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ATTITUDES OF MEDICAL STUDENTS TOWARD THEIR
CAREER FUTURE AT JAHROM UNIVERSITY OF MEDICAL
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ABSTRACT

Background: The career attitude is a positive feeling toward the job which is affected by several factors. The aim of this study was to determine medical students' attitudes toward their career future at Jahrom University of medical sciences and its relationships with demographic variables. **Methods:** This cross-sectional analytical study was conducted on all medical students of Jahrom University of Medical Sciences in 2014 [No: 200]. The data were collected through valid and reliable researcher made questionnaire including 10 questions about demographic information and 20 questions in three socio-individual, educational, and economic subscales. The questions were scored based on the five-point Likert scale, ranging from strongly agree [5] to strongly disagree [1]. **Results:** The attitude of medical students towards their career future was positive [195 students [95%]]. Socio-individual, educational, and economic subscales had a direct and positive relationship with the attitude of medical students towards their career future [$p < 0.001$]. There was a significant difference between first-year and seventh-year medical students in terms of their attitudes toward their career. The mother's education, economic situation, the interest in the field of study, and awareness of career future of students were effective in career attitude [$p < 0.05$]. There was no significant difference between male and female students, basic sciences and clinical students in terms of attitude towards career future [$p > 0.05$]. **Conclusions:** The mean score of individuals' attitude towards their career future was higher than expected, indicating that the majority of students have a positive attitude towards their career future. Detecting effective demographic factors on positive attitude such as interest in the medical profession and awareness of career future for short-term and long-term planning is helpful to make a background for creating and maintaining a positive attitude.

INTRODUCTION

Today, the study of attitude has a special place in research as the most important concept in socio-psychology [1]. Generally speaking, the combination of knowledge, feelings and readiness to act with respect to a problem is called the individuals' attitude toward the problem [2]. Career attitude is a kind of positive feeling about individual's job is rooted from factors such as working conditions, career organization, relationships ruling on the work environment which is influenced by cultural factors [3]. Success in any job usually requires a kind of positive attitude toward that goal or action. Awareness of attitude would be useful both to predict social behaviors and interpret post occurrence [1].

There has been concern about career future decades ago and other countries have considered this issue. Concerning the career future is an issue which has been growing in medicine and other affiliated fields [3]. Since the universities have been the origin of changes in society in various fields and the students constitute the main foundation of universities, and in the future build the main body of different organizations of the society, awareness of their attitude toward their future career is highly important [1,4].

Evidence shows that each year, enthusiasm or, in other words, a number of young people entering university is growing more and more, but after entering the university they become discouraged and frustrated for some reasons in which the most important include insufficient awareness to the university and hasty decision to choose the field to be and reduce their motivation arises which affect the quality of education. Experts believe that there are several complexity and various factors for this and one of the factors is lack of familiarity with the new environment and inadequate recognition of the field of study and the future of Education in University [5]. Meanwhile, medicine has long been the first priority in science field in Iran. In many other countries top students continue their studies in medicine [6].

Research shows that although increasing the number of medical school and medical students eliminates the shortage of doctors in Iran, young doctors encounter problems such as a shortage of learning environment, restrictions on the acquisition of skills based on knowledge, low income, lack of job security, and consequently decline in interest [7]. However, the motives, belief and values of medical students during study and their attitudes toward their future career affect their willingness to accept training

KEY WORDS

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programs and learning and academic performance, as well as the choices made for their future career course [8, 9]. Job motivation is considered necessary and essential for useful and efficient employment. If a person is not interested in his job, continuation of the jobs would be tedious and even impossible. If a person is not interested in their jobs, more jobs would be tedious and even impossible. Positive attitude towards the future career will follow job motivation that would lead to job success as well [10].

The results of the study conducted on the job attitude of medical students in basic and clinical sciences at Jahrom University of Medical Sciences in 2002 showed that the general attitude of the students to their field of study is negative [11]. Participants in the study of Nejat et al did not consider the job status of general practitioners appropriate as well [6].

Investigations of the late twentieth century and early twenty-first century show that 30 to 40 percent of doctors would not choose medicine again if they were asked to decide their future [12]. Obviously, the employment of trained forces would reduce the concern of current students about their future career [13].

