

Factors Affecting Academic Failure In Region II Medical Universities Students

Farideh Izadi Sabet¹, Hasan Ghavami², Moslem Hesam³, Maryam Abbasian⁴, Mohammad Jafar Goghataei⁵, Abbas Ali Abbasnejad⁶, Maryam Salehian⁷, Alireza Emadi^{*,8}

¹Faculty of Nursing and Midwifery, Semnan University of Medical Sciences, Semnan, Iran

²Faculty of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran

³Faculty of Nursing and Midwifery, Golestan University of Medical Sciences, Gorgan, Iran

⁴School of Nursing and Midwifery, Shahrood University of Medical Sciences, Shahrood, Iran

⁵Faculty of Nursing and Midwifery, Sabzevar University of Medical Sciences, Sabzevar, Iran

⁶Faculty of Nursing and Midwifery, Gonabad University of Medical Sciences, Gonabad, Iran

⁷Faculty of Nursing and Midwifery, Bojnurd University of Medical Sciences, Bojnurd, Iran

⁸Department of Information Technology, Semnan University of Medical Sciences, Semnan, Iran

*Corresponding Author: email address: are20935@gmail.com (A. Emadi)

ABSTRACT

Academic failure is an important issue in medical students which, if not controlled, will cause a drop in the academic level of physicians and paramedics in the coming years. Therefore, identification of factors affecting academic failure can influence the future planning of universities and reduce those factors and help effectiveness and flourishing of these students. This study aimed to investigate the factors influencing academic failure in medical universities' students in the region II of country Which and its results can be applicable to Whole country. This study is a case-control study including all students with academic failure in the academic year 2009 in Semnan, Mashhad, Gorgan, Shahrood, Sabzevar, Gonabad and Bojnourd Universities of Medical Sciences (Probation, increased educational semesters, failure in comprehensive medical tests). Data on students with academic failure and other students was collected and analysed using SPSS software by chi-square test at 5% significance level. The prevalence of academic failure in men was higher than women (N=571, 5.33%). There was a significant difference between two groups in terms of gender, type of university, degree and entry quota (P <0.05). Given the significant differences in some demographic and educational characteristics between students with and without academic failure, special attention and planning in this area are necessary.

Keywords: Academic Failure; Individual Characteristics; Social Characteristics; Educational Characteristics

INTRODUCTION

Every year, a large number of prospective students in various medical disciplines participate in a fierce competition named konkoor (university entrance test) with extensive activities and use all their efforts to succeed in this test. Among this large crowd, only a few of them that ranked higher will be able to attend medical faculties. So with all the zeal, enthusiasm and effort of medical students, it is perceived to see more flourishing of them after entering universities. Unfortunately, every year a number of medical students are reported to experience probation, increased educational semesters, and dropout. Academic failure of students leads waste of resources, time and money

in the country, which can ultimately disturb the country's higher education system that is expected to provide needs of the community in terms of human capital and the protection of intellectual and scientific achievements, In addition, frustration and loss of morale in learners, prevents individual talents and abilities of the students with academic failure and causes several damage to these student, their family, their university and the community [1,2]. Preventing academic failure and subsequent psychological trauma and improving quality and efficiency of education depends on factors affecting their educational process and performance [1]. academic failure is different in different medical universities. In a study conducted

