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Survey on students' attitudes of faculty of health in Tabriz University of Medical Sciences towards the field of study and Career future

Background: This study was conducted to determine the attitudes of students of the Faculty of Health in Tabriz University of Medical Sciences towards their field of study and future careers.

Methods: In this cross-sectional-descriptive study, 90 undergraduate students were randomly selected as the study population. Data were collected using questionnaires from the University of Minnesota, including 16 questionnaires, and analyzed using Stata Version 15 and descriptive statistical.

Results: The mean scores of students' attitudes of environmental health engineering, occupational health engineering, and public health towards the field of study and career future were 46.83 ± 9.49 , 51.99 ± 9.14 , and 49.66 ± 7.87 (ranging from 16 to 80), respectively. More than 70 % of students were interested in working in the field of health sciences, but did not have a very positive attitude towards the field of study and career future. Nonetheless, the view of students of occupational health engineering was relatively more positive than other students, and the view of environmental health engineering students was more negative. Results showed a reverse statistically significant correlation between attitude with age and academic year ($P=0.001$). Also, there was a positive significant correlation ($P = 0.01$, $r = 0.966$) between students' attitudes toward the field of study and their Career future.

Conclusion: Students' attitudes toward their field of study and career future were not positively evaluated. Increasing the number of graduates, lack of job security, and the labor market were the most important factors reducing students' attitudes.

Keywords: Discipline; Career Future; Motivation; Viewpoint; Health Students

استیابان حول اتجاهاات طلاب كلية الصحة بجامعة تبريز للعلوم الطبية نحو مجال الدراسة والمستقبل الوظيفي

الخلفية: أجريت هذه الدراسة لتحديد اتجاهات طلاب كلية الصحة بجامعة تبريز للعلوم الطبية نحو مجال دراستهم ووظائفهم المستقبلية.

الطرق: في هذه الدراسة المقطعية الوصفية، تم اختيار ٩٠ طالباً جامعياً بشكل عشوائي كمتجمع الدراسة. تم جمع البيانات باستخدام استبيانات من جامعة مينيسوتا، بما في ذلك ١٦ استبياناً، وتحليلها باستخدام الإصدار ١٥ والإحصائية الوصفية.

النتائج: متوسط درجات اتجاهات الطلاب في هندسة الصحة البيئية وهندسة الصحة المهنية والصحة العامة تجاه مجال الدراسة والمستقبل الوظيفي كانت 46.83 ± 9.49 و 51.99 ± 9.14 و 49.66 ± 7.87 (تتراوح من ١٦ إلى ٨٠)، على التوالي. كان أكثر من ٧٠٪ من الطلاب مهتمين بالعمل في مجال العلوم الصحية، لكن لم يكن لديهم موقف إيجابي للغاية تجاه مجال الدراسة والمستقبل الوظيفي. ومع ذلك، كانت وجهة نظر طلاب هندسة الصحة المهنية أكثر إيجابية نسبياً من الطلاب الآخرين، وكانت وجهة نظر طلاب هندسة الصحة البيئية أكثر سلبية. أظهرت النتائج وجود علاقة ارتباطية عكسية ذات دلالة إحصائية بين الموقف مع العمر والعام الدراسي ($P = 0.001$). كما توجد علاقة ارتباط موجبة معنوية ($r = 0.966$, $P = 0.01$) بين اتجاهات الطلاب نحو مجال الدراسة ومستقبلهم الوظيفي.

الخلاصة: لم يتم تقييم مواقف الطلاب تجاه مجال دراستهم ومستقبلهم الوظيفي بشكل إيجابي. كانت زيادة أعداد الخريجين وانعدام الأمن الوظيفي وسوق العمل من أهم العوامل التي قللت من مواقف الطلاب.

الكلمات الرئيسية: الانضباط؛ المستقبل الوظيفي. تحفيز؛ وجهة نظر؛ طلاب الصحة

بررسی نگرش دانشجویان بهداشت دانشگاه علوم پزشکی تبریز نسبت به رشته تحصیلی و آینده شغلی

زمینه و هدف: این پژوهش با هدف تعیین نگرش دانشجویان دانشکده بهداشت دانشگاه علوم پزشکی تبریز نسبت به رشته تحصیلی و آینده شغلی صورت گرفت.