Given the importance of medical profession and that medical students are responsible for providing, maintaining and promoting public health as a subset of the main forces in the healthcare sector which should be able to play their roles as skilled forces, managers, or at least therapist, knowing the attitude of students towards their future career is important. On the other hand, despite the fact that medical training programs are the most expensive educational programs which imposes a high cost to the system annually, the previous research reflects the negative attitude of students toward their future job. With regard to the implementation of family medicine programs in Iran and in Fars Province and recent changes in the health reform plan, a review of the attitudes of medical students towards their future careers seems essential which could have a significant role in future planning to make necessary changes. The aim of this study was to determine medical students' attitudes toward their career future at Jahrom University of medical sciences and its relationships with demographic variables.

METHODS

Design & Setting

This cross-sectional study was conducted in 2014 with the participation of students of Jahrom University of Medical Sciences.

Sample

First year as well as seventh year students who were studying in medicine included in this study in census method those students who were not inclined to participate in the study were excluded. 220 questionnaires were distributed, total of 200 completed questionnaires were returned to the researcher [response rate 90%].

Tool

The data collection tool is researcher-made questionnaire and the researchers extracted the desired points by reviewing books and articles in the fields of attitudes towards the future career. Considering the nature of the questions, they were categorized into two parts of demographic features [10 questions] and career future [20 questions] in 3 subscales of socio-individual, educational, and economic. Content and face validity of the questions were reviewed by dozens of professors from Jahrom University of Medical Sciences regarding the relatedness of questions to the subject of research and understandability of questions. To determine the reliability, 20 medical students were asked to complete questionnaires and reliability was calculated and confirmed using Cronbach's alpha coefficient 0.85. Also, Cronbach's alpha coefficient in the areas of socio-individual, educational, and economic were calculated 0.90, 0.80, and 0.86 respectively which were appropriately reliable. It is worth noting that students who participated in the pilot study were not examined in the original study.

The questionnaire was ranked based on five-point Likert scale ranging from 1 to 5, strongly disagree to strongly agree and the scores of others responses were placed between these two scores. Based on this, the score 20 represents the lowest tendency and the score 100 indicates the highest positive trend toward future career. To evaluate the students' attitude toward their field of study, the scores of students were compared with average of test scores which is 60. The scores lower than 60 were considered as negative attitude and scores above 60 as a positive attitude.

Procedure

Institutional review board authorization was gained from the Human Subjects Committee at the Jahrom University of Medical Sciences in Iran. After approval of the research project and receive Ethics Committee code and coordinating with the dean of the faculty of medicine, the researchers provided some explanations to the research units such as participation in the study is voluntary, questionnaires are completed anonymously and data collected remains confidential. The researchers distributed the questionnaires in free time between classes and in the students' free time in the hospital and the students filled out the questionnaires through self-reporting.

Statistical analysis

Questions regarding the attitude of future career were completed through descriptive statistics such as mean and standard deviation of the mean scores and to compare the means, t-test, ANOVA, Tukey test and binomial nonparametric test were applied through software SPSS.v.16. The Pearson correlation coefficient was used to investigate the relationship between attitudes toward career future and the dimensions of the questionnaire.

RESULTS

Among 200 medical students participated in the study, majority were female [65.5%], non-native [63.0%] and had a good economic condition [44.5%]. The mean age and the average of student's were 22.67 ± 4.59 and 15.58 ± 1.84 respectively. 59% [118 students] reported their interest in the medical field as high and 89.0% [178 students] expresses awareness of their career future as moderate and high levels [Table 1].

Table 1: Characteristics of the participants [N=200]

Demographic Variables		N [%]
sex	male	69[34.5%]
	female	131[65.5%]
Academic year	First	41[20.5%]
	Second	33[16.5%]
	Third	35[17.5%]
	Fourth	17[8.5%]
	Fifth	7[3.5%]
	Sixth	26[13.0%]
	Seventh	41[20.5%]
location	Non-native	126[63.0%]
	Native	74[37.0%]
edu.fath	< Diploma	39[19.5%]
	Diploma	63[31.5%]
	Bachelor	70[35.0%]
	Master of science	19[9.5%]
	PhD	9[4.5%]
edu.moth	< Diploma	47[23.5%]
	Diploma	75[37.5%]
	Bachelor	58[29.5%]
	Master of science	14[7.0%]
	PhD	6[3.0%]
awareness of career future	Low	22[11.0%]
	Moderate	90[45.0%]
	High	88[44.0%]
Interest rate	Low	9[4.5%]
	Moderate	73[36.5%]
	High	118[59.0%]
Economic situation	Very Poor	8[4.0%]
	Poor	17[8.5%]
	Average	82[41.0%]
	Good	89[44.5%]
	Excellent	4[2.0%]
Level	Basic science	126[63.0%]
	Clinical students	74[37.0%]

The average score of students' attitude was 76.29 ± 10.27 . The average score of students in socio-individual, educational, and social were 37.46 ± 4.97 , 22.07 ± 4.02 , and 16.96 ± 3.98 respectively. To evaluate students' attitudes toward their field of study, non-parametric binomial test with a cut-off point of

60 was used. Lower than 60 and above 60 were considered as the negative attitude and as a positive attitude. The results showed that the attitudes of medical students toward their career future were significant and higher than the cut-off point 60 [Table 2], [p < 0.001].

