



Choosing medical specialty: How Arab interns think?

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Abstract

Background: *Selecting medical specialty can be challenging for the freshly graduated doctors. This versatile decision is influenced by variant personal and vocational factors. No such studies have been undertaken in Arab medical communities. This paper aims to explore and compare career preferences and motivations of two groups of medical interns in Iraq and Jordan*

Methods: *A cross-sectional study was conducted in 2012-2013 on group of medical interns working at Medical City University Hospital and The Jordanian University Hospital-Amman. Data were analyzed through a descriptive tabulation. The forms of 127 respondents who decided their career choice were analyzed to explore the factors influencing their choices and the effect of gender.*

Results: *Male and female interns in Iraq and Jordan favored the major medical and surgical specialties. Males and females in both countries were motivated by intellectual contents, clinical interaction and academic, technical facilities more than financial profit and to lesser workload.*

Conclusion: *The study finding may be a reflection of shared cultural background and personal characteristics of both groups; the findings may also be useful to the health authorities in planning future expansions in certain fields.*

Keywords: *medical specialty, Arab interns.*

Introduction

Medical graduates go through clinical training in different medical specialties for a year or two as interns in general hospitals to acquire the basic professional skills under the supervision of their senior mentors, after which they are expected to decide for a certain specialty or remain in arena of general practice as their future career ^(1,2). This

decision is affected by many factors such as age, gender, personality type, family commitments, positive mentorship, on-call work load, anticipated income, social prestige and may be the country circumstances and health care system ^(1,2,3,4). Specialty choice by medical interns has a significant implication in planning the future workforce for any prosperous health care services

by shrinking the gap between public needs and doctors aspirations ^(5,6). Despite the evolution of health care system in Arab countries, related data are scarce and the few available literature summarized preferences of undergraduates students ^(6,7,8), and no similar study from Iraq or Jordan . Iraqi medical education is a six year program free of charge. The last three years focus on clinical aspects of medical care and provides hospital based clinical training in medicine, surgery, pediatric, Gyni/Obstetric and related subspecialties. The newly graduates are assigned as paid interns in state general hospitals by the Ministry of Health (MoH) for 1-2 years according to their graduation ranks and job vacancy , however this process is also influenced by personal and environmental factors and has been greatly affected by post war conflicts for the last three decades ^(9,10). Medical interns are directly involved in clinical training and experience pros-and cones of each medical specialty making their decision sounder and more appropriate to their age and personal circumstances. Since late thirties, Iraqi health authorities adopted the policy of sending medical candidates mainly to the UK for continuing their education and training in chosen medical specialty following the mounting public needs for qualified and experienced doctors ,however this policy has been stumbled by wars and economical sanction imposed on Iraq for 13 years in addition to political turmoil's and acts of violence, thus a free of charge national postgraduate training program (The Iraqi Council for Medical Specializations) was initiated at 1986 by the Ministry of Higher Education (MoHE) to provide the needy community with locally trained specialists ⁽¹¹⁾. On the other hand, in Jordan ,a neighboring Arab country, medical education has similar curriculum with 256 credit hours ,each costing an average of \$100 ⁽⁸⁾. The newly graduated doctors also enroll in similar foundation 1-2 years in general hospitals before deciding on a certain medical specialty or a general practice, Jordan also has his national post graduate training program (The Jordan Council for Medical

Specializations) with smaller number for available medical specialties and candidates bearing in mind the difference in size and population in both countries. Although both countries share similar demographic characteristics and evolutionary health care system ,Iraqi doctors endure violent and insecure atmosphere which may affect their career attitudes . We sought to the inspect career preferences of two matching groups of junior doctors in Iraq & Jordan and examine the possible motivating factors for their choices aiming to throw light on this crucial yet un approached issue ^(8,10).

Method

Setting

Medical City University Hospital located in the capital city -Baghdad, Iraq and Jordan University Hospital located in the capital city- Amman, Jordan were chosen to conduct this cross-sectional study .For the Iraq group, the study protocol and the questionnaire forms were approved by the research & ethical committee at Iraqi Ministry of Health, and the research & ethical committee at the Jordan University. We designed a questionnaire form in accordance with international tool used in previous survey ^(12,13). It included 2pages , the first page (1) included : age, sex and marital status as selected demographic data and list of 20 different medical specialties according to availability in both countries . This list has been agreed upon by the investigators and hospital administrations .The second page (2) included 15 suggested reasons for selecting particular specialty .The effect of selected reasons is measured by scaled responses as no effect (-), little effect (+) and significant effect (++).