روش: در این مطالعه توصیفی مقطعی، ٩٠ نفر از دانشجویان مقطع کارشناسی مهندسی بهداشت محیط، مهندسی بهداشت حرفه ای و بهداشت عمومی به طور تصادفی طبقه بندی شده به عنوان جامعه پژوهش انتخاب شدند. داده ها با استفاده از پرسشنامه دانشگاه مینه سوتا شامل پرسشنامه ١٦ سؤالی جمع آوری و با استفاده از نرم افزار Stata 15 و پارامترهای آماری توصیفی مورد آنالیز قرار گرفت.

یافته ها: میانگین نمرات نگرش دانشجویان به رشته های مهندسی بهداشت محیط، مهندسی بهداشت حرفه ای و بهداشت عمومی نسبت به رشته تحصیلی به ترتیب 46.83 ± 9.49 ، 51.99 ± 9.14 و 49.66 ± 7.87 بود. دانشجویان نگرش منفی (نزدیک به متوسط) نسبت به رشته تحصیلی و آینده شغلی داشتند. با این وجود، دیدگاه دانشجویان مهندسی بهداشت حرفه ای نسبتاً مثبت تر از سایر دانشجویان و دیدگاه دانشجویان مهندسی بهداشت محیط منفی تر بود اما این تفاوت از نظر آماری معنی دار نبود ($p > 0.05$). نتایج نشان داد که بین نگرش دانشجویان نسبت به رشته تحصیلی و نگرش آنها نسبت به آینده شغلی همبستگی مثبت و معناداری مشاهده شد ($r = 0.966$, $P = 0.01$).

نتیجه گیری: نگرش دانشجویان به ویژه در رشته مهندسی بهداشت محیط نسبت به رشته تحصیلی و آینده شغلی آنها مثبت ارزیابی نمی شود. افزایش تعداد فارغ التحصیلان، نبود امنیت شغلی و بازار کار از مهم ترین عوامل کاهش نگرش دانشجویان است.

واژه های کلیدی: رشته تحصیلی، آینده شغلی، انگیزه، نقطه نظر، دانشجویان بهداشت

تبریز یونیورسٹی آف میڈیکل سائنسز میں فیکلٹی آف ہیلتھ کے طلباء کے مطالعہ اور مستقبل کے مستقبل کے بارے میں سروے

پس منظر: یہ مطالعہ تبریز یونیورسٹی آف میڈیکل سائنسز میں فیکلٹی آف ہیلتھ کے طلباء کے اپنے مطالعہ اور مستقبل کے کیریئر کے بارے میں رویوں کا تعین کرنے کے لیے کیا گیا تھا۔

طریقے: اس کراس سیکشنل وضاحتی مطالعہ میں، ٩٠ انڈرگریجویٹ طلباء کو تصادفی طور پر مطالعہ کی آبادی کے طور پر منتخب کیا گیا تھا۔ یونیورسٹی آف مینیسوتا کے سوالناموں کا استعمال کرتے ہوئے ڈیٹا اکٹھا کیا گیا، بشمول ١٦ سوالنامے، اور Stata ورژن ١٥ اور وضاحتی شماریاتی کا استعمال کرتے ہوئے تجزیہ کیا گیا۔

نتائج: طلباء کے ماحولیاتی صحت انجینئرنگ، پیشہ ورانہ صحت انجینئرنگ، اور صحت عامہ کے مطالعہ اور مستقبل کے مستقبل کے بارے میں رویوں کے اوسط اسکور 46.83 ± 9.49 ، 51.99 ± 9.14 اور 49.66 ± 7.87 (١٦ سے ٨٠ تک) تھے۔ بالترتیب ٧٠٪ سے زیادہ طلباء صحت سائنس کے شعبے میں کام کرنے میں دلچسپی رکھتے تھے، لیکن مطالعہ کے شعبے اور کیریئر کے مستقبل کے بارے میں بہت مثبت رویہ نہیں رکھتے تھے۔ بہر حال، پیشہ ورانہ صحت انجینئرنگ کے طالب علموں کا نقطہ نظر دوسرے طالب علموں کے مقابلے میں نسبتاً زیادہ مثبت تھا، اور ماحولیاتی صحت انجینئرنگ کے طالب علموں کا نقطہ نظر زیادہ منفی تھا۔ نتائج نے عمر اور تعلیمی سال ($P = 0.001$) کے ساتھ رویہ کے درمیان ایک معکوس شماریاتی لحاظ سے ہم تعلق ظاہر کیا۔ اس کے علاوہ، مطالعہ کے میدان اور ان کے کیریئر کے مستقبل کے بارے میں طلباء کے رویوں کے درمیان ایک مثبت ہم ارتباط ($r = 0.966$, $P = 0.01$) تھا۔

