



Factors Affecting Young Medical Students' Choice for Future Medical Specialty

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Abstract

Background: Young doctors' choice of medical specialty is essential to maintaining a sufficient health workforce and developing a sustainable healthcare system.

Aim: The aim of this article is to explore the factors taken into consideration by young medical students in choosing their future specialty.

Materials and Methods: A cross-sectional study was conducted, for the period from 1st of September to the 31st of December /2025. The study sample were (176) medical students, (47), males and (129) females, selected randomly from the 1st, 2nd, 3rd, 4th, 5th and 6th grades of Diyala Medical College. A questionnaire was designed by the researchers included personal, educational level' variables in regard to the medical students in addition to socio-demographic variables related to the students' family. The students were asked to complete the questionnaire following the explanation of the subject and objectives of the research with each grade.

Results: Reveled that highest preference rate among males' undergraduates for Surgery (31.3%), followed by internal Medicine and Pediatrics (14.8% & 10.8%) respectively. While for females the choice for Obstetrics & Gynecology following surgery choice. There is choice' variation according to the grade. The results also revealed a relation between personal interest, social and economic factors with the choice of medical specialty.

Conclusion & Recommendations: The overall two preferred specialties were general surgery (27%), internal medicine, ophthalmology and pediatrics (8.3%). While the choice among female it was surgery, gyne and obstetrics. Deficient choice for Family and Community Medicine, this is against the term of "Tomorrow Doctor" in its emphasis on Primary health care, Family doctors and Public health. The study recommends Career counseling should be offered to students about each specialty's challenges, /opportunities with an ultimate goal to match the country-specific demand and supply of physicians. Another points focusing on spreading the importance of the principles of primary health care, family doctor and public health to be choices for future specialty, as these are the pillars of tomorrow's doctor.

Keywords: Medical students; Undergraduates; Medical Specialties; Diyala Medical College.

1. Introduction

After graduating from medical school, medical students have to decide a career path to pursue for further specialization (1). The future career specialties chosen by medical students and the factors involved in making these choices are of great significance for balanced distribution of doctors in the different specialties and for planning of the workforce of healthcare services (1, 2). Clinical specialties were statistically rated higher than basic medical sciences specialties

(3). Therefore, there is strong evidence that students decide their future medical career during or even before medical school [4, 5]. Their choice, however, can change during the course of medical school [6-7]. Many factors influence the medical students' choice of future career [7-8]. Medical students' choices have evolved throughout time, with a growing interest in quality of life or in technological excellence (9, 10). Generally, these factors are classified into two groups; intrinsic factors, for example those related to personal attributes, interest and preferences, and extrinsic factors like those related to work environment social or economic effect (11). Although studies conducted around the world have attempted to identify the factors that affect medical students' choice of specialty, data is scarce on the real and deep factors that influence the choice of specialty (12). The impact of these factors varies from setting to setting. In United Kingdom, other peoples' perception of the job and fewer practice hours were considered the most important factors by students, whereas in Turkey, financials and prestige were more important [13, 14]. Gender is another important factor that influences career choice (12, 15, 16). Specialty choice for their future medical practice (12, 15, 16). On the other hand, students in Jordan considered the intellectual content of the specialty and the individual's competencies most influential while a personal interest in the specialty was the deriving factor for students in Kingdom of Saudi Arabia, UAE, Lebanon, Kuwait, Australia, Hong Kong, Rawanda Korea and India, (2,3, 5, 6, 9, 10, 16, 17 & 23). This study aims to determine the factors that influence medical student' choice of future medical specialty.

2. Persons & Method

Cross sectional study was conducted for the period from 1st September to the 31st of December. 2025. The study sample were medical student from Diyala Medical College. Questionnaire was designed by researcher sent to (176) medical student to collect data for the current study. The questionnaire covered demographic characteristics, specialty preferences, and factors that influenced career preferences. Demographic characteristics included the student's age, gender, grade, and residency. Students were asked to select the most preferred career preference. Specialties listed were surgery, obstetrics & gynecology, pediatrics, internal medicine, ophthalmology, dermatology, radiology, otolaryngology (ENT), and other specialties. The questionnaire influences on specialty preferences were indicated in order to assess the factors to which students attach importance when choosing their first specialty preferences. Responses to the influences were categorized to interesting subject, intellectual challenge, good income, prestige and good social life, advice from faculty practicing physician, parents or friends.