Table 2: The frequency distribution, mean and standard deviation of medical students' attitudes towards their future career.

attitude	[N]%	Mean±SD	p-value
negative attitude[≤ 60]	10[5]	49.36±8.69	<0.001
positive attitude[> 60]	190[95]	77.86±8.53	
Total	200[100]	76.29±10.27	

Pearson correlation coefficient showed that three socio-individual, educational, and economic subscales were strongly correlated with the attitude of the students; in other words, students' socio-individual, educational, and economic attitudes had a positive and direct relationship with job future. [Table 3], [p < 0.001].

Table 3: Correlations Between career attitude subscales and total attitude

Scale		Socio-individual	educational	Economic
Total attitude	Pearson correlation coefficient	.841**	.739**	.757**
	p-value	<0.001	<0.001	<0.001

Based on analysis of variance [Anova] there was a significant difference between seventh-year and first-year medical students' attitudes toward career future. Tukey test showed that there was a significant difference only between first-year and fifth-year students as well as first-year and seventh-year students. The mother's education, economic condition, the interest in the field of study, and students' awareness of their career future is effective in attitudes toward career future of their field of study [p < 0.05].

According to independent sample t-test there was no significant difference between male and female students in terms of attitudes toward career future of their field of study. Also, despite the difference in students' attitude towards career future of their field of study and high score of clinical students to basic science levels, this difference was not statistically significant [Table 4], [p > 0.05].

Table 4: Relationship between demographic variables and career attitude

demographic variables		Attitude			
		Mean	Standard Deviation	Statistics	p-value
Sex	male	67.13	11.65	-0.367	0.714
	female	76.69	9.35		
Academic year	First	81.46	9.94	3.552	0.002*
	Second	75.58	7.61		
	Third	75.62	10.74		
	Fourth	75.88	12.40		
	Fifth	66.14	7.99		
	Sixth	74.32	8.54		
	Seventh	74.32	10.20		
edu.father	School education	76.10	12.41	0.505	0.732
	Diploma	75.41	9.17		
	Bachelor	77.80	10.21		
	MA	76.63	9.79		
	PhD	75.33	7.25		
edu.mother	School education	73.02	12.29	2.46	0.047*
	Diploma	77.50	9.34		
	Bachelor	77.21	8.12		
	MA	80.93	12.71		
	PhD	73.83	8.42		
Knowledge about medicine field	Low	70.00	12.474	13.819	<0.001*
	Average	74.43	8.97		
	High	80.22	9.375		
Interest to medicine field	Low	63.3333	14.45683	19.289	<0.001*
	Average	73.2740	8.95709		
	High	79.4915	9.14811		

Economic condition	Very weak	68.5000	15.30686	3.718	0.006*
	Poor	76.6875	7.39115		
	Average	75.3537	10.31883		
	Good	78.7079	8.60919		
	Higher	64.7500	25.44766		
Level	Basic science	77.54	10.24	3.691	0.056
	Clinical	74.70	9.86		

DISCUSSION

In this study, the majority of medical students had a positive attitude towards their career future. Likewise, the results of the same study showed that the majority of medical students at the American University of Pennsylvania were optimistic toward their career future [14]. Also, in the study of Gasiorowski et al, (2014) medical students allocated the highest score to their fields part of the medical profession due to doing an important and interesting job, ensuring of finding job and having more facilities which reflects the positive attitude of the students toward their career future [15]. In a study conducted in the UK, 64% of medical students were highly satisfied with the medical profession [16].

But the results of studies are not consistent with the studies which show students' negative attitude to career future. Reviewing attitudes of students of Jahrom University of Medical Sciences toward career future arranged in 2002 showed that the general attitude of the students to their field of study is negative and more than half of the students stated that if they re-examine, they would not choose medical field [11]. The results of the study of Hajian and Nasiri [2005] also showed that despite the fact that 74% of medical students have chosen this field with awareness and interest, but 60% of them have changed their attitudes towards this field and career future and the majority had negative attitudes [17].

