

# Why People Apply to Medical School in Iraq?

Nesif Al-Hemiary<sup>1</sup>, Ahmed Sameer Al-Nuaimi<sup>2</sup>, Hilal Al-Saffar<sup>3</sup> and Ian Randall<sup>4</sup>

<sup>1</sup>Section of Psychiatry, Department of Medicine, College of Medicine, University of Baghdad, Baghdad, Iraq. <sup>2</sup>Department of Family and Community Health, College of Medicine, University of Baghdad, Baghdad, Iraq. <sup>3</sup>Department of Medicine, College of Medicine, University of Baghdad, Baghdad, Iraq. <sup>4</sup>The Bradgate Mental Health Unit, Leicester, UK.

Journal of Medical Education and Curricular Development  
Volume 4: 1–5  
© The Author(s) 2017  
Reprints and permissions:  
sagepub.co.uk/journalsPermissions.nav  
DOI: 10.1177/2382120517726997



## ABSTRACT

**BACKGROUND:** The motivations behind why people choose to study medicine in Iraqi medical schools are unknown. Such information could help school pupils to make more informed career decisions and assist medical schools in enhancing the student selection process.

**AIMS:** To investigate why people choose to study medicine in Iraq.

**SUBJECTS AND METHODS:** The first-year students admitted on the academic year 2015-2016 to Baghdad College of Medicine, University of Baghdad, were invited to complete a structured questionnaire, which was administered through the college electronic education portal. The data were analyzed using IBM SPSS version 21 software.

**RESULTS:** A total of 152 (50% response rate) students responded. Women constituted 69.1% of respondents. Most students (61.8%) had made their choice by themselves without family pressure. The most frequent reasons that affected this choice were “humanitarian reasons and a wish to provide help to others” as well as “childhood dream,” “positive community appraisal of doctors,” and “ready availability of work for physicians.” About three-quarters (73.6%) of the students made some inquiry about medical school before making their choice, and the people asked were most frequently a medical student or a doctor. Information provided by the consulted parties was regarded as satisfactory by 64.2% of the surveyed students, had a positive value in 47.2%, and affected their decision in 34.9%. The highest proportion (42.2%) of the study sample was thinking about studying medicine since primary school. In addition, students with personal preference made their choice at a significantly younger age.

**CONCLUSIONS:** Reasons to apply for medical schools in Iraq are similar to those in many countries. Most of the students who inquired about studying medicine had not contacted the medical school itself.

**KEYWORDS:** Medical school, Iraq

**RECEIVED:** May 13, 2017. **ACCEPTED:** July 19, 2017.

**PEER REVIEW:** Three peer reviewers contributed to the peer review report. Reviewers' reports totaled 553 words, excluding any confidential comments to the academic editor.

**TYPE:** Original Research

**FUNDING:** The author(s) received no financial support for the research, authorship, and/or publication of this article.

**DECLARATION OF CONFLICTING INTERESTS:** The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**CORRESPONDING AUTHOR:** Nesif Al-Hemiary, Section of Psychiatry, Department of Medicine, College of Medicine, University of Baghdad, Medical City, Bab Al-Muadham 10047, Baghdad, Iraq. Email: nesif2012@gmail.com

## Introduction

Choosing to study medicine and becoming a doctor is a very challenging and arduous process that requires a lot of dedication and commitment. Some students might choose to study medicine for the prestige so they can become a distinguished member of their community. Others might be financially motivated and choose medicine as it is recognized to be a profitable career. There are indicators that the reasons to study medicine have changed over time and it is felt that many students are choosing this career because they care about others and want to help people as part of their job.<sup>1</sup>

The decision to study medicine may be due to pressure from the student's family. In Western culture, this is thought to be less prevalent. In some third world countries, however, it is a very common motivator.<sup>2,3</sup>

In Iraq, medical colleges recruit students achieving the highest grades in their secondary schools' final exam, the only criterion for admission. There are no preadmission exams and students pay no education fees. There are 23 medical schools in Iraq, which admit annually around 2000 students. All of these

medical schools are public organizations that are ran and funded by the central government.<sup>4</sup>

College of Medicine University of Baghdad was founded in 1927 by the British physician “Sir Henry Sanderson.” It is one of the oldest medical schools in the Middle East region. It used to follow the traditional subject-based curriculum of Edinburgh Medical School. This type of curriculum diffused to all medical schools in Iraq thereafter. Recently, a small number of medical schools, including the currently studied one, adopted the integrated system-based curriculum in collaboration with Nottingham and Sheffield Universities (H. Al-Saffar, Personal communication, Head of Medical Education Council of Iraq, 2017).<sup>5</sup>

The ratio of doctors to Iraqi citizens is the lowest in the Middle East region. In 2012, the ratio was 7.5 doctors to 10 000 citizens, and it is predicted to be 8.7 to 10 000 citizens by 2018. This is much lower than the global ratio of 14:10 000 and the regional ratio for the Middle East of 18:10 000.<sup>4</sup>

Knowing the factors that influence the student's choice for studying medicine may help in student selection and support.