نتیجہ: طلباء کے اپنے مطالعہ کے شعبے اور کیریئر کے مستقبل کے بارے میں رویوں کا مثبت جائزہ نہیں لیا گیا۔ گریجویٹس کی تعداد میں اضافہ، جاب سیکورٹی کی کمی، اور لیبر مارکیٹ طلباء کے رویوں کو کم کرنے کے لیے اہم ترین عوامل تھے۔

مطلوبہ الفاظ: نظم و ضبط کیریئر کا مستقبل؛ حوصلہ افزائی؛ نقطہ نظر صحت کے طلباء

INTRODUCTION

Scientific and academic centers are one of the most important factors for the dynamism and growth of countries. Universities are one of the most valuable resources in the progress and development of societies (1,2). The source of the transformation and development of society in various fields has been the university, and students, as the main members of the university, will manage the various pillars of society and organizations in the future (3). Among these, one of the significant factors determining the success of the educational system is the academic motivation of students (4). Awareness, knowledge, and interest in the field of education and professional future increase people's sense of responsibility and lead to increased efficiency of people in providing health services (5). In our country, Iran, university entrance candidates are subjected to various psychological pressures when choosing a field. The incompatibility of these factors with their personal and spiritual interests and characteristics can later lead to their academic dissatisfaction (6). The positive attitude of the student towards the field of study and job prospects can lead to job satisfaction and success, as well as the progress of the community (7,8). Lack of a positive attitude towards the field of study causes a mismatch between the future of the job and the expectations of individuals that the negative consequences of this issue can be noticed by the higher education system and the health system (9,10). Research has shown that students do not know enough about the field of education when choosing a field (11,12).

The employment of specialized staff in health and medical centers has especial importance. Hence, feelings of frustration and job insecurity among the graduates of health and medical fields result in the loss of material, spiritual, and human capital of the country. In recent years, the number of students admitted to the field of environmental health engineering as one of the branches of health sciences has increased (13,14). When a study field exceeds the needs of a community, it leads to a decrease in the income of graduates and the want and motivation to study and work in that field.

Adequate job motivation is necessary for useful and efficient employment (15).

Due to the importance of health disciplines, students' correct attitude towards the study field and future career along with traits such as compassion and love could make sure the physical, mental and emotional health of human beings (16,17). Numerous studies in Iran and the world have evaluated the attitude of medical students toward their field of study and future careers (18, 5, 15, 19-24).

A study of public health students' attitudes showed that 70% of students had a negative attitude toward the future of their careers (25), while the study of Gholami et al., showed that 98% of students showed a positive attitude toward the future of their careers (4). In a study conducted at the University of Minnesota, USA, most medical students were concerned about the loss of their medical status and income (26).

Considering that the comprehensive study was not found about the attitude of students of the Faculty of Health in Tabriz University of Medical Sciences toward the field of education and career prospects, the purpose of this study was to investigate the attitude of students of the Faculty of Health of Tabriz University of Medical Sciences (TUOMS) toward their field of education and job prospects.

METHODS

This cross-sectional, descriptive study was performed in 2018-2019. The target population included all undergraduate students of the Faculty of Health. Samples were including 90 undergraduate students of public health, environmental health engineering, and occupational health engineering in the Faculty of Health in Tabriz University of Medical Sciences (TUOMS) through Stratified random sampling. This questionnaire was taken from the questionnaires of the University of Minnesota, USA, which has been used in the study of Samadi et al. (2010) and Karimi et al. (2012) (3, 13). The validity and reliability of this questionnaire have already been reviewed and approved by Hedayati et al. and Jahani ($\alpha = 0.83$). Attitude questions related to the field of study (9 questions) and the career future (7 questions) are presented in Table 1. The section on

Table 1. Attitude questions related to the field of study and the career future

Attitude questions related to the field of study		Attitude questions related to the career future	
Q1	My grades only allowed me to be accepted in this field.	Q1	This field has more income in the future than other fields.
Q2	My family recommended this course to me.	Q2	Professors encourage students to find suitable jobs
Q3	I am satisfied with the choice of this field.	Q3	The legal benefits of employment in this major are appropriate.
Q4	Course objectives are compatible with individual needs and students' expectations	Q4	I am not worried about the labor market in this major
Q5	After studying, became more interested in this field.	Q5	The employment status is better for lower education levels than the higher levels.
Q6	My major will be more valuable at higher education levels.	Q6	I like to work in the field of health.
Q7	Other students have a positive view toward my field.	Q7	More student admission threatens the future career of this field
Q8	Society people have a positive view toward my field.		
Q9	I chose this field solely based on interest.		

