

# The knowledge of attitudes of environmental health and occupational health students toward their field of study and future career in Ardebil University of Medical Sciences

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## ABSTRACT

**Background and objective:** Understanding the effective factors on the attitude of environmental health students is necessary and can be useful in legislation, providing appropriate facilities, training capable and health workers, and creating a passionate environment in faculty.

**Methods:** In this cross-sectional study, 100 environmental health and occupational hygiene students were selected by census method in the first semester of the academic year of 2014-2015. Data were collected using a questionnaire prepared by University of Minnesota (America), which consists of 17 questions with Likert scale. Data were analyzed using Spss software (version 16).

**Results:** The mean score of attitude towards future career in environmental health and occupational hygiene students was  $52.5 \pm 9.86$  and  $52.8 \pm 8.1$ , respectively. The mean score of attitude towards future career in studied students was higher than that of the acceptable score. Moreover, minimum and maximum scores of the attitude in environmental health students were 26 and 71, respectively, and these values for occupational hygiene students were 41 and 70, respectively.

**Conclusion:** According to obtained results, the students had a positive attitude toward their educational field. Adjusting the number of environmental health and occupational hygiene students, proper distribution of human forces, complete informing students with academic disciplines to take the entrance examination, providing advice and supporting the students about study fields and future career can be helpful in improving their attitude.

**Key words:** Attitude of Students, Occupational hygiene and Environmental Health, Field of Study, Future career, Ardabil

## 1. INTRODUCTION

Providing the knowledge and skill requiring for future labor force is one of the most direct and obvious option in which higher education can contribute to economic development. On the other hand, providing the necessary conditions and opportunities for training professional and skilled individuals to enter the labor market is the most important measures and forecasts for proceeding development programs (Akbari and Kouchakian, 2013). Health systems around the world are facing with increasing challenges such as the expansion of health needs and economic constraints, which affect the potential of health infrastructure and labor force (Havens, 2010; Rafat, 2015). The human resource factor as an effective factor in the survival of the organization has been taken into a huge consideration by organization's administrators (Bakhtiari, 2014). Health workers specializing in different fields of study are the front-line of health care providers in the community. They should be appointed in the organizational positions in relation to their fields after graduating to solve problems of the society and provide community health services (Hamdy, 2006).

Nowadays, the study of attitude as the best concept of social psychology has a special place among the research (REJALI et al., 2010). Positive attitude is required to achieve success in any business and reaching the goal. In general, the person's attitude towards the issue consists of the combination of knowledge, feelings and readiness for the action. If a person is not interested to his/her job, continuing to work would be boring and even impossible (Sadr Arhami, 2004). A positive attitude towards the future career can cause job motivation, and that will lead to career success (Iravani, 2002). In this regard, it can be said, there is a direct relationship between job satisfactions and job motivation (shafiabadi, 1992). Job satisfaction is a positive feeling about a job, which it depends on many factors such as workplace conditions, job organizational systems, workplace relationships, and cultural factors (shafiabadi, 1992).

Awareness of people's attitude can be beneficial for predicting social behavior and its interpretation after occurrence. Since universities are known as an origin of society revolution in different fields, it is clear that knowing

the attitude of health students to their future career is very important (Sharifi and Taheri, 2002, Rasolabadi, 2015). Understanding the effective factors on the student's attitude is necessary and can be useful in legislation, providing appropriate facilities, training capable and health workers, and creating a passionate environment in faculty (REJALI et al., 2010). Lack of awareness and interest to the field of study can result in a mismatch between the needs and expectations and future jobs of students, and consequences of this issue will affect the educational and health care systems (Fardanesh, 2003). Due to the fact that the use of specialists in health systems is very important, frustration and lack of job security in health graduates can result in wasted mental and financial capitals (Malakoutian and Parvaresh, 2003). Samadi et al. reported that the attitude score of environmental health students toward their future career is low (Samadi, 2010).

Since students are considered as future career forces in a community, understanding their problems to solve them is essential, and is a task of educational systems. Therefore, the present study aimed to investigate the attitude of environmental health and occupational hygiene students toward their field of study and future career in Ardebil University of Medical Sciences in 2015.

