

## Factors effective on the admission to higher education in holders of health associate degree of Shahrekord University of Medical Sciences based on the Cox regression model

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**Abstract:** Background and aim: Health and clinical courses, which other marginal factors, irrespective of motivation, may contribute to continuing studies in, are socially important. Therefore, the present study tries to determine the factors influencing continuing studies among health graduates of associate, Shahrekord University of Medical Sciences (SKUMS). Methods: For this descriptive-analytical study, educational profiles of all health graduates of SKUMS between 1365-86 were examined and the data was gathered through a researcher-developed checklist and phone calls. Data analysis was performed by SPSS 16 using Cox regression. Findings: From 398 respondents of the study with a mean age of  $22.2 \pm 2.25$  (range: 20-39), 140 (35.2%) were male and 206 (51.8%) had been admitted to higher education. According to Cox regression, some factors, e.g. age, gender, marital status, residency, and GPA associate, were significantly effective on continuing studies and some others including associate course of study, course period, and diploma GPA had no significant effect on the chance of admission to higher education. Conclusion: Growing older, one gradually enters other living arenas like marriage, making continuing studies marginalized. Therefore, it could be assumed that the factors influencing continuing studies should be considered a whole, i.e., the circumstances should be prepared to facilitate continuing studies before growing older and facing consequent life issues.

[Mahmoud Mobasheri, Soleyman Kheiri, Seyfollah Borjian Borujeni, Seyfollah Bakhshi, Borzoo Khaledifar. **Factors effective on the admission to higher education in holders of health associate degree of Shahrekord University of Medical Sciences based on the Cox regression model.** *Life Sci J* 2013;10(8s):368-371] (ISSN:1097-8135). <http://www.lifesciencesite.com>. 58

**Keywords:** continuing studies, health student, influencing factors

### Introduction:

Educating specialized workforce, creating jobs for them, and employing their services are some important preoccupations in any management system. It is obvious that when learning skills and creating different specialties are consistent with society's requirement, wasting financial resources and frustrating society's younger generation and the elites as capable assets and human resources are avoided (1). Every year, Iran's universities of medical sciences welcome a number of young people for continuing studies in health sciences. On the other hand, students' enthusiasm for continuing studies and obtaining higher scientific grades necessitates some activities including schools establishment, extracurricular materials development, preparation

tests development, etc. which should be accomplished by universities and curriculum developers. However, being or not being admitted, irrespective of these issues, raise the question of which factors could be effective within this mechanism.

The effectiveness of an educational system in terms of the final outputs and ramifications desirability is judged in comparison with the system's goals. One of the final outputs in academic educational system is the graduates, comprising the level of the knowledge and acquired skills, attitudes, and the effects of equal education opportunities. According to the findings of Rouhi and Asayesh's study of students in Golestan University of Medical Science, the students of Nursing and Midwifery Faculty had

the highest educational motives followed by the students of Medicine and Paramedicine Faculty. Several factors including personality characteristics, age, gender, and educational year were effective on educational motives (2). Hashemipour et al.'s study indicated that willingness to be employed in Ministry of Health and Medical Education, family advice, and an enhanced communication with people were among the most important reasons for continuing studies. In addition, some reasons such as achieving a better economic status, access to a better job, a better social status, and higher knowledge were reported, in this regard, as the least important reasons (3).

In Saberian and Haji Aghakhani's study, the majority (60.21%) of nursing graduates did not continue studies and only 12.9% of them were admitted to higher studies of nursing; 61.2% continued their studies in non-nursing higher studies, 21.6% obtained another MSc while maintaining nursing as a job, 16.12% did not determine their continuing studies status, and 6.45% shifted to a non-nursing course of study and occupation (4).