No published articles or dissertations were found about this subject relating to Iraq.

### Subjects and Methods

A cross-sectional study (survey) was conducted on freshmen (first-year students) admitted on the academic year 2015–2016 to Baghdad College of Medicine, University of Baghdad. A structured questionnaire was prepared and administered using the college's electronic education portal (Iraqi Network Learning Environment accessed at <http://inle.education>). Two weeks were given for voluntary participation in the feedback. The questionnaire included data about age, sex, and the mean of grades in the last year of secondary school. There were 9 questions in total that explored the student's reasons for choosing to study medicine.

The questionnaire was posted in Arabic language. Only the results were translated into English language. The first-year medical students in Iraq have some difficulty in understanding the English language, although their teaching is entirely in English. Help is always easily accessible in the online e-learning Web site in case of having difficulty in understanding a feedback question. A phone line is available, but the preferred method of correspondence is an online forum attached with the activity or e-mailing the module moderator directly.

The first question looked at the underlying motivations for choosing to study medicine. It has 2 parts: the first one is asking whether the application to the medical school was a personal preference or a family preference and the second part was to discover the motivations beyond personal preference. This part was a multiple response question with a total of 16 options that were extrapolated from a pilot study which was opened for voluntary student's participation on December 1, 2015. This pilot study allowed students to freely express their reasons in an open-ended question stating their own Arabic wording for the reason. A total of 180 students participated in the first round of feedback activity. Two of the authors reviewed all the polled answers and managed to prepare a list of 16 items, which were included in the second feedback version with a structured questionnaire form opened for student's participation on January 15, 2016.

The second feedback question was whether the student sought advice from significant others and the impact of this person's advice on the student's choice. The third and fourth questions were about the student's past experience visiting the medical college or the teaching hospital associated with it before making their decision. The fifth and sixth questions inquired whether the student had a doctor or other medical professional (dentist, vet, pharmacist, or nurse) among their relatives and whether this had influenced the student's choice. The seventh question was about the age when the student first thought about studying medicine. The eighth question was about having any worries or concerns about this choice, and if present, the reason for this. The last question was about feelings of regret for making this choice. The participation in the

survey was voluntary and all responses were made anonymous. The student was also given the freedom to skip answering any individual question in the survey as well.

The minimum required sample size was calculated to be 158, which would estimate the proportion of the students selecting a specific reason with a 95% confidence interval of  $\pm 0.1$  error at the most conservative (the one associated with highest possible error) estimate of a proportion of 0.5.

Ethical consideration: the participation in the feedback activity was voluntary and totally anonymous. This fact was clearly stated to the students. Necessary ethical clearance from the deanery to use the feedback results was also obtained.

The data were analyzed using IBM SPSS version 21 software. Frequency distribution for selected variables was performed, and a Mann-Whitney test (nonparametric) was used to assess the statistical significance of difference in median of an ordinal level variable (age group) between 2 groups.

### Results

The results were based on the analysis of 152 first-year students who voluntarily replied to the online feedback questionnaire. The response rate was 50%. Women constituted 69.1% of respondents. The female to male ratio in the whole first-year students was 2.4.

As shown in Table 1, the most frequently reported reason for choosing medical college (61.8%) is personal preference. About one-third (38.2%) of the students pointed out to their parent's role in making the choice. Humanitarian reasons and considering medicine as a way of providing help to others were reported by two-thirds of the students. About a third reported the following 3 reasons: "Childhood dream," "Positive community appraisal for physicians," and "Ready availability of work for physicians." Having a very high secondary school graduation mark was reported as a reason by a quarter of the students (28.3%). Less than a fifth of respondents reported the following reasons: "Studying medicine is appealing," "Profiting profession," "Personal experience with disease or another person's disease," and "Trying to change the perceived negative image of physicians in community." The remaining 6 reasons were reported by less than 10% of the students: "Having physicians as relatives in the family," "Religious causes (exploring the glories of God's creation)," "Preserving my health and that of my family," "My country is in bad need for the services of physicians," "Positive physicians image reflected by media," and "Challenging carrier providing an opportunity to solve mysteries."