students' attitude to the discipline of study and career future included nine and seven questions respectively. Answers to each question were scored on a five-point Likert scale, with a range of one (strongly disagree) to five (strongly agree). To evaluate students' attitude to the discipline of study and job prospects, the mean scores of students were compared with the mean score of the exam. The scores of less than 21 as negative attitudes toward job prospects, less than 27 as negative attitudes toward the field of study, and below 48 as negative attitudes to the total discipline of study and career future were considered.

Statistical analysis

The normality of the distribution of variables was tested by the Kolmogorov-Smirnov test and skewness and kurtosis indices. Univariate and multivariate was used for the mean future career and field of study scales without adjusted, and key independent covariates including age, gender, marital status, native, employment, and residence status were

adjusted. Parson correlation was used for the association between students' attitudes toward the field of study and their Career Future. Statistical analyses were performed using Stata Version 15 (College Station, TX: StataCorp LLC; 2017).

RESULTS

A total of 90 questionnaires was completed and analyzed. Out of the total number, the participants in the study were 16 (16.78%) males and 74 (83.22%) females .In terms of marriage, 81 participants (90%) were single and 9 (10%) were married. 44 (48.9%) students were native and 46 of them (51.1%) were non-natives. in terms of residence status,65 people (72.21%) lived in the dormitory, 2 people (2.21%) in rented houses, and 23 people (58.5%) in paternal homes. In terms of employment status, 6 people (6.67%) were employed, and 84 people (93.33%) were only students. Also, 25 people (27.78%) were entrance of 2017, 28 people (31.11%) entrance of 2016, 25 people (27.78%) entrance of

Table 2. Student's demographic information by discipline of study

Demographic information		Public health	Environmental health engineering	Occupational health engineering
			Number (Percentage)	
Marital status	Married	5 (16.66%)	3 (10%)	1 (3.33%)
	Single	25 (83.34%)	27 (90%)	29 (96.67%)
Native status	Native	10 (33.33%)	15 (50%)	19 (63.33%)
	Non-native	20 (66.66%)	15 (50%)	11 (36.37%)
Residence status	Dormitory	25 (83.34%)	18 (60%)	22 (73.33%)
	Rented	0 (0%)	0 (0%)	2 (6.66%)
	Paternal home	5 (16.66 %)	12 (40%)	6 (20.01%)
Employment status	Employed	5 (16.66 %)	1 (96.67%)	0 (0%)
	Only student	25 (83.34%)	29 (3.33%)	30 (100)

Table 3. Absolute and relative frequency distribution of students' attitude toward the field of study

Qs	Strongly agree (%)			Agree (%)			Neutral (%)			Disagree (%)			Strongly disagree (%)		
	P.H	E.H	O.H	P.H	E.H	O.H	P.H	E.H	O.H	P.H	E.H	O.H	P.H	E.H	O.H
Q1	16.7	16.7	20	20	26.7	50	40	20	10	23.3	30	20	0	6.6	0
Q2	3.3	3.3	3.3	23.3	20	23.3	10	16.7	26.7	43.4	46.6	26.7	20	13.4	20
Q3	3.3	3.3	13.3	40	43.4	56.7	23.3	16.7	13.3	16.7	26.6	10	16.7	10	6.7
Q4	6.7	3.3	0	36.6	13.3	26.7	16.7	20	16.7	23.3	43.4	53.3	16.7	20	3.3
Q5	26.6	23.3	36.7	36.6	40	40	20	23.3	16.7	13.4	3.4	3.3	3.4	10	3.3
Q6	30	20	23.3	36.6	46.7	36.7	23.3	23.3	30	6.7	10	6.7	3.4	0	3.3
Q7	6.7	0	10	30	20	23.3	33.3	36.7	56.7	23.3	40	6.7	6.7	3.3	3.3
Q8	6.7	0	3.3	30	30	30	30	30	43.4	26.6	33.3	20	6.7	6.7	3.3
Q9	6.7	0	3.3	16.7	10	16.7	23.3	16.7	20	30	40	50	23.3	33.3	10

* P.H= Public Health; E.H= Environmental Health; O.H= occupational health

2015 and 12 people (13.33%) were entered in university in 2014. Further details by the discipline of the study were presented in Table 2.

