

MEDICAL SPECIALTY CONSIDERATIONS BY MEDICAL STUDENTS IN THEIR EARLIER CLINICAL EXPERIENCE: THE NEED FOR CAREER COUNSELING

Narmeen Hashim¹, Waqar Ali², Farhad Ali³, Naeem Ullah⁴, Saadullah Afridi⁵

¹Department of Medical Research, Rehman Medical College, Peshawar.

²Department of Community Medicine, Rehman Medical College, Peshawar.

³Research Cell, Khyber College of Dentistry, Peshawar.

⁴Department of Community Medicine, Saidu Medical College, Swat.

⁵Department of Public Health, SIHS, Sarhad University, Peshawar.

Abstract

Objective: To determine preferences for medical career, the factors influencing these preferences and need for career counseling among medical students.

Materials & Methods: A descriptive study was conducted on medical students of Rehman Medical College, Peshawar, Pakistan. Duration of the study was from August 2017 to November 2017. MBBS students from fourth and final years were included in the study. Through random sampling, research was conducted on 125 students of RMC. The analysis was done using SPSS version 20.

Results: A total of 76 students of 4th year and 49 students of final year MBBS students participated in the study. Most (49.6%) of them were 23 years old. Among 30 different medical specialties, Cardiology (25%) and Pediatrics (24.2%) were mostly selected specialties. According to chi-square test, there was a significant difference of 0.003 among advice received by 4th year medical students.

Conclusion: Medical students considered top 3 specialties to be Cardiology, pediatrics, general surgery. Very few students received advice from proper trainees/professionals, which calls for career counseling.

Key Words: Career choice, counseling, medical, specialties, students.

Introduction

Medical profession is a technical and sensitive occupation as it involves life and death. It requires experienced and skillful doctors therefore it is necessary that medical students are guided in the right direction and choose the specialty of their interest and capacity. The right choice of profession is necessary not only for medical students but for the health care system as well.^{1,2,3} The quality of health can be improved with the guidance of right practitioner who has interest in that specific specialty.⁴ Nowadays choosing an appropriate career is a challenge for medical students.⁵ Career advice can save the students from pain of choosing the right path for them.⁶ Factors like personal interest, media, friends, family, teachers, web-based knowledge and involvement to job, cultural and social values and experience during clinical rotations play role in influencing the type of specialty students choose.^{4,6,7} Medical students are more prone to their career outlooks, earning high salary, working in respected profession, job security, recommendation of parents and socioeconomic status.^{6,8} Certain diagnostics (personality tests) concludes which career path should a particular individual follow. It demands focus on individual's personal life stories linked with their professional life.⁵

Types of personalities relate with different specialties. Therefore it is necessary to have a counselor who can study the personality of an individual and advice specific specialties accordingly.⁹ Career counseling figures out the self-identity of students and relate to suitable specialty in order to attain appropriate career earlier.^{5,10} It was found at LMU Munich that career counseling was the frequent topic discussed by 59.6% undergraduate medical students as it was seen to be useful for undergraduate and graduate programs.¹¹

Different careers require different commitments, manual and intellectual skills and suits well with personalities that can cope with them.¹⁰ Medical education acts as a guide to choose specialties for medical students. Apart from personal interests, medical school teachings, its environment and orientation towards research plays main role in choosing a specialty.¹² Studies show that medical students are aware of their career during their undergraduate studies while clinical rotations also help them to choose a specialty.^{2,3,11,13} Although medical students develop their choice of specialty during studies but many of them change their choices during clinical practice.¹⁴ A research showed that only 65% doctors work in their first choice of specialty after having eleven years of experience.¹⁰

Many of the medical students have no career guidance throughout the education. The only source of guidance is found in faculty and student mentoring relationships which shows there is a need of career counseling.^{14,15} Career planners for medical students emphasized on areas like career choice, career satisfaction,

Correspondence:

Dr. Waqar Ali

Assistant Professor

Department of Community Medicine,
Rehman Medical College Peshawar.

