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Factors affecting the academic achievement of the talented students at Ilam University of Medical Sciences

Masoumeh Otaghi

Associate Professor of Nursing, Department of Nursing, Ilam University of Medical Sciences, Ilam, Iran and Psychological Injuries Research Center, Ilam University of Medical Sciences, Ilam, Iran

Reza Valizadeh

Faculty of Medicine, Psychosocial Injuries Research Center, Ilam University of Medical Sciences, Ilam, Iran

Kourosh Sayehmiri

Psychological Injuries Research Center, Ilam University of Medical Sciences, Ilam, Iran.

Hamed Tavan

Department of Paramedical, School of Allied Medical Sciences, Ilam University of Medical Sciences, Ilam, Iran

Corresponding author email: hamedtavan@gmail.com

Abstract---Introduction: By identifying the factors affecting the academic achievement of students, several major goals can be achieved; including the training of high literacy and adequate science, the purpose of this study is to determine the factors affecting the academic achievement of the talented students in Ilam University of Medical Sciences. Materials and Methods: The study was a descriptive-analytic study. The research tool was a questionnaire of 24 questions. It has a comprehensive domain (5 questions), an educator (7 questions), a field of educational environment (5 questions), Family domain (3 questions) and socio-economic domain (4 questions). How to score each question based on Likert scale 5 options (very low = 1 point, low = 2 points, average = 3 points, high = 4 points and much = 5 points). SPSS V 19 software was used to analyze the data. Results: 34 (68%) girls and 16 (32%) were male. In the general field of student motivation and interest in the field of study, the most important factor in the field of educator's mastery of the subject is on the subject of the curriculum, in the area of educational environments for student's access to books, in the family-friendly and intimate relationship, and

in the socio- Were agents. Conclusion: The most important factors in the academic achievement of our students are the overwhelming efforts that must be made to promote their prosperity and other factors such as educator and educational facilities in the following categories. The most important concern for unemployed students is the lack of employment after graduation and there is no guarantee of their future job with proper planning, this concern can be eliminated.

Keywords---academic achievement, students, talented.

Introduction

In any country, the students are the future builders, and in the population of each country, a large number of people constitute the educated class in advanced societies (1-2). Other members of society are hopeful for these people and have high expectations from them (3-4). In Iran, students include a large population of the country. Students who are studying in universities of medical sciences are dealing with the discussion of treatment and illness, and pay more attention to people's health (5-6). The training of elite and educated people has always been on the agenda of all medical sciences universities in the country, because they are related to the health of people in society (7). Special privileges and benefits are considered for these people in order to motivate other students to try harder and be able to serve the people of society (8). The issue of success or lack of success in education is one of the most important concerns of any educational system in all societies, so that the success and academic progress of students in any society shows the success of the educational system of universities to achieve their goals (9).

After entering the university from school, students face a severe weakness in academic performance, so that about 50% of students face academic failure in the first year of entering the university, and many factors such as physical health, mental health, lifestyle and environmental factors (depression, poor communication with friends, low income and long distance to university) can affect it. Medical fields and their subsets are among the most popular academic fields in Iran. Due to the presence of stressful factors such as the clinical education environment, being faced with patients and the intensive course units in internships and internships the students of these groups suffer from mental and emotional disorders more than other students during their educational period. Every year, more than half of the millions of students in the world drop out from universities, are placed under probation, or cannot complete their studies on time. The course of university education in Iran is a stressful period due to factors such as distance from family, adaptation to educational conditions, dormitory environments and unfamiliarity with many students, and the university environment can cause their academic decline (10-12).

Examining the academic progress of students and the factors affecting this progress, the need to review the educational programs of all fields and levels of education according to the needs, applying educational programs by establishing a logical connection between universities and the industrial, agricultural,

economic, medical and health, and civil applications in order to make optimal use of graduates as well as student admission planning according to the needs of the country's future programs are among the things that make this research more necessary (13-18).

Determining the factors affecting the academic progress of talented students of the University of Medical Sciences is effective in achieving several major goals, such as training human resources with high literacy and sufficient knowledge, motivating other students to improve their academic level, as well as eliminating obstacles to academic progress. These factors are the causes of student's failure. In this regard, the present study was conducted with the general aim of determining the factors affecting academic progress in talented students of Ilam University of Medical Sciences.

