

Career Preferences and its influencing factors among medical graduates and undergraduates

Tamkeen Nishat Jaffry¹, Nadia Tariq², Sadaf Tariq³, Farwa Haider⁴

¹⁻³Assistant Professor of Community Medicine, Islamabad Medical and Dental College, Islamabad,

⁴Demonstrator, Community Medicine, Islamabad Medical and Dental College, Islamabad

Author's Contribution

^{1,3,4}Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work.

²Final approval of the version to be published

Funding Source: Nil

Conflict of Interest: Nil

Received for Publication:

May 12, 2019

Accepted for Publication:

June 22, 2019

Address of Correspondent

Dr Tamkeen Nishat Jaffry

Assistant Professor of Community Medicine

Islamabad Medical and Dental College, Islamabad

Email:

tamkeen.jaffry@imdcollge.edu.pk

Cite this article as: Jaffry TN, Tariq N, Tariq S, Haider F. Career Preferences and its influencing factors among medical graduates and undergraduates. *Ann Pak Inst Med Sci.* 2019; 15(1): 17-21.

ABSTRACT

Objective: To determine the career preferences of medical students and young doctors and the associated influencing factors.

Methodology: A descriptive cross-sectional study was conducted on 267 graduates and undergraduates of various medical institutes and hospitals of Islamabad, selected through convenient non-probability sampling technique. Data was collected through a self-designed pre-tested questionnaire and processed in SPSS software version 20. Comparison was done among male and female students as well as graduates and undergraduates. For categorical variables frequency and percentages were calculated. χ^2 test was used to find association between influencing factors, career choices and socio demographic variables.

Results: There was significant difference of specialty preferences between males and females ($p=0.017$) as the most preferred specialty in males was General Medicine (23.8%) whereas in females it was Gynaecology (21.7%). Graduates and undergraduates also had significant difference in their specialty preference ($p=0.008$). The students showed overall equally little interest in the subjects such as Anaesthesia, Oncology, Family Medicine, Public Health and Research. Lack of specialists in a particular field was the most common reason for preference of specialty among males. Females were more influenced by advice from family members in pursuing a career as compared to males ($p=0.04$). Maximum participants (95.5%) thought that there is a need of career counselling in medical field.

Conclusion: It was observed that majority prefer to choose the most established disciplines. Various factors influence the specialty choices of medical students which should be kept in mind to avoid mismatching of the personality with selection of choice.

Key words: Career Choice, Medical Speciality, Gender.

Introduction

It is often assumed that students do not make their specialty preferences till they graduate from medical college as it is tough for an undergraduate to equip him or herself with enough know-how to decide about the future. There are more than 60 career options available but medical graduates are seldom aware of the scope of each specialty and the number of training spots and slots

available for consultants in different specialties.¹ Almost 60% of graduates change their choices before finalizing a specific specialty as the concept of career counseling is almost non-existent in our country.

The reasons that medical students choose various specialities are multiple.² These can be related to individuals for example personal interest, work satisfaction, social respect, and peer pressure or associated with the profession like employment aspect,

work hours and financial incentives³ etc. In Pakistan, the issue is compounded by the stereotypical approach of parents deciding their children's future, according to the societal norms. Various rotations during house job modify the attitude towards multiple specialities.⁴ Gender difference also influences the selection of career as male consider the reputation of profession while majority of females prefer manageable lifestyle specialities and ease of raising a family.⁵

Speciality preference of medical graduates determines the future work force in various fields hence its significance in career guidance, healthcare planning and policy formulation⁶. Statistics show that till February 2018 the number of specialist doctors registered by PMDC in both basic and clinical was 210490.⁷ College of Physician and Surgeons offer fellow ship in 73 specialities and membership in 22 disciplines.⁸ Majority of medical graduates want to pursue their career in clinical fields while very few choose basic and preclinical subjects⁹ as their field of specialization which form the back bone of medical curriculum.¹⁰ This lack of career guidance will ultimately create an imbalance between various specialities. Moreover, adoption of a field without any interest will affect the quality of performance.

Becoming a doctor is a big investment; physically, mentally and financially. There is an acute need of career counselling in order to make life easier, to produce high quality professionals and to prevent deficiencies in various specialities. The current practice of leaving everything to luck is faulty and defective, and needs to be amended. The purpose of conducting the study was to determine speciality preferences of graduates and undergraduates, factors influencing their career choices and associated gender based similarities and differences thus emphasizing the need of career counselling in medical education.