21 (70%) of environmental health students, 22 (73.33%) of public health students, and 21 (70%) of occupational health students were strongly agree or agree with working in the field of health. 4 (13.33%) of environmental health students, 3 (10%) of public health students, and 2 (6.66%) of occupational health students did not agree with working in the field of health. 16 (53.33%) of environmental health students, 19 (63.33%) public health students and 14 (46.66%) occupational health students were concerned about the labor market of their field of education. Whereas 7 (23.33%) of environmental health students, 4 (13.33%) of public health students, and 8 (26.66%) of occupational health students were not worried relatively about the labor market of their field of study. The absolute and relative frequency distribution of students' attitudes of public health, environmental health engineering and Occupational health

engineering toward the field of study and career future are presented in Tables 3 and 4, respectively.

DISCUSSION

Findings from the study showed that the majority of undergraduate students (83.22%) were female. This may indicate that women are more interested in health sciences compared to men. On the other hand, men's reluctance and interest in studying health sciences can be due to their concern about future careers and the lack of labor market and job security. However, there was no statistically significant difference between the attitude of students toward the field of study and future career with gender variable. The majority of students in all three fields of study (more than 70 %) were interested in working in the field of health sciences. The majority of students (more than 65 %) did not agree with the increase in student admission, believing that this could lead to a reduction in the labor market and threaten their job security. While contrary to the student's opinion, the evidence

Table 4. Absolute and relative frequency distribution of students' attitude toward the career future

Qs	Strongly agree (%)			Agree (%)			Neutral (%)			Disagree (%)			Strongly disagree (%)		
	P.H	E.H	O.H	P.H	E.H	O.H	P.H	E.H	O.H	P.H	E.H	O.H	P.H	E.H	O.H
Q1	0	0	3.3	6.7	10	16.7	50	23.4	16.7	26.6	36.6	20	16.7	30	33.3
Q2	10	3.3	10	46.7	20	36.6	23.3	46.7	26.7	20	23.3	33.3	0	6.7	6.7
Q3	6.7	0	6.7	26.6	16.7	20	30	50	33.3	30	30	26.7	6.7	3.3	6.7
Q4	6.7	3.3	10	16.7	20	3.3	26.6	13.3	33.3	30	36.6	16.7	20	26.7	26.7
Q5	3.3	3.3	3.3	26.6	26.7	16.6	33.3	33.3	23.3	30	26.7	40	6.7	10	16.7
Q6	6.7	10	23.4	66.7	60	50	23.3	13.3	20	0	10	3.3	3.3	6.7	3.3
Q7	26.7	33.3	33.3	33.3	46.7	23.4	36.7	16.7	30	0	3.3	10	3.3	0	3.3

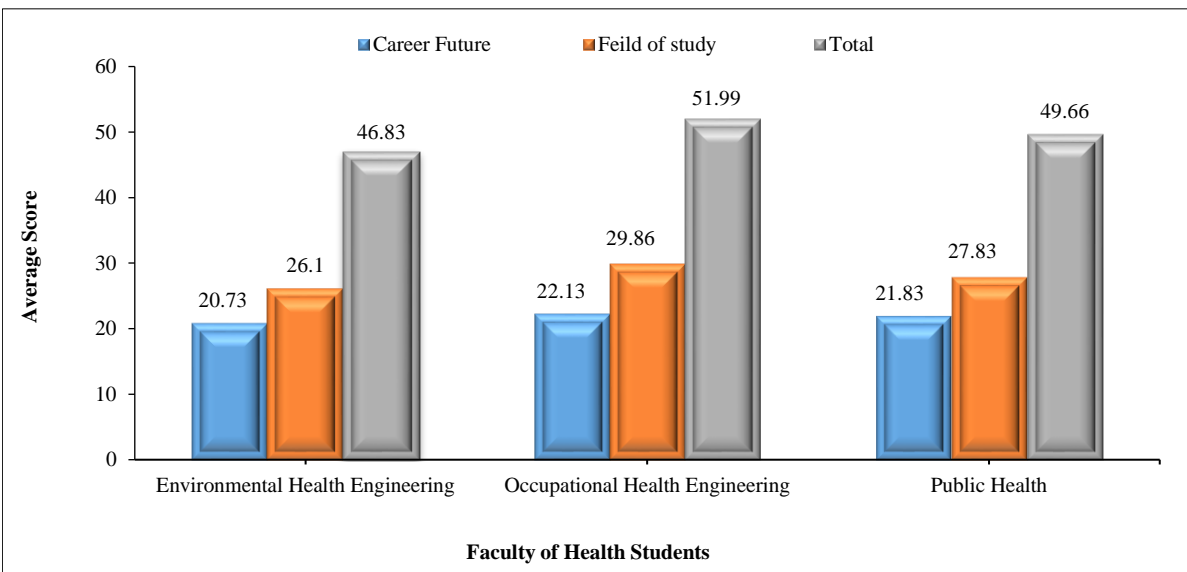


Figure 1. Average scores of students' attitudes toward the field of study and career future