The results also showed the negative attitude of medical students towards their career future at Isfahan University of Medical Sciences [10]. In another study, medical students stated that the career future of general practitioners has unfairly been treated in comparison with other disciplines, and some of them evaluated studying medicine more difficult than other disciplines [6]. This negative attitude has also been observed in studies in other countries. In a study at the University of Minnesota, most medical students were concerned about the status decline and income [18]. In Britain, most GPs did not have enough confidence in their career future [19] and in France, 60% of medical students believed that medical workers exceed the population need [20]. In fact, when a specialty is available more than the society needs, makes the income reduce among graduated students, desire to study and work in the field gradually decreases [21], and this can make the students change their attitude toward career future.

This study also showed that there was a positive and direct relationship between socio-individual, educational, and economic views and the students' attitudes towards their career future. In fact, attitude and career future plans and individual satisfaction are in relation to several factors, including demographics, personality, and factors related to medical school, ethics and curriculum, learning environment, and students' attitudes towards expertise and values [15, 22]. In fact, the attitude of students to the medical profession and their performance during the training and education is influenced and their attitude affects their performance and decisions after graduation [23].

The results showed that despite the higher scores of attitude among clinical students to basic science level, this difference was not statistically significant. The study of Hajiani and Nasiri (2005) showed no statistically significant relationship between the level of education and their attitudes towards career future [17] which is consistent with the current study. However, it's recommended that further studies be conducted with a larger sample size.

In this study, there was a significant difference between the attitudes of the first-year and the fifth-year students and the first-year and seventh-year students. In explaining this problem it can be acknowledged that students' perception from gaining clinical skills play an important role in enhancing the satisfaction and attitude of the students. Since the promotion of students' skills are achieved in the final years of the study, in fact, the difference in attitude is between the first year and clerkship and internship courses that are reconsidered main courses of clinical training in medical students.

A review of studies shows other conflicting results. The study conducted at Tehran University of Medical School indicated that as the students age, their evaluations from career future change negatively, so that as they age, the possibility of continuing their education and finding a job with enough income and in the right place become harder than other fields which is not inconsistent with this study [6]. The study conducted in 2002 at Jahrom University of Medical Sciences also reflected more negative attitudes of students in the clinical course than basic Sciences [11]. In the study of Hasanzadeh, et al, (2006) there was a significant relationship between level of education and attitude to the field at the beginning and internship students had more negative attitudes to other levels [24].

Regarding the positive attitudes of students in conducted studies in the last years, implementation of family physician at the beginning of the 2006 and the healthcare reform plan programs could be mentioned

at the beginning of 2002[25]. However, the implementation of the program in the right way at the start of their implementation, and their effectiveness is noticeable in changing the attitudes of students and physicians that requires exclusive and further research. Some consider the origin of students' negative attitude of students in the final years encountering the realities of the society and medical profession [7]. In other studies, sleep deprivation of last-year medical students, the disruption of sleep hours due to night shifts, unsupportive atmosphere and changes in the scheduling of lessons, the high volume of materials and references, numerous instructors, treatment with the hospital staff have been mentioned and pointed out[27,26].

In this study, mother education, economic condition, the interest in the field of study and awareness of career future is effective in students' attitude toward career future. The results of the study of Gaşiorowski et al.[2014] showed that the majority of students who enter medical school have parents with higher education, and almost one-fifth of students had at least one parent who had medical education[15]. In fact, parents' education, especially in the field of medical education creates awareness of the field of study and career future and increases their interest to study in this field. Results of the study conducted on neither young physicians nor way showed a doctor father's job as a physician has a significant role in job satisfaction in young physicians [22]. In other studies the relationship between interest in the field of study and positive perception of self as professional person has been pointed out [28].

There is no significant difference between male and female students in terms of attitudes toward career future. No statistically significant relationship was observed in the study of Hajiani et al, (2005) regarding gender and attitude of students towards career future [17]. Although the study conducted on medical students in Poland, there was a significant relationship between gender and type of expertise and it seems that gender demography has the greatest influence on choosing the type of expertise [15]. A study conducted in Canada also showed that job dissatisfaction is more common in women than men [29]. In another study, the sex was a predicting factor in job motivations of medical profession [22, 30].

CONCLUSION

The mean score of attitude towards their career future was higher than expected, indicating that the majority of students have a positive attitude towards their career future which makes a ground suitable among medical students as service providers in the future. As an individual's attitudes change in different periods of life in harmony with the environment, detecting demographic factors influencing the positive attitude such as early interest and awareness of career future for the short and long plans is helpful to create a suitable structure to make and maintain a positive attitude.

CONFLICT OF INTEREST

None

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FINANCIAL DISCLOSURE

None

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