Cell # 0332-9299732

E-mail: dr_waqarali@hotmail.com

research, clinical issues (dealing with tough situations), interpersonal skills and life balance.¹³ In most countries there is little to no concept of career guidance for career goals.¹⁵ Research conducted in Turkey showed that students choose career based on financials and prestige. In Jordan, students chose specialty based on individual's competencies. While personal interest was the major factor for career planning in Pakistan, India, Taiwan and KSA.³ Numerous studies show that medical students are receiving career guidance in Pakistan.² Research conducted in Nigeria show that the choice of specialty and career counseling varies with gender differences. Gender plays major influential role when it comes to opting for particular specialty. It was found that females choose Pediatrics and gynecology while men choose surgical specialties.³

The objectives of the study were to determine preferences for medical career, the factors influencing these preferences and need for career counseling among medical students.

Materials & Methods

A descriptive study was conducted on medical students of Rehman Medical College, Peshawar, Pakistan. Duration of the study was from August 2017 to November 2017. MBBS students from fourth and final years were included in the study. Through random sampling, research was conducted on 125 students of RMC. Students who signed the informed consent participated in the study while students who were absent or gave incomplete information were excluded.

Self-administered questionnaire was distributed among medical students of 4th and 5th year, under supervision of faculty members to avoid any misunderstanding. The data was entered by professional data entry operator and the analysis was done using SPSS version 20. Descriptive statistics was used for frequency and percentage of demographic data while multiple response and chi-square tests were also applied on data.

Results

The demographic table 1 shows a total of 76 students of 4th year and 49 students of final year MBBS students participated in the study. Most (49.6%) of them were 23 years old. Nearly equal number of male students (52%) and 48% of female students were included in the study.

Table 1: demographic data (n=125)

demography	Frequency(%)
Student ages	
21	7(5.6)
22	32(25.6)
23	62(49.6)
24	20(16)
25	4(3.2)
Gender	
Male	65(52)
female	60(48)
Year of study	
4 th prof	76(60.8)
5 th prof	49(39.2)

Figure 1 shows the frequency and percentage of educational status of students' parents. Almost 56% fathers had post-graduation education while only 21.6 mothers were post-graduates. Most (52%) of the mothers had attained only high school education.

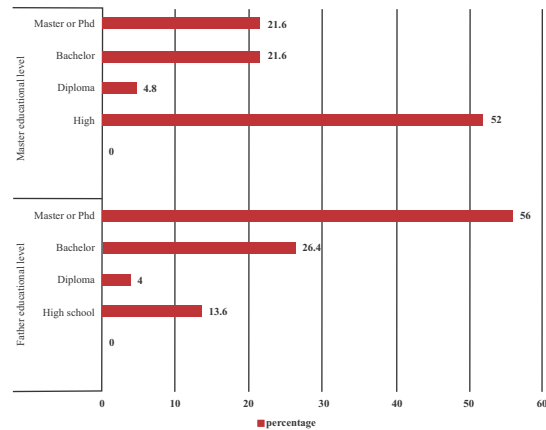


Figure 1: Parents' educational level.

There were 77.6% students who received advice for opting a specialty in medical profession. However, mostly (68%) students were advised by their families, 15.2% by their friends while very few (8%) were advised by professionals as shown in figure 2.

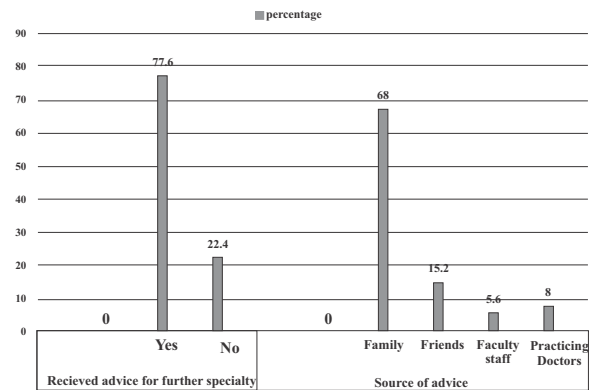


Figure 2: Advice for future specialty. Among 30 different medical specialties, Cardiology (25%) and Pediatrics (24.2%) were most selected specialties. General surgery, gynecology and dermatology were next to top selected specialties, 21.8%, 18.5% and 17.7% respectively. However the least desired specialties were histopathology (0.3%) and forensic medicine (0.3%) (Table 2).