2.1 Inclusion and Exclusion Criteria

The study had to focus on medical students after their selection year and before their graduation, to ask about the detail the choice of specialty of each student, and look for factors influencing their choice. Juniors and Specialist's physicians excluded from this study.

3. Result

Table 1: Frequency of specialization preference between males and females Medical students

Medical Specialty	Males No. (%)	Females No. (%)	Total No. (%)
-Pediatric	3 (15,78%)	16 (84,21%)	19 11%
-Internal medicine	9 (34,61%)	17 (65,38%)	26 15%
Surgery	19 (34,54%)	36 (65,45%)	55 31%
Radiology	1 (9,09%)	10 (90,90%)	11 6%
Gynecology & Obstetrics	0 (0%)	18 (100%)	18 10%
Dermatology	5 (27,77%)	13 (72,22%)	18 10%
-ENT	2 (10%)	0 (0%)	2 1%
Ophthalmology	4 (33,33%)	8 (66,66%)	12 7%
- Others	4 (26,66%)	11 (73,33%)	15 9%

Table 2: Frequency distribution of medical specialists' preference among medical students according to the grade

Medical Specialty	1 st grade No. (%)	2 nd grade No. (%)	3 rd grade No. (%)	4 th grade No. (%)	5 th grade No. (%)	6 th grade No. (%)
1-pediatric	5,26%	21,05%	21,05%	31,57%	10,52%	(10,52%
2-internal medicin	0%	86,92%	23,07%	3,84%	19,23%	26,92%
3-surgery	23,72%	21,81%	14,54%	9,09%	10,95	10,9%

4-Radiology	9,09%	9,09%	18,18%	18,18%	36,36%	0%
5-Gyncoylogy	27,77%	0%	0%	22,22%	16,66%	33,33%
6-Dermatology	11,11%	16,66%	22,22%	22,22%	16,66%	11,11%
7-ENT	0%	0%	0%	50%	50%	0%
8-opthalmology	25%	16,66%	16,66%	25%	8,33%	8,33%
9- other	13,33	0%	20%	13,33%	20%	33,3%

Table 3: Frequency distribution of the factors affecting choice of medical specialty among Medical students according to gender

Factors affecting choice	Males No. (%)	Females No. (%)	Total No. (%)
-Interesting subject & personal interest	33 (21,29%)	122 (78,70%)	155 (88%)
-Good in come, & work-life balance	4 (80%)	1 (20%)	5 (3%)
-Prestige and social life requirements	14 (87,5%)	2 (12,5%)	16 (9%)
Total	51 (29 %)	125 (71%)	176 (100%)

4. Discussions

Career preferences made by medical students and factors influencing these preferences are of importance to medical workforce planners especially in times of over-supply or under-supply of doctors. Surgery, internal medicine, pediatrics, and obstetrics and gynecology were the most specialty preferred preferences among medical students at Diyala medical college. Factors influencing students' choices were studied depending on each discipline. The most frequent factor was their real interest in that specialty. Prestige and social life requirements second affecting factor followed by income factor and work-life balance. Clinical specialties more than basic medical sciences specialties as specialty preferences. Personal interest and an anticipated higher income were other influential factors contributing to specialty preference. (1) Saudi medical students and interns at the University of Dammam were influenced mostly by lifestyle when they considered their future specialty. Internal medicine, family medicine, general surgery, pediatrics, and emergency medicine were the preferred specialties. (3, 4).

Table (1) show the variation of specialties among student about 3(15,78%) of male chose pediatric but in female about 16(84,21%). Some of student chose internal medicine about 9(34,61%) of male and in female about 17(65,38%). While about 19(34,54%) of male and 36(65,45%) of female chose the surgery. But some student chose radiology about 1(9,09%) of male and 10(90,90%) of female. About (0%) of male and 18(100) of female chose gynecology & Obestetrics. While some student about 5(27,77%) of male and 13(72,22%) of female chose the dermatology. About 2(100%) of male and 0(0%) of female chose ENT. While some student about 4(33,33%) of male and 8(66,66%) of female chose Ophthalmology. Furthermore, some student chose other specialties about 4(26,66%) of male and 11(73,33%) of female.