at Ardabil University of Medical Sciences, there was a significant relationship between student discipline, parents' education level, residence of the family, knowledge of the future education, lack of motivation, lack of systematic study and the academic failure [2]. In a case-control study of students in Lorestan University of Medical Sciences, academic failure was found to be higher in males. Also, the probation is more frequent in the students with martyrdom quota. there is a correlation between economic and social level and educational failure [3]. In another study conducted at Hamadan University of Medical Sciences, it was indicated that factors such as the teaching method, individual characteristics of students, student's academic and environmental problems, sex and high school diploma GPA had a significant effect on probation or academic failure of students [4]. A study conducted in Shiraz University of Medical Sciences indicated higher frequency of failure in students with other entry quota, married students and students with no plan to study and additional employment [5]. In a study at Kazeroon, it was shown that the number of siblings in unsuccessful group is higher than successful group [6]. In another study at University of Tehran, it was shown that entry quota, family income, employment, low levels of educational facilities, lower study hours, failure to be accepted at first to third priorities, lack of knowledge of the material and content of courses at time of university admission, as well as scientific and experimental weakness of the professors are variables that contribute to academic failure [7]. In a study conducted at the School of Nursing, there was a significant difference in terms of sex, employment, entry quotas, place of residence, field of study, the overall GPA and credits passed [8].

A study in the United States, it was shown that some students in a medical university had educational failure, which was due to their academic weakness [10]. Another study in the UK showed that academic failure of dentistry students results in loss of quality in dental services [1].

Considering that academic failure is an important issue in medical students which if not controlled, will cause a drop in the academic level of physicians and paramedics in the coming years, identification of factors affecting academic failure can influence the future planning of universities

and help effectiveness and flourishing of these students. Therefore, this study is sought to investigate factors influencing academic failure in medical universities' students in the region II of Iran, including types I, II, and III University of Medical Sciences, and present strategies to solve problems and difficulties in this regard.

METHODS

This study is a case-control study including all students with academic failure in the academic year 2009 in Semnan, Mashhad, Gorgan, Shahroud, Sabzevar, Gonabad, and Bojnord Universities of Medical Sciences in the academic year 2009, with total number of 485. The academic failure includes the following factors:

1. The GPA in the second academic semester in 2009 academic year is more than 1 score less than the previous semester.
2. Probated semesters in student's academic records.
3. Increased number of educational semesters than normal students (except educational leave, suspension, maternity leave and sick leave)
4. The GPA less than 12
5. The rejection in comprehensive medical tests (even once)
6. GPA less than 14 in clerkship and internship

The students who had at least one of above criteria were recognized by universities. Then an appropriate questionnaire was prepared by experienced instructors in terms of validity and reliability with appropriate pre-test and was completed by them. The questionnaire contains 18 questions related to the individual factors (including gender, academic degree, age, type of university, the Time gap between getting a high school diploma and entrance to university, entry quota, marital status, location, employment status, familiarity with the discipline, motivation, interaction with other students, satisfaction of authorities, career perspective and religious beliefs), 13 questions about family factors (including age, education level and occupation of parents, family members (including sibling by sex), family income, family support, emotional relationships between family members, place of residence), 16 questions about the educational factors (including the study plan, taking notes at class- attendance, satisfaction with teachers and professors, satisfaction with

discipline and degree, motivation, satisfaction with the university, satisfaction with clinical features - satisfaction with city where university is placed, reception or transmission history, study skills workshop, and interaction with the faculty advisor).

The students' names were recorded as known codes. Frequency distribution tables were used to describe the students' characteristics. To compare gender, university type, university degree and entry quota of students with and without academic failure, the above data were adjusted individually and using SPSS11.5 software and chi-square test at 5% significance level, the calculations were performed.

RESULTS

This study, performed on 10714 students, 485 of whom had suffered an academic failure (4.52%).

Individual factors of academic failure:

Frequency of academic failure in men is higher than women (N=571, 5.33%), there was a correlation between academic failure and sex ($p=0.002$), academic failure among undergraduate students (N=620, 5.79%) was the highest, and among Ph.D & MPH students (0.13%, N=14) was the least. In addition, none of PhD students experienced academic failure in school (Table 1 and figure 2).