Materials and Methods

The sample consisted of first-graders in different courses and fields in Ilam University of Medical Sciences out of 2500 students. Sampling was done in full and the samples were 50 people. The characteristics of the research samples were the first person in the fields of study in the faculties according to the field and academic semester and with the requirement of a GPA above 17 (out of a maximum of 20) in the nursing faculty (undergraduate nursing and midwifery), the health faculty (health environment, occupational health and public health at the undergraduate level and epidemiology and biostatistics at the graduate level), medical school (general medicine), paramedical school (operating room, intelligence and laboratory sciences at the undergraduate level) and dental school (general medicine).

The research tool was a two-part questionnaire that was taken from Ehsani et al.'s study (1). Its validity and reliability have been confirmed (Cronbach's alpha 0.85). The first part of the questionnaire was demographic characteristics (age, gender, academic semester, degree and grade point average). The second part of the questionnaire was the most important factors affecting the academic progress of students, which included 24 questions and the following parts: comprehensive (5 questions), teacher (7 questions), educational environment facilities (5 questions), family (3 questions) and socio-economic field (4 questions). Each question was graded based on a 5-point Likert scale (very low = 1 point, low = 2 points, moderate = 3 points, high = 4 points, and very high = 5 points). In total, the total score range of the questionnaire, which was 24 questions (minimum score of one and maximum score of five) is between 24 scores and 120. which was divided into 4 categories. Weak category with score between 24 to 48, average downward category with score 49 to 64, average upward category with score 65 to 88 and good category with score 89 to 120 were classified. Data were entered into SPSS V19 software and descriptive (mean, standard deviation, frequency and percentage) and inferential tests were used.

The code of ethics (IR.MEDILAM.REC.1397.079) was obtained from the Ethics Committee of Ilam University of Medical Sciences. Self-introduction was made to the education units and the objectives of the research were explained. The participation of the research units was informed and written consent was

obtained. The participants were assured that the information will be confidential and the results will be announced in general and they can withdraw from the research at any stage and at any time. There was no cost to the students due to this research. Ethical considerations were observed in documents and sources.

Result

In the present study 34 people (68%) were girls and 16 people (32%) were boys. The average grade point was 17.55 and the standard deviation was 0.56. The demographic information of the research samples is given in Table 1 .Table 2 shows the mean and standard deviation for each question. In the comprehensive area, two questions of student motivation and interest in the field of study with an average score of 4.5 were the most important factors in this area. In the field of teaching, the teacher's mastery of the subject with an average score of 4.34 has obtained the highest score. In terms of the facilities of the educational environment, students' access has the highest score with an average score of 4.04. In the family area, the warm and intimate relationship in the family with an average score of 4.14 was the highest score. In the socio-economic field, career prospects with an average score of 4.52 were the most important factors.

Table 1- Demographic information of research samples

subset	Demographic variable	N	%
age category	Less than 20 years	4	8
	20-22 years	29	58
	More than 23 years	17	34
School of Nursing and Midwifery	nursing	9	18
	Midwifery	4	8
medical School	medical	7	14
Faculty of paramedicine	Laboratory science and operating room and intelligence	7	14
dental College	Dental	15	30
Faculty of Health	Health (professional, public and environment)	8	16

Table 3 showed descriptive information about the fields of the questionnaire. Chart 1 demonstrates the classification of talented students' grades that most of them (62%) have obtained good grades, 36% have obtained above average grades and only 2% have obtained below average grades and none of the students are placed in the weak category. The overall average score was 94.98 and the standard deviation was 14.57.

Table 2- The average score of the areas of factors affecting academic progress from the point of view of gifted students

-	Questions	Mean	SD
1	Student's Motivity	4.5	1.1
2	Student's Self-Confidence	4.3	0.93
3	Student's interest in academic field	4.5	0.64

4	Regular attendance of students in class	3.98	1.02
5	Student's attention in the class	4.04	0.92
6	Professor's academic level	4.08	0.96
7	The teacher's knowledge about the subject	4.34	0.89
8	The relationship between student and professor	3.8	1.06
9	Continuous evaluation of students	3.74	1.1
10	Using different teaching methods	3.68	1.1
11	Use of educational aids	3.78	1.1
12	The teacher's punctual attendance in the class	3.96	1.04
13	The number of university faculty members	3.38	1.06
14	Suitability of the dormitory environment	3.96	1.3
15	Students' access to books, publications	4.04	1.04
16	Suitability of the physical space of the class	3.82	1.02
17	Facilities of the educational environment	3.9	1.2
18	Parents' sensitivity to children's education	3.84	1.03
19	Guidance of children in academic matters	3.8	1.27
20	Warm and intimate relationship in the family	4.14	0.99
21	Giving scholarships to students	3.96	1.06
22	Economic status of the family	3.54	0.99
23	Educational level of parents	3.38	1.15
24	Career future of the student's field of study	4.52	0.95