As shown in Table 2, about three-quarters (73.6%) of the students made some inquiry about medical school before making their choice. A medical student and physician were the consulted persons in 53.8% and 43.4% of cases, respectively. Parents and family were also among the most frequently consulted people (49.1%). The information provided by the consulted party was described as being enough in about two-thirds of cases (64.2%), having a positive value in 47.2% of cases and

**Table 1.** Frequency distribution of the study sample by selected reasons for choosing medical college.

REPORTED REASON FOR CHOOSING MEDICAL COLLEGE (N = 152)	NO. (%)
Personal preference	94 (61.8)
My parents vision and choice	69 (45.4)
A way of providing help to others	65 (42.8)
Humanitarian profession	62 (40.8)
Childhood dream	55 (36.2)
Positive community appraisal for physicians	49 (32.2)
Ready availability of work for physicians	47 (30.9)
Having a very high secondary school graduation mark	43 (28.3)
Studying medicine is appealing	29 (19.1)
Profiting profession	20 (13.2)
Personal experience with disease or another person's disease	19 (12.5)
Trying to change the perceived negative image of physicians in community	19 (12.5)
Having physicians as relatives in the family	14 (9.2)
Religious causes (exploring the glories of God's creation)	14 (9.2)
Preserving my health and that of my family	14 (9.2)
My country badly needs the services of physicians	13 (8.6)
Positive physicians image reflected by media	7 (4.6)
Challenging carrier providing an opportunity to solve mysteries	2 (1.3)

affecting the personal decision in 34.9% of those students seeking advice before making their choice.

The highest proportions of surveyed students were thinking about studying medicine since they were in primary school (42.2%). Around a third (31%) made their mind during their study in secondary school (Table 3).

As shown in Table 4, students with a reported personal preference for studying medicine as a reason for their choice to study medicine would consider this choice at a significantly younger age compared with those with no personal preference.

## Discussion

Most of the students (61.8%) had made their choice by themselves without interference from their families, a finding that had been recorded in many studies around the world.<sup>6-8</sup> Despite that, there was a considerable proportion of participants (38%) whose choice was influenced by their families. This percentage was higher than some nearby countries such as Saudi Arabia (11.6%)<sup>6</sup> but is much lower than that observed in Nigeria (84%)<sup>2</sup> and Pakistan (58%).<sup>3</sup> The family pressure might reflect

**Table 2.** Frequency distribution of the study sample by selected characteristics.

	NO. (%)
<b>Inquired about medical college before applying for study</b>	
No	38 (26.4)
Yes	106 (73.6)
Total	144 (100.0)
<b>The person providing info about medical college</b>	
A medical student	57 (53.8)
Parents and family	52 (49.1)
A physician	46 (43.4)
Friends	23 (21.7)
A worker in health profession (dentist, pharmacist, nurse, etc)	12 (11.3)
A student in a health-related college (dentistry, pharmacology, nursing, etc)	5 (4.7)
Total inquired about medical college before applying for study	106 (100.0)
<b>Info description</b>	
The info was enough	68 (64.2)
The info had positive value	50 (47.2)
The info affected personal decision	37 (34.9)
Total inquired about medical college before applying for study	106 (100.0)

**Table 3.** Frequency distribution of study sample by age (years) when first thought about studying medicine.

	NO. (%)
<b>Age (y) when first thought about studying medicine</b>	
Primary school age (<13)	66 (45.5)
Intermediate school age (13-15)	34 (23.4)
Secondary school age (16-18)	45 (31.0)
Total	145 (100.0)

the good status of medical profession in Iraqi community. The family's wishes might contradict the student's wish and force them to study something he or she does not like and job dissatisfaction will be an unavoidable consequence.

Two-fifths of the students made their choice because they think that this career can be a way to help others and can be a humanitarian profession. This finding was similar to many other studies worldwide.<sup>6-8</sup>

One of the top 5 reasons was the childhood dream of being a doctor (36%). This finding is interesting because we found that 45% of the students had made their decision very early in

**Table 4.** The age when the student first thought about studying medicine by reported personal preference as a reason for choosing to study medicine.

	PERSONAL PREFERENCE	
	NEGATIVE	POSITIVE
	NO. (%)	NO. (%)
<b>Age (y) when first thought about studying medicine</b>		
Primary school age (<13)	16 (29.6)	50 (54.9)
Intermediate school age (13–15)	10 (18.5)	24 (26.4)
Secondary school age (16–18)	28 (51.9)	17 (18.7)
Total	54 (100.0)	91 (100.0)
Median age	Secondary school age (16–18)	Primary school age (<13)

*P* (Mann-Whitney) <0.001.

life (before the age of 13 years). This finding was also in line with some international studies.<sup>8</sup> It might reflect a positive image for the doctor retained by Iraqi community that makes it one of the childhood dreams. This image might result from the media or the family's positive appraisal.