suggested an increase in student admission, in 2016, 2017, and 2018 compared to 2015.

Based on the findings of this study, most of the students of the health faculty of TUOMS did not have a favorable attitude (Close moderate) toward their study field and job prospects. Nonetheless, the view of students of occupational health engineering was relatively more positive than other students, and the view of environmental health engineering students was more negative. However, there was no significant difference between the attitudes of students toward their academic field and career future. Generally, the attitude of students toward the field of education and job prospects was as follows: Occupational health engineering > Public health > Environmental health engineering

The positive attitude of students of occupational health engineering compared to environmental health and public health students can be due to job security and labor market, low student acceptance, as well as the appropriate position of this field in industry and a suitable condition for employment in industries.

The positive attitude of public health students may be due to the greater employment capacity in health care units and the greater adaptation to the work environment of public health students (especially female students) compared to environmental health students.

The negative attitude of environmental health students can have several reasons such as: professional insecurity, excessive student admission, lack of labor market, the saturation of employment capacity, lack of sufficient organizational position for environmental health graduates in government organizations and offices, lack of a suitable platform for employment in industries and private sectors, less employment capacity in health care units as well as less compatibility in the field of environmental health for female students.

46.66% of public health students and 56.66% of occupational health students believed that professors encourage students to find suitable jobs. Whereas, only 13% of environmental health students answered this question positively, which indicated their negative attitude toward their future careers. Generally, according to the results of this study, suitable job security, appropriate salaries, and benefits, good work field, interest in working in the field of health, encouraging students by professors to continue their education and finding a good job, appropriate labor market and increasing employment capacity, as well as student admission according to needs can lead to motivate and encourage students to continue their education and positive attitude toward the field of study and career future.

Occupational health students believe that the employment situation is better at higher education levels. One of the important reasons for this could be the lower admission of students in the field of occupational health in all levels of education, especially at higher education levels (MSc and Ph.D. degrees). Hence, it is possible for occupational health graduates to be employed at higher education levels at various industries and private sectors as responsible for health, safety and the environment (HSE) and also universities as faculty members.

Environmental health students believe that there is no obvious difference in their employment status between higher and lower levels of education, so 30% of students agreed with this issue, 36% disagreed and 33.33% were neutral. While, public health students believe that the employment situation in lower levels of education is better than higher education levels. One of the reasons for this could be the greater employment capacity of public health bachelor graduates in health care units, the suitable work field, especially for female bachelor's public health graduates, the impossibility of education in higher levels (MSc and Ph.D. degrees) in the field of public health.

However, the changes made in the first level of providing health services, the implementation of health system evolution plan programs, and the employment rate of health students lead to improved students' attitudes toward their future careers.

Further research is recommended in health in different parts of the country to create more favorable working positions for employment and motivate students.

The results also indicated that the curriculum and training course are not appropriate to the individual needs and expectations of the student. Therefore, long-term and short-term planning by policymakers, curriculum review, and educational reform under the individual needs and expectations of students are recommended.

The aim of this study was to determine the attitudes of undergraduate students of environmental health engineering, occupational health engineering, and public health in Tabriz University of Medical Sciences in relation to the field of study and job prospects. Results of the present study indicated that students are interested in their field of study. Despite this, most of the students of the faculty of the health of TUOMS did not have a favorable attitude toward their study field and future careers. Some factors, such as many graduates in the field of health, lack of job security, and a suitable labor market, lead to a negative attitude of students toward the field and future careers. Job security, appropriate salaries, and benefits, good work field, interest in working in the field of health, encouraging students by professors to continue their education and find a good job, appropriate labor market and increasing employment capacity, as well as student admission according to needs can lead to motivate and encourage students to continue their education and positive attitude towards the field of study and career future.

Ethical Considerations: Ethical issues including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc. have been completely observed by the authors. This article is extracted from the course project of students.

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