Comparing the means of educational motives' parameters between female and male participants, in Yousefi et al.'s study, indicated that the male had a higher motive for effort and competitiveness, possibly explained by their responsibilities in the future including house provision, living making, and family management or willingness to achieve a better vocational success in the future (5). Hashemi's study also indicated that the most important reasons for lack of students' interest included frustration with studies, the difficulties derived from success in specialized examinations, and getting a job immediately after graduation (6). Examining the present literature on the influencing factors on continuing studies, we found no study focusing on the factors influencing continuing studies on graduates of health. Since health courses are very important in terms of society's health because of delivering services, willingness to continue studies in any course requires interest and motive, the higher education is being expanded and there is a need for MSc graduates in Iran, entrance of health associates into MSc studies in very important. Therefore, the present study was aimed to determine the factors influencing continuing studies among health associates of Sharekord University of Medical Sciences (SKUMS).

#### Materials and methods:

In this descriptive, analytical study the statistical community consisted of all students of health associated graduated at faculty of health, SKUMS from 1365 to 1386. Data were gathered by two researchers (students of MSc in health sciences)

through studying educational profile of students of health associate graduated between 1365 and 1386 and a checklist developed by the researchers according to the research purposes was filled out for each sample. If educational approval issued for higher education was not present in the student's profile, he or she was considered as a non-continuing studies student. Other required data for filling out the checklist included age, gender, marital status, employment, residency (native or non-native), associate course of study, educational period (daily/afternoon), diploma GPA, and associate GPA. Furthermore, the people admitted to higher education were contacted through the phone number in the profile and the items of the duration waiting for admission to higher studies, the university giving admission, and the course in which they were admitted were answered. Having entered the data into SPSS 16, we considered the duration waiting for admission to higher studies as survival time and being or not being admitted to higher studies as sensor index. The data were analyzed according to Cox regression.

#### Results:

Totally, 398 graduates of health associate were enrolled into the study, of whom 140 (35.2%) were male. The mean age of participants at graduation was  $22.2 \pm 2.25$  years (range: 20-39). 52 (13.1%) were married at the time of graduation, 184 (46.2%) attended at daily courses, 247 (62.1%) were native, and 11 (2.8%) were married. 155 (38.9%) were students of environmental health, 177 (44.5%) students of family health, and 66 (16.6%) students of fighting diseases. Diploma GPA of graduates was 11-14.34 (of total 20, mean:  $15.4 \pm 1.84$ ) and their GPA associate was 11.05-17.97 (of total 20, mean:  $15.10 \pm 1.25$ ).

206 (124 women and 82 men [51.8%]) were admitted to higher studies. The duration waiting for admission to higher studies was from 0-23 semester with median of 2 and 29.6% were admitted immediately after graduation. The result of Cox regression model regarding the factors influencing continuing studies in health associate graduates of SKUMS have been given in Table 1. According to this model, factors such as age, gender, marital status, residency, and associate GPA were effective on continuing studies among health associate graduates. Getting older decreased the likelihood of admission to higher studies but higher GPA associate increased it. The likelihood of admission to higher education was higher for women, single students, and non-native students compared to respectively men, married students, and native students. Also, employment status had a minimal effect on the likelihood of

admission and the employed had a minimally lower chance of being admitted. Despite the above-mentioned factors, other factors including course of

study, educational period, and diploma GPA had no effect on the likelihood of admission.

Table 1: The factors influencing continuing studies in health associate graduates of Skahrekor University of Medical Sciences according to Cox regression

Variable	Coefficient estimation	Standard deviation	Level of significance	Likelihood estimation	Confidence interval (95%)	
					Upper limit	Lower limit
Age	-0.162	0.054	0.003	0.851	0.945	0.765
Gender	-0.487	0.233	0.037	0.614	0.971	0.389
Marital status	1.035	0.348	0.003	2.813	5.567	1.424
Course of study	-	-	0.263	-	-	-
Environmental vs. Fighting diseases	0.250	0.235	0.286	1.285	2.035	0.811
Family vs. Fighting diseases	-0.035	0.307	0.909	0.966	1.763	0.529
Period (Daily/non-Daily)	-0.014	0.116	0.932	0.986	1.366	0.712
Residency (native/non-native)	-0.518	0.159	0.001	0.595	0.813	0.436
Employment status	1.233	0.629	0.052	3.399	11.659	0.991
Diploma GPA	-0.002	0.055	0.975	0.998	1.112	0.896
Associate GPA	0.251	0.077	0.001	1.286	1.495	1.106