Table 2: Medical specialties as a career

Medical specialty	Responses		Percent of Cases
	N	Percent	
Cardiac Surgery	20	5.8%	16.1%
Dermatology	22	6.4%	17.7%
Endocrinology	13	3.8%	10.5%
Gastroenterology	16	4.7%	12.9%
Hepatology		.6%	1.6%
Medical Oncology		2.3%	6.5%
Obstetrics & Gynecology	23	6.7%	18.5%
Otorhinolaryngology		.6%	1.6%
Plastic Surgery	13	3.8%	10.5%
Pulmonology	13	3.8%	10.5%
Anesthesia		2.0%	5.6%
Cardiology	31	9.0%	25.0%
Diabetology		1.7%	4.8%
Family Medicine	11	3.2%	.9%
General Surgery	27	7.9%	21.8%
Histopathology		.3%	.8%
Neurology		2.0%	5.6%
Ophthalmology		2.0%	5.6%
Pediatric Surgery	10	2.9%	8.1%
Psychiatry		1.7%	4.8%
Basic Science		2.0%	5.6%
Emergency Medicine	11	3.2%	8.9%
Forensic Medicine		.3%	.8%
Hematology		1.7%	4.8%
Internal Medicine	17	5.0%	13.7%
Neurosurgery	11	3.2%	8.9%
Orthopedics		1.5%	4.0%
Pediatrics	30	8.7%	24.2%
Public Health		1.2%	3.2%
Surgical		1.7%	4.8%
Total	343	100.0%	276.6%

Among 12 reasons for choosing medical career. Mostly (48%) students chose medicine because of its image in the society. 46.4% students wanted to help patients. The least number

(1.6%) of students said that previous employment experience could be the reason for choosing medical career (table 3).

Table 3: Reasons for choosing specific medical career

Reasons	Responses		Percent of Cases
	N	Percent	
Helping Patients	58	17.0%	46.4%
Employment Security	27	7.9%	21.6%
Economic Potential	46	13.5%	36.8%
Influence of a Role Model (Family/ Friends)	27	7.9%	21.6%
Opportunity to Perform Research	14	4.1%	11.2%
Illness of relative/ friends	16	4.7%	12.8%
the scientific basis of medicine	17	5.0%	13.6%
The profession's image	60	17.6%	48.0%
Potential for family life	32	9.4%	25.6%
Influence of previous studies	13	3.8%	10.4%
Influence of a role model (Physician)	29	8.5%	23.2%
Previous employment experience	2	.6%	1.6%
Total	341	100.0%	272.8%

Total 381 responses were considered by medical students for influencing specialty as a career. Out of which 54.4% students chose interesting/challenging specialty. A reasonable

relationship between salary/lifestyle was 2nd highest selected option for students. Bedside specialty had the least (0.8%) influence on career according to medical students (table 4).

Table 4: Positive influence on career.

Influence on career	Responses		Percent of Cases
	N	Percent	
Interesting/ challenging specialty	68	17.8%	54.4%
A reasonable relationship between salary/lifestyle	56	14.7%	44.8%
Bedside specialty	1	.3%	.8%
specialty that is rapidly advancing	29	7.6%	23.2%
High paying specialty	28	7.3%	22.4%
Performing surgery/ Procedure	25	6.6%	20.0%
Time in the operating room	4	1.0%	3.2%
Work only the daytime	26	6.8%	20.8%
Control over lifestyle	37	9.7%	29.6%
Independent practice	44	11.5%	35.2%
Opportunity for private practice	33	8.7%	26.4%
Much teamwork	9	2.4%	7.2%
Opportunity to perform research	10	2.6%	8.0%
Work only in the hospital	11	2.9%	8.8%
Total	381	100.0%	304.8%

Total 316 responses were noted by medical students among which most (42.6%) of the medical students considered control over lifestyle as a positive influence on their selection of residency program. 39.3% students thought that good

relationships between residents and interesting/challenging residency would have good influence on their residency program respectively. While the least (2.8%) influence was due to opportunity to perform research (table 5).