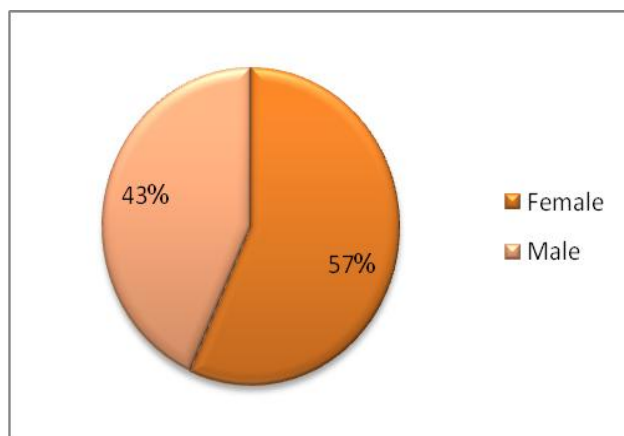


Figure 1. Comparing the number of students with academic failure in terms of sex

Among those with academic failure, the most time between finishing high school and entering university was one year (36.7%, N=3932), the most frequent age range was 21-25 years (67.6%

, N=7242), the type of diploma was experimental sciences (87.6%, N=9385), the discipline with highest educational failure was nursing (18.8%, N=201), most students were single (83%, N=8892), lived in dormitories (62%, N=6641), were only students and non-employed (83.7%, N=8967). The highest degree of familiarity with their discipline was medium (42.3%, N=4532), their motivation was moderate (32.6%, N=3492), their interaction with other students was high (45.8%, N=4907) and satisfaction with the university authorities was moderate (44.5%, N=4767). Despite the academic failure, most of the students are optimistic about their career prospects (44.3%, N=4746), and most of their beliefs was high (7.44%, N=4789).

Family factors of academic failure:

Most fathers of students were aged 51-60 years (43.2%, N=4628), had high school diploma (20.8%, N=2228) and self-employed (30.7%, N=3289). Most mothers of students were aged 41-50 years (48%, N=5142), had high school diploma (26%, N=2785) and were housewives (71%, N=7606). More students has moderate family income (52.8%, N=5656) and experienced high levels of family support (64.6%, N=4992) and most of them had lots of emotional ties between family members (54%, N=5785) and lived in urban areas (73%, N=7821).

Educational factors of academic failure:

Most of the students (56.7%, N=6074) mentioned a plan for their study and often (72.8%, N=7799) take notes in classes. They believe that they attend classes in regular basis (59.6%, N=6385) and their satisfaction with teaching is more than moderate level (48.9%, N=5239). Most of the students have high degree of satisfaction with their discipline (63.3%, N=6781) and also a high degree of satisfaction with their degree (2.34%, N=3664). The majority of these peoples are highly motivated (38.6%, N=4135) to study and have moderate satisfaction (1.35%, N=3760) with their university authorities. Their satisfaction with training facilities (43.9%, N=4703) extracurricular activities (46%, N=4928) and clinical facilities (43.3%, N=4639) is also moderate. Most students' satisfaction with their city where their university is located was

moderate (31.3% ,N=3353).Most of them had not been visiting (88% ,N=9428) or transferred (85.6% ,N=9171) students. Most of them had not passed study skills workshops (87.2%,N=9342), and studied nearly 2 hours during the day (24.3%

,N=2603). Most of them (60.2%,N=6449) noted that they had not used advisors and counselors. The majority of those who had used, had interaction moderate with their advisors (23.1%, N=2474).

Table 1. Individual factors of students with and without academic failure in university t region II of the country

Evaluation criteria		Students with academic failure		Students without academic failure		P Value
		N	%	N	%	
sex	female	439	4.1	10274	95.9	P<0.002
	male	567	5.3	10146	94.7	
Education degree	Specialty and subspecialty	10	0.1	10703	99.9	P<0.001
	Ph.D & MPH	0	0	10714	100	
	MD	535	5	10178	95	
	MSc	117	1.1	10596	98.9	
	BSc	396	3.7	10317	96.3	
	Associate Degree	396	3.7	10317	96.3	
Entrance exam quota	Region 1	492	4.6	10221	95.4	P<0.001
	Region 2	696	6.5	10017	93.5	
	Region 3	835	7.8	9878	92.2	
	Martyrs' family members	749	7	9964	93	
	other	74	0.7	10639	99.3	
University type	1	342	3.2	10371	96.8	P<0.001
	2	514	4.8	10199	95.2	
	3	835	7.8	9878	92.2	