Methodology

This was a descriptive cross sectional survey conducted from February to June 2018. Respondents were the graduates and undergraduates of various medical institutes and hospitals of Islamabad. A total of 267 study participants were selected through convenient non probability sampling technique. Total sample size was calculated by using Creative Research System Survey Software on the basis of estimated number of fresh graduates and doctors with basic degree/ population of Islamabad (1697/ 2 Million) at confidence level of 95% and confidence interval of 5%. Included in the study

were demonstrators, house officers, final year and fourth year students while students of 1st three years of MBBS were excluded from the study because of their limited clinical experience. The response rate was 97%. Approval for the study and the participants' consent was taken by the ethical committee of Islamabad Medical and Dental College (IMDC).

Data was collected through a self-designed questionnaire; tested and validated by pilot testing on 5% sample population of house officers of PIMS. Respondents were informed about the purpose of study at the time of distribution of questionnaire.

Data was analysed by SPSS software version 20. Basic predictor variables examined were demographic factors, choice of specialty, future career plans, factors that influence these choices and opinion on the need for provision of career counselling services. The general approach used was to compare the responses of the graduates with undergraduates and male with female students. For categorical variables, frequency and percentages were calculated. χ^2 test was used to find association between influencing factors, career choices and socio demographic variables. P value less than 0.05 was considered statistically significant.

Results

Out of 267 study participants, 62.2 % (166) were female and 37.8% (101) were male. Out of them, 146 (54.7%) were undergraduate medical students (4th & 5th year) and 121 (45.3%) were graduates (House officer & medical officer). Mean age of participants was 24.38 ± 3.39 years.

There was significant difference of specialty preferences between males and females ($p= 0.017$) as the most preferred specialty in males was General Medicine (23.8%) whereas in females it was Gynaecology (21.7%). Graduates and undergraduates also had significant difference in their specialty preference ($p=0.008$). The students showed overall equally little interest in the subjects such as Anaesthesia, Oncology, Family Medicine, Public Health and Research. (Figure 1)

Regarding reasons for preference of specialty, there was significant difference between graduates/undergraduates ($p=0.03$) and male/female ($p=0.02$). Most of the graduates and males wanted to pursue their career in a particular field due to lack of specialists in that area. As compared to undergraduates, graduates were more influenced by good marks in the related subject ($p=0.02$). Females were more influenced by advice from family

members in pursuing a career as compared to males (p=0.04) (Table I)

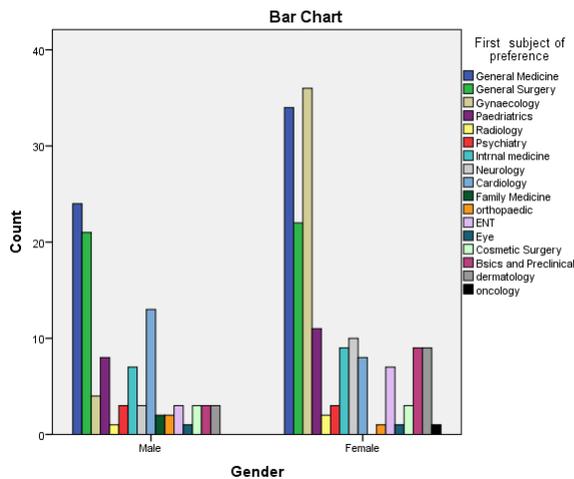


Fig1. Specialty Preference According to Gender

for post graduate medical examination (46.8%), to go for foreign qualifications (33%), start general practice (10.5%), start research project (1.1%), another 8.6% did not have any plan about the career. There was significant difference between graduates and under graduates in future career plan where maximum undergraduates did not have any idea (91.3%) and least were interested in research (33.3%), whereas among graduate’s maximum number wanted to start a research project (66.7%) as depicted in Table: II

Maximum participants (95.5%) thought that there is a need of career counselling in medical field and career counselling should be part of curriculum (88.8%). Participants with educated (graduate or post graduate) fathers and mothers were more of the view of having need of career counselling in medical curriculum, (p=.003) and (p=0.04) respectively.

Table 1: Factors influencing choice of specialty

	Female (n = 166 62.2%)						Male (n = 101 37.8%)						P-value
	Applicable		Not sure		Not Applicable		Applicable		Not sure		Not Applicable		
	N	%	N	%	N	%	N	%	N	%	N	%	
Lack of specialists in that area	53	31.9	44	26.5	69	41.6	47	46.6	27	26.7	27	26.7	.024*
Shorter hours of practice	38	22.9	42	25.3	86	51.8	24	23.8	38	37.6	39	38.6	0.079
Reputation of that specialty	127	76.5	18	10.8	21	12.7	76	75.2	12	11.9	13	12.9	0.963
Advice from family members	92	55.4	20	12.1	54	32.5	47	46.5	24	23.8	30	29.7	.042*
Financial incentives	57	34.3	46	27.7	63	38.0	43	42.6	26	25.7	32	31.7	0.383
Good marks in the subject	75	45.2	42	25.3	49	29.5	43	42.6	31	30.7	27	26.7	.626
Marital status and family commitments	60	36.1	42	25.3	64	38.6	27	26.7	34	33.7	40	39.6	.230