### Methods

This cross-sectional study was conducted on 125 of environmental health and occupational hygiene students in Ardebil University of Medical Sciences, 2015. Sampling was done by census method. After holding briefing sessions, the related questionnaire were filled by participants. In final, of 125 questionnaires that were distributed among participants, 100 questionnaires were filled by them. Data were collected using a questionnaire containing 17 questions with Likert scale. This has been introduced by University of Minnesota (America) (Hafferty and Boulger, 1986), which was translated and confirmed by researchers. It consists of two parts including demographic information and student's attitude toward their future career (environmental health and occupational hygiene students). The validity of questionnaire was confirmed by environmental health, occupational hygiene and ergonomic experts. The reliability of the questionnaire was also obtained using Cronbach's alpha coefficient ( $\alpha=0.86$ ). In attitude questions for each statement or item Likert scale and grading criteria were used. Grading criteria consists of a five point scale ranging from strongly disagree (1) to strongly agree (5). In final, the score of 17 indicates the minimum attitude and the score of 85 represents the maximum positive attitude toward future career.

In order to evaluate the status of student's attitude toward their future career and study field, the mean of scores of the students was compared to the mean exam score, which was 51. Then, scores less than 51 were considered as a negative attitude and scores higher than 51 were considered as a positive attitude. Questions in relation to the field of study were presented as frequency distribution by Descriptive statistical tests such as mean and standard deviation. To compare the mean of scores between both sexes (male and female) and both study fields (environmental health and occupational health sciences), chi-square and t-test were used by SPSS software (version).

### RESULTS

In total, 100 questionnaires were filled. Of total participants, 23 students (33%) were male, 67 students (67%) were female. Also, of all participants, 68 students (68%) were studying in the field of environmental health sciences and 32 students (32%) were studying in the field of occupational hygiene sciences. In regard to the relation between marital status and attitude of with environmental health and occupational hygiene students, 80.2% of participants were unmarried and 18.8% were married. Moreover, in term of the settlement, 49.5% lived in dormitory, 26.7% in father's house, 15.8% in private home, and 6.9% in rental house. 68.8% of environmental health students and 53.2% of occupational hygiene students believed that their fields of study are more valuable in masters and doctoral degree. 37.3% of environmental health students and 43.7% of occupational hygiene students were satisfied or very satisfied with their fields of study. Moreover, 59.7% of environmental health students and 46.7% of occupational hygiene students believed that the presented courses are not suitable with needs and expectations of the students. The mean of attitude scores toward future career was  $52.5 \pm 9.86$  and  $52.8 \pm 8.1$  for of environmental health and occupational hygiene students, respectively. By considering the mean score of test (15), the mean score of attitude towards future career in studied students was higher than the acceptable level. In addition, the minimum and maximum of attitude score in environmental health students were 26 and 71, respectively. Also, these values in occupational hygiene students were 41 and 70, respectively.

The relation between the sex of the students and their attitude toward their future career indicated that the mean score of attitude in environmental health students was  $51 \pm 12.9$  and  $53.21 \pm 8.2$  for male and female, respectively. Also, this score in occupational hygiene students was obtained  $52.2 \pm 9.7$  and  $53.2 \pm 7.2$  for male and female, respectively. Results of the attitude in environmental health and occupational hygiene students showed that 56.7% and 37.4% of them were completely agree and agree, respectively with working in the field of environmental health and occupational hygiene, and only 7.5% and 18.8% of the students were completely disagree and disagree, respectively. 55.3% of environmental health students and 53.2 of occupational hygiene students were completely disagree and disagree with the query expressing "I do not worry about the job market in the field of study". In addition, 35.8% of environmental health students and 43.8% of occupational hygiene students had no idea regarding

the employment status in the lower levels of their study fields. There was no significant difference between sex and attitude towards occupational hygiene ( $P=0.74$ ). Results are presented in Table 1.

**Table.1.Frequency distribution (%) responses of environment health and occupational hygiene students regarding their attitude toward the field of study and future career in Ardabil University of Medical Sciences**