Not only thoughtful individual factors such as interest for the discipline, work-life balance or role modeling can influence the specialization choice, but also sociobiological aspects. For example, gender can modify factors associated with the choice of several medical specialties: in the US, men-to-female ratio was 4.9:1 in obstetrics and gynecology [6], 24.6% of last-year male medical students would chose internal medicine compared with 11.8% female in Rwanda [7], or in Korea, where 2.9% of male would be interested in pediatrics for 10.7% of woman [8]. Men are more interested by technical challenges, salary, career and prestige, women by time related aspects and societal orientation [9], [10], [11]. Gender influences an important variable, A shift in the gender ratio in medical students have occurred at the end of the 20th century [12] from a male to a female over-representation, leading to difficulties for policymakers to adapt incentives, learning programs, schemes for managing physicians' flows and the specialization's issue. If many papers have investigated the gender imbalance among physicians [6], [7], [8],

Table (2) Show frequency of specialization preference among grade of students. First grade about 1(5,26%), Second grade about 4(21,05%), Third grade about 4(21,05%), Fourth grade about 6(%), Fifth grade about 2(10,52%), And

sixth stage about 2(10,52%) chose pediatric. Other chose Internal medicine about 0(0%) of first grade, 7(86,92%) of second grade, 6(23,07%) of third grade, 1(3,84%) of fourth grade, 5(19,23%) of fifth grade, And 7(26,92%) of sixth grade. While about 18 (23,72%) of first grade, 12(21,81%) of second grade, 8(14,54%) of third grade, 5(9,09%) of fourth grade, 6(10,95%) of fifth grade, and 6(10,95%) of sixth grade chose the surgery. Some student in first grade about 1(9,09%), 1(9,09%) in second grade, 2(18,18%) in third stage, 2(18,18%) in fourth grade, 4(36,36%) in fifth grade, And 0(0%) in sixth grade chose the radiology. The current and projected nationwide shortage of primary care physicians necessitates studying factors that could influence students' specialty choice for their future medical practice (11,12).

First grade about 5(27,77%), second grade about 0(0%), third grade about 0(0%), fourth grade about 4(22,22%), fifth grade about 3(16,66%), And sixth grade about 6(33,33%) chose the gynecology. About 2(11,11%) of first grade, 3(16,66%) of second grade, 4(22,22%) of third grade, 4(22,22%) of fourth grade, 3(16,66%) of fifth grade, and 2(11,11%) of sixth grade chose the dermatology. While some student of first grade about 0(0%), 0(0%) of second grade, 0(0%) of third grade, 1(50%) of fourth grade, 1(50%) of fifth grade, and 0(0%) of sixth grade chose ENT. About 3(25%) of first grade, 2(16,66%) of second grade, 2(16,66%) of third grade, 3(25%) of fourth grade, 1(8,33%) of fifth grade, and 1(8,33%) of sixth grade chose Ophthalmology. About 2(13,3%) of first grade, 0(0%) of second grade, 3(20%) of third grade, 2(13,33%) of fourth grade, 3(20%) of fifth grade, and 5(33,3%) of sixth grade chose other. Table(3) show frequency of factor affecting the choice of male and female students. About 33(21,29%) of male, 122(78,70%) of female affecting by interesting subject. While some student about 4(80%) of male and 1(20%) of female affecting by good income. Other about 14(87,5%) of male and 2(12,5%) of female affecting by prestige and good life social life.

5. Conclusions & Recommendations

The overall two preferred specialties were general surgery (27%), internal medicine and pediatrics (8.3%) among males. While it was for surgery, gynecology and dermatology for females. Deficient choice for Family and Community Medicine, this is against the term of "Tomorrow Doctor" in its emphasis on Primary health care, Family doctors and public health. The study recommends Career counseling should be offered to students about each specialty's challenges, /opportunities with an ultimate goal to match the country-specific demand and supply of physicians. Knowledge about doctors' preferences regarding their medical specialty could support the development of targeted policies to increase the attractiveness of deficit specialties. The study recommends Focusing on spreading the importance of the principles of primary health care, family doctor and public health to be choices for future specialty, as these are the pillars of tomorrow's doctor.

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