*Significant

Future career plans of graduates were to prepare

Table II: Preference for future career plan

		Prepare for the postgraduate medical examination	Go for foreign qualifications	Start general practice	Start research project	Do not have any idea	Total	P value
Undergraduate	Count	58	52	14	1	21	146	0.002*
	% within Category	39.7%	35.6%	9.6%	0.7%	14.4%	100.0%	
Graduate	Count	67	36	14	2	2	121	
	% within Category	55.4%	29.8%	11.6%	1.7%	1.7%	100.0%	
Total	Count	125	88	28	3	23	267	
	% within Category	46.8%	33.0%	10.5%	1.1%	8.6%	100.0%	

*Significant

Discussion

In the rapidly changing world, it is important that the medical graduates should be well aware of needs of tomorrow. In the present study it was observed that majority of the respondents choose the most established disciplines like Medicine, Surgery, Gynaecology, and Paediatrics while very few opted for basics, public health, research and oncology. In our country with the advancing trends of environmental health issues and emerging and re-emerging infectious diseases the importance of the public health and research cannot be overlooked. Similarly considering the high prevalence rate of cancers where the treatment is available only to those who can afford it, very soon there will be a mismatch between the existing problems and available human resources. Various studies conducted at national and international levels^{11,12} showed the similar response of the students who showed little interest in radiology, anaesthesia, oncology while basics and non-clinical subjects like pathology, biochemistry and preventive medicine were also found to be less popular. Keeping in view the rapidly increasing network of private medical colleges, the importance of basic subjects cannot be overlooked. Study conducted by Hur and Kim¹³ showed that most students in Korea prefer to specialize in clinical fields. An international study conducted by Tan et al concluded that there was very little inclination of undergraduate students towards research.¹⁴ A Swedish study revealed that most preferred specialities among females were gynaecology and paediatrics¹⁵ while in Saudi Arabia women mostly choose gynaecology, surgery and dermatology¹⁶ which is comparable with our study.

A wide range of factors affect the selection of a speciality like in present study males are influenced more by the reputation of speciality and lack of specialists. Similar studies conducted in South Korea¹⁷ and Tamilnadu¹⁸ concluded that many students choose a particular field due to job security while a study conducted in Sindh Pakistan revealed that financial incentives, family pressure and good marks in the subject also influence the speciality preference¹⁹. Influence of individuals seemed to effect decision making of female more as shown in the research conducted on women liaison officers in United States.²⁰ In a qualitative study women physicians²¹ were found to be influenced by the job characteristics and family commitments while male were more influenced by financial incentives.²² The results are comparable with the current study which

revealed that females considered good marks, reputation of specialty and advice from family members.

In the present study great majority of respondents stressed that career counselling should be a part of curriculum. A study conducted at Tagore Medical University revealed that none of the participants ever received any professional career advice during their course of study²³ which is comparable to our study. A study published in a British journal showed that the most significant factor influencing the career choice of final year medical students was presence of clinical mentor with mean of 6.8.²⁴ A study conducted in Canada stressed that medical curriculum must provide recommendations for decisions making regarding future choices.²⁵

Conclusion

Number of registered medical practitioners is growing with every passing year but majority of them prefer to choose the most established disciplines which will ultimately lead to imbalance between health needs and specialist numbers in the area. Various factors influence the specialty choices of medical students which should be kept in mind to avoid mismatching of the personality with selection of choice. Career counselling units should be set up in the medical institutions thus providing assistance in selection of appropriate careers and also to prevent maldistribution of doctors among various specialties.

References

- 1 Welbergen L, Pinilla S, Pander T, Gradel M, von der Borch P, Fischer MR, Dimitriadis K. The FacharztDuell: innovative career counselling in medicine. *GMS Zeitschrift für Medizinische Ausbildung*. 2014;31(2): Doc17. doi: 10.3205/zma000909
- 2 Hayes BW, Shakya R. Career choices and what influences Nepali medical students and young doctors: a cross-sectional study. *Human resources for health*. 2013;11(1):5-17.
- 3 Asif M, Bukhari SM, Ahmad A. Research Trend, Career Preferences and its Effective Factors among Undergraduate Medical Students in Jinnah Sind Medical University, Pakistan. *Future of Medical Education Journal*. 2015 ;5(3):3-7.
- 4 Weissman C, Zisk-Rony RY, Schroeder JE, Weiss YG, Avidan A, Elchalal U, Tandeter H. Medical specialty considerations by medical students early in their clinical experience. *Israel journal of health policy research*. 2012;1(1):13-23.