| Query   | Completely agree |          | agree        |              | No idea        |              | Disagree     |              | Completely disagree |              |
|---|------------------|----------|--------------|--------------|----------------|--------------|--------------|--------------|---------------------|--------------|
|   | Env              | occ      | Env          | occ          | Env            | occ          | Env          | occ          | Env                 | occ          |
| My grades were only allowed to accept this field therefore I chose it                                 | (29.9)<br>20     | (28.1) 9 | (18)26.9     | (43.8)<br>14 | (17.9)<br>) 12 | (9.4) 3      | (17.9)<br>12 | (9.4) 3      | (7.5) 5             | (9.4) 3      |
| I agree from the selected discipline  | (17.9)<br>12     | (3.1) 1  | (19.4)<br>13 | (40.6)<br>13 | (25.4)<br>14   | (28.1)<br>9  | (16.4)<br>11 | (12.5)<br>4  | (20.9)<br>14        | (15.6) 5     |
| Presented courses are proportional with needs and expectations of students                            | 3(4.5)           | (6.3) 2  | (19.4)<br>13 | (18.8)<br>6  | (16.4)<br>11   | (28.1)<br>9  | (37.3)<br>27 | (34.4)<br>11 | (22.4)<br>15        | (12.5) 4     |
| I am more interested after studying in this study field   | (16.4)<br>11     | (6.3) 2  | (25.4)<br>17 | (37.5)<br>12 | (19.4)<br>13   | (21.9)<br>7  | (19.4)<br>13 | (21.9)<br>7  | (19.4)<br>13        | (12.5)<br>4  |
| I think this field becomes more valuable in postgraduate students                                     | (32.8)<br>22     | (21.9) 7 | (35.8)<br>13 | (31.3)<br>7  | (14.9)<br>10   | (18.8)<br>6  | (7.5) 5      | (9.4) 3      | (9) 6               | (18.8) 6     |
| I think major students in other disciplines have an appropriate insight to my field of study          | (6) 4            | (9.4) 3  | (16.4)<br>11 | (18.8)<br>6  | (19.4)<br>13   | (28.1)<br>9  | (23.9)<br>16 | (25) 8       | (34.3)<br>23        | (18.8) 6     |
| I think there is no a positive attitude towards my field of study in my society                       | (9) 6            | (3.1) 1  | (14.9)<br>10 | (21.9)<br>7  | (22.4)<br>15   | (28.1)<br>9  | (31.3)<br>21 | (25) 8       | (22.4)<br>15        | (21.) 7      |
| Teachers encourage students to find appropriate jobs in this field of study                           | (11.9) 8         | (12.5) 4 | (25.4)<br>17 | (25) 8       | (35.8)<br>24   | (21.9)<br>7  | (14.9)<br>10 | (37.5)<br>12 | (11.9)<br>8         | (3.1) 1      |
| I think the benefits and salary employment in this field is   | (10.4) 7         | (6.3) 2  | (32.8)<br>22 | (31.3)<br>10 | (35.8)<br>24   | (37.5)<br>12 | (14.9)<br>10 | (15.6)<br>5  | (6) 4               | (9.4) 3      |
| I do not worry about the labor market of my field of study  | (13.4) 9         | (3.1) 1  | (6) 4        | (12.5)<br>4  | (25.4)<br>17   | (31.3)<br>10 | (25.4)<br>17 | (31.3)<br>10 | (29.9)<br>20        | (21.9) 7     |
| I think the employment status in lower levels is better than higher levels of education               | (9) 6            | (12.5) 4 | (14.9)<br>10 | (15.6)<br>5  | (35.8)<br>24   | (43.8)<br>14 | (14.9)<br>10 | (12.5)<br>4  | (25.4)<br>17        | (15.6) 5     |
| I like working in this field of study.  | 16<br>(23.9)     | (18.8) 6 | (32.8)<br>22 | (18.8)<br>6  | (28.4)<br>16   | (28.1)<br>9  | (7.5) 5      | (15.6)<br>5  | (7.5) 5             | 18.8) 6      |
| I will study in postgraduate level after undergraduate level  | (29.9)<br>20     | (18.8) 6 | (26.9)<br>18 | (21.9)<br>7  | (19.4)<br>13   | (34.4)<br>11 | (11.9)<br>8  | (18.8)<br>6  | (11.9)<br>8         | (6.3) 2      |
| I have been accepted in the field mistakenly  | (7.5) 5          | (3.1) 1  | (16.4)<br>11 | (12.5)<br>4  | (14.9)<br>10   | (21.9)<br>7  | (239)<br>16  | (18.8)<br>6  | (37.2)<br>27        | (43.8)<br>14 |
| Courses are practical and usable in the workplace   | (3) 2            | (3.1) 1  | (22.4)<br>15 | (25) 8       | (14.9)<br>10   | (28.1)<br>9  | (29.9)<br>20 | (15.6)<br>15 | (29.9)<br>20        | (28.1) 9     |
| Headings of the course are provided with educational content are proportional to the needs of society | (0) 0            | (0) 0    | (25.4)<br>17 | (28.1)<br>9  | (28.4)<br>19   | (31.3)<br>10 | (34.3)<br>23 | (28.1)<br>9  | (11.9)<br>8         | (21.5) 4     |