#### Discussion:

In the present study, the association between continuing studies and gender indicated that more men continued their studies compared to women while a larger proportion of women compared to men took part in higher education examinations but failed to be admitted. There was a significant and indirect association between continuing studies and age and more younger participants managed to be admitted to higher education compared to older participants. The possible explanation for this is that when people get older, they entered into other landmarks of life such as marriage and hence their related issues, which marginalizes continuing studies. Accordingly, getting older could be a main obstacle facing continuing studies and hence continuing studies should be advised prior to entering into subsequent life periods. In addition, continuing studies was significantly associated with marital status; more single participants compared to married continued their studies possibly due to less preoccupation and fewer job-related difficulties among the single. The people

who are still single do not have to deal with other difficulties in life and enjoy more free time to study and continue their studies.

There was a direct association between GPA associate and admission to higher education; more people with higher GPA associate were admitted to higher education compared to those with lower GPA associate. Obviously, those undergraduate students who enjoy higher motives for studying, try more hard, and hence get better grades are more interested in being admitted to higher education. According to the results, the likelihood of entering into higher courses of study was lower for native students compared to non-native, which could be related to the absence of postgraduate courses of study on health at SKUMS until recent years because the issues relevant to continuing studies in other universities especially for native women are among the important factors influencing continuing studies.

In Hashemipour et al.'s study (3), about 73% of students expressed their willingness to continue studies. In Anderson and Bill's (7) and Hashem's

study, also, respectively 62.8% and 78.5% of the students were willing to do so. These findings are consistent with ours. Notably 82% of non-continuing studies participants in the present study took part in examinations.

Furthermore, Hashemipour et al.'s study (3) indicated that a larger number of women compared to men are willing to continue studies, similar to the present study. In the present study, a larger proportion of women compared to men took part in higher education examinations, but fewer women compared to men managed to be admitted, which is not in line with Rashidinejad and Mortazavi study(8). In their study, while women comprised the predominant population of students in any course of study, they were more successful in academic examinations. In a study (9) in Ireland, female students were academically more successful compared to male. Perhaps, the inconsistency of the result relates to the difference in populations under study. In those two studies, students of medicine and dentistry comprised the community under study. Finally, some researchers concluded that the difference in grades of male and female students had no association with their educational gift, which could be attributable to the decline in male students' motives for studying after being admitted to university. This is consistent with the present study's finding that fewer male students took part in higher education examinations compared to female. Cox regression model indicated that despite some factors such as age, gender, marital status, residency, and GPA associate, other factors including course of study, educational period, and diploma GPA had no effect on continuing studies. In fact, these three factors could be secondary. Diploma GPA might have no role when GPA associate does, because the latter could represent the academic status in associate's courses of study which is most probably relevant to admission to higher studies. Because associate degree in health sciences is homogenous in terms of general ability level among the students, it could be concluded that the course of study is not the main factor for continuing studies. In addition, attending daily or afternoon courses of study had no effect on admission; the reason for this is that although daily and afternoon courses were seemingly attended separately, the teachers, teaching approach, and educational environment were all the same for both divisions of courses of study.

#### **Conclusion:**

Together, the factors influencing continuing studies should be considered as a whole and the context should, prior to getting older and facing other difficulties in life, be prepared for continuing studies

through creating necessary facilities in the courses which ensure job security of younger generation.

#### **Acknowledgment:**

We thank Research and Technology Deputy of Shahrekord University of Medical Sciences for giving grant no. 805, all people for participating in this study, and our respectful colleagues for collaborating in this research work.

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4/2/2013