Table 5: Positive influence on residency program.

Influence on residency program	Responses		Percent of Cases
	N	Percent	
Good relationships between residents	48	15.2%	39.3%
Residency with much resident teaching	35	11.1%	28.7%
Control over lifestyle	52	16.5%	42.6%
Make clinical decisions on their own	25	7.9%	20.5%
A residency with few on-calls	10	3.2%	.2%
Work under pressure	11	3.5%	9.0%
Interesting and challenging residency	48	15.2%	39.3%
Leading department in the specialty	32	10.1%	26.2%
A large university hospital	24	7.6%	19.7%
Residency with limited Hours	22	7.0%	18.0%
Opportunity to perform research	9	2.8%	7.4%
Total	316	100.0%	259.0%

Among 4th year students, 28/30 female students received advice for specialty while 29/46 male students received medical guidance. According to chi-square test, there was a significant difference of 0.003 among advice received by 4th

year medical students. However, in 5th year, 26/30 females received advice while 14/19 males received advice. There was no (0.253) significant difference in specialty advice for final year students (table 6).

Table 6: Specialty advice by gender and professional year

Student year	gender	Received advice for further specialty			p-value
		Frequency (%)			
		yes	no	total	
4 th year	Male	29(63)	17(37)	46(100)	.003
	female	28(93.3)	2(6.7)	30(100)	
5 th year	Male	14(73.7)	5(26.3)	19(100)	.253
	female	26(86.7)	4(13.3)	30(100)	

Discussion

The study was conducted on 4th and final year medical students because they have clearer view of their future path. The students have to sort their interest along with advantages regarding particular medical specialty but for this they are needed to be guided, keeping in mind their internal and external determinants.¹⁶ The medical specialty and career choices of students have been analyzed in various regions around the world so as to implement a proper health care system.¹⁷

In this study, the participants were from only 2 years of medical college, among which 52% were males and 48% were females in contrast to a study³ where majority were females than males. The age of participants was mostly (49.6%) 23 years, almost similar to the age of Kuwaiti medical students which was (50%) at the age 22 years.⁴

Reflecting the education of parents as a contributing factor, the present study analyzed 56% fathers had the highest degree i-e Masters/PhD while 21.6% mothers had masters/PhD. However 21-26% parents had only bachelor's degree in contrast to Kuwaiti study where highest (63-65%) education level of parents was bachelors.⁴ According to this study, 77.6% students received advice for future medical career, however, for 68% students the source of advice was family and only 13.6% students were advised from experienced/ professionals i-e 86.4% students were in greater need of counseling. In Kuwait, 38.8% students received advice from professionals.⁴

The top five medical specialties of students were Cardiology, pediatrics, general surgery, gynecology and dermatology (25%, 24.2%, 21.8%, 18.5% and 17.7% respectively). The least selected specialties were forensic medicine and histopathology, 0.8% each. Similarly, in a study conducted in Turkey, the top 5 specialties were cardiology, pediatrics, ophthalmology, DPT and gynecology (25%,16.9%, 6.6%, 4.7% and 4.5% respectively). Family medicine being the least selected (0.9%) specialty. pediatrics and surgery were the top specialties for medical students in Karachi, Pakistan.¹⁹

Reasons for choosing particular medical specialty varies in different universities. In China, students were more inclined towards opportunity of performing research and scientific basis of medicine. According to Canadian studies, medical lifestyle, prestige and societal orientation were the

reasons. Similar to this study, 48% students chose specialties due to the profession's image. The most positive influence on medical career was marked by working in challenging environment (54.4%) followed by relationship between salary/lifestyle (44.8%). However, Australian medical students considered work culture and flexibility of working arrangements as most influential factors.

There was a significant association between received advice and gender among 4th year students. Less male students received advice related to career. Overall advice was taken from non-professionals which shows need of counseling. Further career preferences and reasons of selection would help educators to provide career counseling for a better health care system.

Conclusion

Medical students considered top 3 specialties to be Cardiology, pediatrics, general surgery. The underlying reason behind it was the profession's image and the societal considerations. Very few students received advice from proper trainees/professionals, calling for career counseling.

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