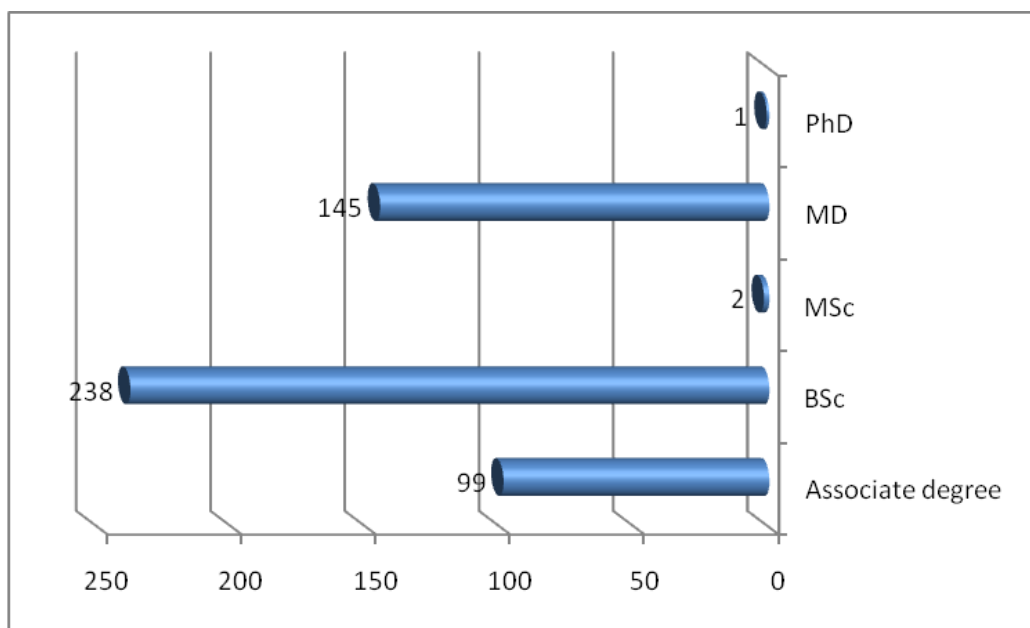


Figure 2. Comparing the number of students with academic failure in terms of degree

DISCUSSION

In this study, there is a significant relationship between two groups of students with and without academic failure in terms of university type, sex, quotas, and education degree. The results are consistent with similar studies in Iran such as DehBozorgi and Alikhani studies [5, 8]. The impact of sex on academic failure is considered in some studies [3,9,11,13] including the present study, and in all these studies the academic failure in males is reported to be higher than females. Buckingham believes that boys are at risk of academic failure more than girls [13]. To identify factors affecting academic failure in boys, the family concerns and issues should be considered. This study showed a significant correlation between the entry quota and academic failure; so that the students with quota of region 3 experienced higher academic failures, while a study by Khazaei et al [1] suggests higher academic failure in students with quota other than the three regions (martyrs' family members and other). It seems that strengthens the scientific basis for students with this quota can prevent their academic failure. This study showed that academic failure is more prevalent in students with bachelor's and associate's degree. Due to the occupation of most occupational capacities of health section at the country by this group, this issue is of particular importance. If the graduates of this level have a strong scientific base, activities relating to health and therapy are expected to be better organized [14,15]. Given that university type is related to students with different academic base, and students with better grades want to study in universities type I, then types II and III respectively, and academic failure at the universities of Type III is more than other

REFERENCES

1. Khazaei M, Rezaei M, Khasaei S. Medical students' academic and personal characteristics of successful versus unsuccessful. *Komesh* 2007;9(2): 87-92
2. Edalat Khah H, Jangiri C, Khanbabazadeh M, Amani F. Academic achievement of students of medical sciences. *Iranian Journal of Medical Education* ; 2005: 5(2) 193-195
3. Frhadi A, kadhodaei HR, Hassanpour AN. Effective factors on student's academic dropout in

types. Therefore, specific curricula and pre-university courses in universities Type III is necessary to prepare students in the courses, according to the outline of their country.