Subjects

During November-December 2012, 107 consenting male and female interns working in Medical City University Hospital were invited to complete questionnaire forms at their convenience within the study duration. After explaining the study objectives, the anonymous forms were

distributed by two senior residents under supervision of the primary investigator; there was no need to translate the questionnaire form to Arabic language since all participants comprehend English language, refusal to participate in the survey was the reason to approach the next doctor, it was not necessary to obtain written consent since no patients information is released. In February-March 2013, 100 consenting male and female interns working in Jordan University Hospital were invited by the third author to complete the questionnaire forms following the same protocol. Of the total study forms, only 127 respondents (69 from Iraq and 58 from Jordan) made up their decisions regarding future specialty, the decided specialties were analyzed according to suggested reasons for selection. Data were statistically analyzed using the statistical package for Social Sciences (SPSS version 11.5).

Results

The mean age for the Iraqi and Jordanian respondents was (26.4) years and (24.5) years respectively. In the Iraqi group, female interns consisted (51.4%) and the male interns (48.6%), while in the Jordanian group, female interns consisted (34%), and the male interns (66%). The larger portion of the participants were unmarried in both the Iraqi and Jordanian groups (66.1% and 83%, respectively). Both groups had matching numbers of doctors in the family of 50% and 51% in the same order.

Specialty choices

Respondents, after making their selection of the specialty available, were asked to justify their choice by selecting one of the 15 suggested reasons for deciding on a particular specialty. The five most desired specialties by the Iraqi group have been obstetrics/ gynecology (Ob/ Gyn), general surgery, orthopedics, radiology and pediatrics, while the Jordan group preferred orthopedics, otorhinolaryngology (ENT), internal medicine, general surgery and urology (Table 1).

Effect of gender on specialty choices

The most favored specialties by the Iraqi male interns were pediatrics, general surgery, urology and internal medicine, while their Jordanian counterparts chose orthopedics, internal medicine, Urology, general surgery and ENT surgery, all in the order of preference. Female interns in the Iraqi group favored Ob/Gyn, radiology, general surgery, internal medicine, and ophthalmology, while their Jordanian counterparts chose ENT, dermatology, pediatrics, general surgery, and radiology.

Both groups frequently identified "intellectual content of the specialty" and "more involvement of modern technology". These were followed by the "social prestige of a specialty" and "better future income". The least cited factors were "less competition in the specialty field" and "less legal responsibility in the specialty" (Table 3). Factors of top priority to female interns were "flexible control of working hours" ($P < 0.005$) and "close interaction with patients" ($P < 0.005$). The male counterparts were influenced mostly by the factors of "intellectual content of the specialty" and "involvement in modern technology" ($P < 0.007$). In addition, "specialty-related social prestige" was the third most important factor for male respondents from the Iraqi group, whereas in the Jordanian group, the "better future income" was perceived by female and male interns. Simultaneously, "better future income" was perceived as the third important factor to male respondents from Jordan group with a much lesser ranks to their female counterparts in both groups.

Table 1. Distribution of specialty choices of the interns among Iraqi and Jordan groups by ranking

Choice of specialty by Iraq group	Rank	Choice of specialty by Jordan group	Rank
Obs/Gyn	1	Obs/Gyn	6
General surgery	2	General surgery	4
Orthopedics	3	Orthopedics	1
Radiology	4	Radiology	16
Pediatrics	5	Pediatrics	12
Internal medicine	6	Internal medicine	3
Urology	7	Urology	5
Anesthesiology	8	Anesthesiology	14
Ophthalmology	9	Ophthalmology	10
Dermatology	10	Dermatology	7
Plastic surgery	11	Plastic surgery	9
Basic sciences	12	Basic sciences	13
ENT surgery	13	ENT surgery	2
Neurology	14	Neurology	11
Cardiac surgery	15	Cardiac surgery	15
Neurosurgery	16	Neurosurgery	16

Table 2 .Distribution of specialty choices of interns in Iraq and Jordan by gender and ranking

