning-related factors in academic achievement.

Effect Factors	Fully effective	Effective	Moderately effective	Lowly effective	Very lowly effective
Individual	149(35.8%)	88(21.2%)	67(16%)	59(14.2%)	53(12.9%)
Economic	88(21.2%)	54(12.9%)	149(35.8%)	67(16%)	58(14.2%)
Environmental	88(21.2%)	149(35.8%)	67(16%)	54(12.9%)	58(14.2%)
Planning-related	149(35.8%)	88(21.2%)	54(12.9%)	59(14.2%)	66(16%)

According to the Table, 149 (35.8%) of the participants have considered individual factors as fully effective on academic achievement. 149(35.8%) participants have considered economic factors as moderately effective on academic achievement. It applies to the factors relevant to planning by the university, faculties, and professors as well.

Discussion and conclusion:

The results on the effect of the factors under study on academic achievement of students in SKUMS in 2010-2011 indicates that the most frequency of data, 149 (35.8% of the) students, considered individual factors including gender, diploma GPA, marital status, occupation, motivation and being hopeful about the future, being timely and planning, study method, and study hours as fully effective on increase in academic achievement, which is consistent with the results of other studies conducted in other universities. Therefore, the contribution of individual factors to academic progress becomes completely obvious and clear.

In studies by Hejazi and Omidi on students of Agriculture and Natural resources in University of Tehran, Moniri et al. on the reasons for underachievement in students of paramedical courses in Kashan University of Medical Sciences, Khaza'ee et al. in Semnan University of Medical Sciences entitled "Examination of individual and academic factors among successful students of Medicine", Dehbozorgi et al. in Shiraz University of Medical Sciences entitled "the reasons for academic fail among students", Izadi et al. in Faculty of Humanities of University of Mazandaran entitled "Psychological study of University Of Mazandaran's students", and Ashournezhad in Shahid Beheshti University entitled "Examination of structural relationships, self-perception, and self-regulation", the obtained results are consistent with effectiveness of individual factors on academic achievement.

The results of the present study relevant to the plannings by the university, faculties, and professors indicated that 149(35.8% of the) students have considered these factors including professors' methodology, curriculum content, establishing emotional relationship with students, professors' respectful relationships, offering necessary guidance by professors and other university officials, and educational status of the faculty, like individual factors, as fully effective on academic achievement of the students.

Reviewing the previous studies, we observed that Hejazi and Omidi's study on students of Agriculture and Natural Resources in University of Tehran, Izadi et al.'s study in Faculty of Humanities of University of Mazandaran, which considered elongated education as one of the reasons for academic, confirm the results of the present study.

The result of the study on the effect of environmental (physical and emotional) factors indicates that the majority of students (more than 1/3) considered the effect of these factors consisting of family attitude toward studies, parents' attitude toward studies, educated siblings, parents' education, parents' relationships in the family, place of place of residency, location of study, etc. as effective on academic achievement.

Hejazi and Omidi's study of Agriculture and Natural Resources students of University of Tehran, Moniri et al.'s study of Kashan University of Medical Sciences' students, Khaza'ee et al.'s study of students in Semnan University of Medical Sciences, Dehbozorgi et al.'s study of Shiraz University of Medical Sciences students and determining the factors for their academic downfall confirm the results of the present study.

Among the factors effective on academic achievement more than 1/3 (149 [35.8% of the]) students considered socioeconomic factors including father's job, mother's job, family's economic status, facilities at home and in the faculty, and particularly

economic facilities as moderately effective on academic achievement. It seems that economic factors and financial status of the family are not fully effective on academic achievement.

Hejazi et al.'s study in Agriculture and Natural Resources Faculty of University of Tehran confirms these results.

Among 416 students enrolled the highest frequency of data was related to individual and the university's, faculties', and professors' planning-related factor and the student considered these factors as fully effective on academic achievement and environmental factors were in the second rank of importance. Socioeconomic factors were considered moderate and ranked as third in importance.

Regarding the results of the present study, we recommend the most emphasis be placed in counseling center of the university on religious training and some training aimed to create motivation and hope about the future, concentration, planning, timeliness, and time management for students; in the faculties on professors' methodology, curricula content, respectful relationships between professors and students and offering necessary advice by university's advisors; and in the society on change of parents' and other family members' attitude toward children's studies and trainings on life skills (such as stress management, interpersonal relationships management) targeted at families to have an ideal academic status among other students as well.

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