**Env:** Environmental health students; **Occ:** Occupational hygiene students

## DISCUSSION

Recognizing problems and attitude of students towards their field of study to plan for solving their problems and improving their status are as tasks of higher education system. Because, students are a sign of educational system efficiency in their country and their attitude can present the attitudes of others who are studying or working in the field. Results indicated that the most students in the study fields were female, which this may be due to their interest to the field of study compared to males and this fact that the most of participants in National Entrance Examination are female. It seems that the interest to the academic field and the selected study field could promote the scientific level of the students. While, the lack of interest to the selected field could cause disappointment, frustration and fatigue of continuing education (Cliff and Cliff, 1972). Also, the results of the present study showed that 61% of students had a positive attitude toward their fields of study and future career. Main causes of this positive attitude toward the future career in environmental health and occupational hygiene students include their interest to work in the field, receiving a decent salary after employment, and encouraging them by their teachers to continue their studies at postgraduate levels. It seems that these factors could enhance students' motivation. These results are inconsistent with Samadi et al. study (Samadi et al., 2010). While, our results are in agreement with Donnelly et al (Watt et al., 2005) and Mehrabian et al. (Mehrabian et al., 2012) studies, which most of students were satisfied with fields of study.

The result of a similar study in Hamadan showed that 61% of environmental health students had a negative attitude towards their field of study (Samadi, 2010). While, in the present study only 39% of participants had negative attitudes toward their field. The results of Samadi et al. study showed that the most of environmental health students had no positive attitude toward their future career (Samadi, 2010). Rajaei et al. reported that 95.6% of faculty health students in Esfahan University of Medical sciences had a positive attitude toward their future career (Hajian and Nasiri, 2006). The differences in these results could be due to differences in the types of used questionnaires and the time interval between two universities. Recently, there has been increasing concerns about the future career of medical disciplines and other related fields. The concern about future career is an important subject but not limited to only our country. In Britain in 1993, most general practitioners did not have enough confidence on their future career (Rowell, 1995). However, the comparison of our results with medicine students' attitudes is not true scientifically. Because, the economic, education and social problems in students studying in the medicine field can cause a negative attitude in them, which this problems is less common among student studying in the health fields. The results of a similar study in United States showed that most medical students were worried about the loss of their social prestige and low income (Hafferty and Boulger, 1986). Moreover, a study in French in 1990 showed that 60% of medical students believed that the number of trained forces in this field is higher than the need of their community (Velliet and Verbist, 1991). Sociological theories can be used for justifying the negative attitudes of medical students toward their future career. According to the blue theories, two groups of factors have a key role in choosing a career. The first group consists of individual characteristics such as biological and psychological factors. The second group involves economic and social situation. Among these factors, the geographical location, social benefits, improving mobility and cultural conditions, and the labor market can be mentioned, which the second group of factors have an important and sensitive role in choosing jobs (shafiabadi, 1992).

According to the obtained results, 59.8% of environmental health students and 43.7% of occupational hygiene students declared that the courses and contents in their study fields cannot provide their needs of future career in workplaces. The results of similar study that was conducted in Esfahan on the graduates of environmental health sciences, the number of activity type in levels of associate, bachelor and master were 31, 38 and 26, respectively. Moreover, in the mention study, researchers reported that the heading of the courses should be modified and edited for providing the career needs of students in future (Parvaresh and Amin, 2005), which is in consistent with our finding.

According to the finding of this study, 37.3% of environmental health students and 43.7% of occupational hygiene students were satisfied with their fields of study. Variety of occupational hygiene courses, presence of various industries and factories in the province, and a large research and educational attractions that exist in the industry, could cause a better attitude in occupational hygiene students.

## 2. CONCLUSION

According to the findings of present study, student's attitude towards their future career was evaluated to be positive. Adjusting the number of students and professional field of environmental health, proper distribution of human resources, complete informing students with academic disciplines to take the entrance examination, providing advice and supporting the students about study fields and future career can be helpful in improving their attitudes. So, planning to solve the problems is an important issues that should be evaluated by the relevant authorities. Short-term and long-term planning are necessary to increase the efficiency of health workers by training human forces.

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