Table 3. Factors affecting specialty choices among interns in Baghdad and Jordan University Hospitals

Factors affecting specialty choices	Iraq group %	Rank	Jordan group %	Rank
1-intellectual content of the specialty	57.3	1	58.6	1
2-involvement in modern technology	48.5	2	55.2	2
3-speciality related social prestige	44.1	3	34.5	6
4-close interaction with patients	41.1	4	36.2	5
5-academic and research opportunities	35.2	5	31	8
6-flexible control of working hours	32.3	6	25.9	10
7-opportunity for future subspecialty	30.8	7	37.9	4
8-opportunity for training abroad	26.4	8	29.3	9
9-career counseling(advice from others doctors)	25	9	20.7	12
10-better future income	22.5	10	43.1	3
11-lower risk of transmitted diseases	22	11	15.5	13
12-shorter course of training	22.5	12	34.5	7
13-less effort needed to complete the specialty	17.6	13	24.1	11
14-less legal responsibility in specialty	14.7	14	10.3	15
15-less competition in the specialty	11.7	15	12.1	14

Table 4. Factors affecting specialty choices among interns in Baghdad and Jordan University Hospitals according to gender

Factors affecting specialty choices	% Females Iraq group	Rank	% Males Iraq group	Rank	% Females Jordan group	Rank	% Males Jordan group	Rank
intellectual content of the specialty	61.1	1	62.5	1	42.9	3	63.6	1
Involvement in modern technology	38.8	5	62	2	35.7	7	61.4	2
Specialty related social prestige	33.3	6	53.1	3	28.6	8	34.1	6
Close interaction with patients	60.0	2	21.8	9	50.0	2	31.8	8
Academic and research opportunities	47.2	4	34.3	5	7.1	14	38.6	5
Flexible control of working hours	50.0	3	21.8	10	50.0	1	18.2	10
Opportunity for future subspecialty	27.7	8	34.3	6	14.3	10	45.5	4
Opportunity for training abroad	30.5	7	31.2	8	14.3	11	34.1	7
Career counseling (advice from other doctors)	25.0	10	37.5	4	35.7	6	15.9	13
Better future income	13.0	13	34.3	7	14.3	12	52.3	3
Lower risk of transmitted diseases	27.7	9	15.6	12	7.1	15	18.2	11

Shorter course for training	8.3	15	21.8	11	42.9	4	31.8	9
Less effort needed to complete the specialty	22.2	11	12.5	13	42.9	5	18.2	12
Less legal responsibility in the specialty	16.6	12	9.3	15	14.3	13	9.1	14
Less competition in the spatiality	11.1	14	12.5	14	28.6	9	6.8	15

Discussion

It has been evidenced by much literature that organizing a thoughtful plan for medical specialty choice will help avoiding miss-match of health care services. Nearly half of the Iraqi interns were females as compared to one-third only in the Jordanian group. All the female interns refrained from difficult surgical subspecialty; yet, they competed with their male counterparts in choosing related major specialty of OB/GYN, general surgery, internal medicine, and pediatrics^(14,15,16). There were no clearly preferred choices in basic medical sciences as was reported previously in spite of the differences in life quality and health policies among various countries. Moreover, the issue of "intellectual content", "close interaction with the patient", "flexible control of working hours" ranked similarly by both female groups in making their career choices, which agrees with previous reports from various communities^(16,17,18). However, the least considered incentive were those of "better future income, " and, "less legal responsibility" which was expected since it reflects a relative similarity of the social characterization in both groups on one hand, and, on the other hand, it may reflect the legal liabilities in these countries^(18,19,20,21,22). The reasons for differences in the issues of "shorter course and fewer efforts" among the two groups may be related to the economical differences in two countries. Nevertheless, male interns in both groups took the challenges of "intellectual content, "involvement in modern technology "and "more academic research" in general as desirable issues reflect their competitive nature^(22,23). The only difference was when Jordanian males indicated "better future income" as more desirable than the Iraqi counterparts. The reason for this difference may be the better financial reward of the private practice in Iraq.

Conclusion

In consistency with many international studies , the major specialties were favored by young physicians in Iraq & Jordan , with avoidance of surgical subspecialties manifested by female doctors. Intellectual content was the main factor directing their aspiration, although better income was commonly considered, but was not outstanding in the result.

Competing Interest

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