In this study, cases who had an academic failure often stated their regular attendance in class, taking notes and study programs of at least 2 hours a day, while majority of them had not passed study skills workshops. Therefore, it seems efforts of students and their attendance is not enough for their success. So it is recommended to hold study skills workshops for all students, including students with academic failure, so that they can earn more interest while presenting in their classes. These students need to learn the correct ways to study and memory improvement techniques to gain better results.

This study showed that the role of advisor is not fully understood in universities and students with academic failure were unable to see an advisor or counselor to identify and solve their problems, and provide the groundwork for better education. Due to the special role of advisor professors to interact with students from enrollment to graduation, personal, familial, educational and emotional problems of students with proper collaboration to relevant centers, the underlying problems that affect their education can be solved and lead to improved educational condition.

Finally, all the universities of every type are required to have a detailed study of their students to identify students at risk of academic failure and provide education, welfare, etc. assistances to prevent academic failure.

Reaching this goal involves using advisor professor at universities and careful training of these professors can be an undeniable barrier to academic failure of students.

lorestan university of medical sciences . *Journal of medical Education* 2003 suppl1;4(1) :86

4 . Hazavehie SMM, Fathi Y, Shamshiri M. Some of the reasons for the limited vision of Hamadan University of Medical Sciences in the year1380-1381. *Strides in Development of medical education*; 2006: 3(1) 10-11

5 .Deh bozorgi GH, Mosel HA. Causes loss of medical students, Shiraz University of Medical Sciences, 1378. *Journal of Babol University of MedicalSciences*2007; 5(2): 58-60

6. Hesam M, sanago A. Academic failure, and other factors associated with student satisfaction in Golestan University of Medical Sciences. *Journal of Research in Nursing and Midwifery* 2012;9(2):90-96
7. Roudbari M, Ahmadi A, Azar ebadi far F. Determine Factors affecting students' progress, Tehran University of Medical Sciences. *Teb Va Tazkieh* 2013;19(3): 1-12
8. Alikhani SH, Markazimoghadam N, Boromand S, Zandebagleh M. Decline factors affecting nursing students't of Artesh medical university in 1380-1383. *Journal of army university* 2006; 4(2): 819-824
- 9 . Changizi Ashtiani S, Shamsi M, Mohammad Beigi A. Dropout rate and factors affecting the attitudes of Arak medical students in 2009. *Journal of Arak University of Medical Sciences* 2008; 12(4):33-34
10. Lazin R, Neumenn R. students characteristics as predictors of drop out from medical school. *Medical EducationJournal* 1991;25:396-404.
11. Derakhshan A, khadivzadeh T, khoraminia sh. Indices of educational dropout and the effective factors in medical students of Mashhad medical university .*journal of medical Education* 2003;suppl.1;4(1):94
12. Saberfirozi M, panjeh shahin MR, Mosavi Nasab M. survey of dropout factors in students of shiraz university of medical sciences(1998-1999). *Teb V Tazkeh* 2002;45:16-21
- 13-Buckingham J. The puzzle of boy`s education decline a review of the evidence . *Issue analysis* 1999; 9:235-241
14. Motaghd Larijani Z, Vakili M, Gofranipour F, Mirmohammad khani M. Effects of health education program on Behvarz's interpersonal communication skills in Semnan University of Medical Sciences. *koomesh*. 2015;16 (2) :229-238
15. Momeni M, Valizadeh S, Ghorbani R. A survey on the information literacy of final-year students studying at Semnan University of Medical Sciences (2012). *koomesh*. 2014;15(4): 502-510