A positive community appraisal was among one of the main reasons for studying medicine (32%). A similar result was found by a study in India.<sup>7</sup> Availability of work for physicians was the reason in 30% of choices. This is higher than what is found in Saudi Arabia,<sup>6</sup> and this could be explained by the higher unemployment rates among the youth in Iraq (18%).<sup>9</sup>

Having high grades in the secondary school was the reason for 28% of the students. There is a tradition in Iraq whereby students with highest grades apply for medical colleges followed by engineering schools.<sup>10</sup>

Being a profitable career was the reason reported by 13% of the students. A finding which is similar to a study in Saudi Arabia<sup>6</sup> but lower than Puljak et al<sup>11</sup> and Hypollo et al<sup>12</sup> studies. Other less common reasons were based on spiritual or personal experiences or aspirations.

Most of the students (73.6%) had inquired about medical school before making their choice. They had inquired about it mostly from a medical student (53.8%), parent (49.1%), physician (43.4%), friend (21.7%), and health worker (11.3%). The information was satisfactory in less than two-thirds of the students and had affected the decision of only one-third of these students. These data show that there was no organization or body available to be consulted about the subject and so the student approached different people to explore the possibilities associated with their choice. This stresses the importance of establishing a program of advocacy for prospective medical students to help answer their questions about how to apply for medical schools and what to expect from the medical career.

This study had revealed that two-thirds of the students started to think about studying medicine before the age of

15 years. Thinking about studying medicine had a more positive effect on their decision when it starts earlier in life. This is similar to a finding of a study in Ireland where high percent of medical students made their choice among primary education level.<sup>13</sup>

We were aware that in conducting this study, selection bias might have affected the results, as conducting the survey was optional. The response rate of the survey was 50% and it may be that the half of the student body who did not respond may potentially be less altruistically motivated students. Their reasons for applying to medical school may have been due to parental pressure or financial gain and hence they were less inclined to fill in the survey. However, this is, of course, speculation and it may be useful in further study to have a mandatory survey across the student population.

## Conclusions

The reasons for application to medical school in Iraq are not much different from those in other parts of the world, especially third world countries. There might be greater impact of the family on the student's decision. Although most of the students had made inquiries about studying medicine, they usually asked people who has some experience, but they did not contact the medical school itself. This finding raises the need for establishing a department in medical schools to provide students with necessary information and answer their questions. A future study on high school students may help to discover the reasons and needs for making a decision to apply for medical school

## Author Contributions

NA-H: Study design, editing the study tool, writing the manuscript, project supervision and editing. ASA-N: Study tool development and management, statistical analysis, writing results chapter and methods, editing. HA-S: Study design, editing. IR: Review and editing.

## REFERENCES

1. Anonymous. The reasons our future doctors are choosing medicine have changed. *Education*, June 8, 2012. [www.kevinmd.com](http://www.kevinmd.com). Accessed December 14, 2015.
2. Odusanva OO, Alakija W, Akesode FA. Socio demographic profile and career aspirations of medical students in a new medical school. *Niger Postgrad Med J*. 2000;7:112–115.
3. Saad SM, Fatima SS, Faruqi AA. Students' views regarding selecting medicine as a profession. *J Pak Med Assoc*. 2011;61:832–836.
4. Al-Hasnawi S. Physicians' shortage in Iraq: impact and proposed solutions. *Iraq J Comm Med*. 2013;3:214–218.
5. Al-Shamsi M. Medical education in Iraq: issues and challenges. *Int J Med Educ*. 2017;8:88–90.
6. Ayuob NN, Bahumdain SZ, AL-Najei ZA, Khobrani FM, El Deek BS. Becoming a doctor, what is behind this decision? A comparative study between governmental and private medical school in Saudi Arabia. *J Contemp Med Edu*. 2015;3:155–160.
7. Kuriakose S, Revankar SKB, Viveka S, Shetty B, Rao CP. Why become a doctor? Evaluation of motivational factors for selecting medical profession as career. *J Evid Med Healthcare*. 2015;2:206–211.
8. Gašiorowski J, Rudowicz E, Safranow K. Motivation towards medical career choice and future career plans of Polish medical students. *Adv Health Sci Educ*. 2015;20:709–725.
9. About Iraq. <http://www.iq.undp.org/content/iraq/en/home/countryinfo.html>. Accessed September 24, 2016.
10. Student's guide for applying to Iraqi Universities. <http://moheer.gov.iq>. Accessed October 10, 2016.
11. Puljak L, Brnjas Kraljevic J, Barac Latas V, Sapunar D. Demographics and motives of medical school applicants in Croatia. *Med Teach*. 2007;29:227–234.
12. Hypollo H, Kumpusalo E, Neittaanmaki L, et al. Becoming a doctor—was it the wrong career choice? *Soc Sci Med*. 1998;47:1383–1387.
13. Sulong S, McGrath D, Finucane P, Horgan M, O'Flynn S, O'Tuathaigh C. Studying medicine—a cross-sectional questionnaire-based analysis of the motivational factors which influence graduate and undergraduate entrants in Ireland. *J Roy Soc Med Open*. 2014;5:1–8.