- 5 Mwachaka P, Mbugua E. Specialty preferences among medical students in a Kenyan university. *Pan African Medical Journal*. 2010;5(1):18-28.
- 6 Ossai EN, Uwakwe KA, Anyanwagu UC, Ibiok NC, Azuogu BN, Ekeke N. Specialty preferences among final year medical students in medical schools of southeast Nigeria: need for career guidance. *BMC medical education*. 2016;16(1):259-267.
- 7 Pakistan Medical and Dental Council Statistics PMDC www.pmdc.org.pk/Statistics/tabid/103/Default.aspx
- 8 Siddiqui Z A. Cpsp.edu.pk. [Online]. Available from: <https://www.cpsp.edu.pk/fcps.php>
- 9 Kumar R, Dhaliwal U. Career choices of undergraduate medical students. *Natl J Med India*. 2011;24(3):166-169.
- 10 Gopalan DH, Vani MM, Edwin B, Arumugam B. Career Advice during Indian Medical Training—An Urgent Need. *International Educational Scientific Research Journal*. 2016 Apr 1;2(4):9-10.
- 11 Ossajee H, Obonyo N, Ahmed SM. Career preferences of final year medical students at a medical school in Kenya—A cross sectional study. *BMC medical education*. 2016;16(1):5-15.
- 12 Ossai EN, Uwakwe KA, Anyanwagu UC, Ibiok NC, Azuogu BN, Ekeke N. Specialty preferences among final year medical students in medical schools of southeast Nigeria: need for career guidance. *BMC medical education*. 2016;16(1):259-266.
- 13 Hur Y, Cho AR, Kim S. How to provide tailored career coaching for medical students. *Korean journal of medical education*. 2015 ;27(1):45-50.
- 14 Giri PA, Sambutwad RC, Kausar HM, Muneshwar SN, Shafee M. Career choices regarding medical education among first year medical students of IIMSR Medical College. *Int J Community Med Public Health*. 2015; 2(4): 620-623
- 15 Diderichsen S, Johansson EE, Verdonk P, Lagro-Janssen T, Hamberg K. Few gender differences in specialty preferences and motivational factors: a cross-sectional Swedish study on last-year medical students. *BMC medical education*. 2013;13(1):39-46.
- 16 Kaliyadan F, Amin TT, Qureshi H, Al Wadani F. Specialty preferences of 1st year medical students in a Saudi Medical School—Factors affecting these choices and the influence of gender. *Avicenna journal of medicine*. 2015;5(4):134- 139.
- 17 Kim KJ, Park JH, Lee YH, Choi K. What is different about medical students interested in non-clinical careers? *BMC medical education*. 2013;13(1):81-87.
- 18 Sharma D, Pattnaik S. Carrier choices and the factors influencing it among medical students in a private medical college in Tamilnadu. *International Journal Of Community Medicine And Public Health*. 2017 Mar 28;4(4):1110-1112.
- 19 Asif M, Bukhari SM, Ahmad A. Research Trend, Career Preferences and its Effective Factors among Undergraduate Medical Students in Jinnah Sind Medical University, Pakistan. *Future of Medical Education Journal*. 2015 ;5(3):3-7.
- 20 Borges NJ, Navarro MA, Grover AC. Women physicians: choosing a career in academic medicine. *Academic medicine: journal of the Association of American Medical Colleges*. 2012;87(1):105-114.
- 21 Rizvi R, Raymer L, Kunik M, Fisher J. Facets of career satisfaction for women physicians in the United States: a systematic review. *Women & health*. 2012 May 1;52(4):403-421.
- 22 Kawamoto R, Ninomiya D, Kasai Y, Kusunoki T, Ohtsuka N, Kumagi T, Abe M. Gender difference in preference of specialty as a career choice among Japanese medical students. *BMC medical education*. 2016;16(1):288-295.
- 23 Gopalan DH, Vani MM, Edwin B, Arumugam B. CAREER ADVICE DURING INDIAN MEDICAL GRADUATE TRAINING—AN URGENT NEED. *International Educational Scientific Research Journal*. 2016 ;2(4) :9-10.
- 24 Yap C, Rosen S, Sinclair AM, Pearce I. What undergraduate factors influence medical students when making their choice of postgraduate career?. *British Journal of Medical and Surgical Urology*. 2012 ;5(1):11-15.
- 25 Howse K, Harris J, Dalgarno N. Canadian national guidelines and recommendations for integrating career advising into medical school curricula. *Academic Medicine*. 2017;92(11):1543-1548.