Table 3- Descriptive information of the fields of the questionnaire of factors affecting the academic progress of students

Field name	Mean	SD	highest score	lowest score
comprehensive	21.32	2.68	25	16
instructor, educator	27.38	5.52	35	10
Learning environment	19.1	4.41	25	8
family	11.78	2.82	15	5
economic- social	15.4	3.2	20	6
total score	94.98	14.57	120	56

Table 4- Correlation of the total score of the effective factors of academic progress with demographic variables

Variable	P Value	F
Age	0.23	1.204
gender	0.35	1.186
field	0.36	1.164
semester	0.001	4.762

Table 4 shows that there is a statistically significant relationship between the academic achievement score and the academic semester ($P < 0.05$), so that the academic achievement decreases with the increase of the academic semester until

the 5th semester and increases after that, but with other Demographic variables such as age, gender and field of study were not significantly related to academic progress.

Discussion

The importance of medical students is of special importance due to the role they play in the future for the health and recovery of patients (26, 27). Improving the health status is a multifaceted variable and requires improvement in all dimensions and various therapeutic and educational interventions (28,29). according to the results of the present study, the comprehensive field was the most important factor in the academic progress of students. In the study of Rajaeifar et al. (19) and Ehsani et al. (1), among the factors affecting academic progress, the role of self-perception is more important than other factors, even if other factors are fully available, educational progress cannot be observed without the student's motivation and the rest of the factors are located after this area.

Among the questions of the inclusive field, the two questions of student motivation and interest in the field of study with an average score of 4.5 were the most important factors in this field, and it is consistent with the results of Ehsani et al.'s research (1), but with the results of Steenkamp's research (20) with regular attendance. In the class, it is considered to be more important than other factors, which is not consistent with the results of the present study, and the reasons for this can be pointed to the different types of education between the two countries and the resources taught to the students.

The results showed that in the field of teaching, the teacher's mastery of the subject with an average score of 4.34 was the most important factor in this field. In Asikia's research, high quality has been mentioned and they have stated that it will improve the taught material (21). Ehsani et al. also found out that it depends on the content and the subject of the lesson, because some research shows that there is a significant relationship between the teacher's mastery of the subject and the academic performance of the students (1). The more experience the professor has, the higher his mastery of the subject is and he can easily explain the material to the students (19) and it is consistent with the results of the present study, but this theory was rejected in the study of Adhami et al. (22) which seems to depend on the taught topic that should be further discussed and concluded.

In terms of the facilities of the educational environment, the results showed that students' access to books and publications was the most important factor with an average score of 4.04, which was also achieved in the Ehsani et al.'s research. In another study, it has been stated that facilities and equipment improve the academic quality of students (23). They will have authority and it is possible to improve their education, but in the case of practical courses that are offered in the hospital as an internship unit, clinical skills can be achieved.

In the family field, the warm and intimate relationship in the family with an average score of 4.14 was the most important factor, which in Ehsani et al.'s research has also reached such a similar result and there is agreement with the

results of the current research (1). In another study, the role of the family has always been mentioned (24). The family plays an important role in the development of a person, whether during education or even after education, this role always exists.

In the socio-economic field, career future with an average score of 4.52 was the most important factor. Ehsani et al.'s research has also reached such a similar result and there is agreement with the results of the present study (1). This is also mentioned in Najimi's study (25), it seems that the main goal of students from studying is to get a quick job after graduation and their most important concern is unemployment after graduation, for which special measures should be taken for their job security and expert people should be employed in the relevant field, which is possible with proper planning.

Conclusion

Students must make efforts for self-improvement and prosperity, and other factors such as the teacher and facilities of the educational environment are in the next ranks. The most important concern of students is unemployment and lack of employment after graduation, and there is no guarantee for their future employment. With careful planning, choosing the right resources during the study period, holding several tests during the academic semester, it is possible to increase the academic progress among the students and in this way, it is possible to increase the hope and motivation among them. Simultaneous teaching of theoretical and practical materials, using new educational methods such as educational films and animations about common procedures in the field instead of traditional methods can be useful in the academic progress of students. They can learn many things in a short period of time repeatedly.

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