

Original Article

CAREER PREFERENCES AND BRAIN DRAINING THREATS AMONG YOUNG MEDICAL GRADUATES OF SERVICES INSTITUTE OF MEDICAL SCIENCES, LAHORE.

Nayer Riffat¹, Uzair Mumtaz², Zoofishan Qureshi³, Shafqat Jabeen⁴, Tehmina Noor⁵, Muhammad Shafiq⁶

ABSTRACT:

Objectives: To determine the career preferences and to assess the brain drain threats among young medical graduates of the Services Institute of Medical Sciences (SIMS) Lahore.

Material and Methods: This cross-sectional study was carried out in students of final year MBBS and house officers of Services Hospital Lahore. A detailed questionnaire was used to collect data and face to face interview was also conducted.

Results: A total of 310 students, including 144 final year students and 166 house officers, with (61.29%) male and (38.71%) female. (70.97%) of the respondents were intended to migrate abroad to pursue the training. UK and US were the most preferred destinations. The reasons cited for migration abroad were quality of training (63.64%), economic prospect, after training (15.91%), salary during training (9.09%), professional prospect, after training (9.09%), and desire to settle abroad (2.27%). For respondents who had no plan of migrating abroad, the most important reason for staying in Pakistan was family ties (44.44%), followed by a desire to serve the nation (33.33%), professional satisfaction (11.11%), desire to live in Pakistan (5.56%) and lack of resources (5.56%). Surgery was the first choice by 41.9% of the graduates, followed by Internal Medicine (24.2%), General Medicine/Family Medicine (9.7%), Psychiatry (6.5%), Pediatrics (4.8%), Obstetrics and Gynecology (4.8%) while (3.2%) selected dermatology.

Conclusion: Improvement in the health care system and medical education should be made along with the policy settings to attract young doctors to settle down in Pakistan and to opt high-priority disciplines so that imbalances encountered would be minimal in the future.

Key Words: Brain Drain, Medical Education, Career Preferences

INTRODUCTION:

The transfer of skilled human resources to foreign countries is called brain drain.¹ Many countries are facing this problem. The aim of migration may be to get more salaries and improve the quality of life, access to advanced technology, and to live in stable political conditions.²

The four preferred countries for migration are United States, United Kingdom, Australia, and Canada. About 23-28% of doctors working in these countries are International Medical Graduates (IMGs). About 40-75% of these IMGs come from low salaried countries, like Pakistan, which contributes about one third. The percentage of physicians serving abroad (emigration ratio) from Pakistan varies from 13.5% to 17.6%.³

The factors important for medical students to choose their future career may be broadly classified into two major types – Intrinsic and Extrinsic. The intrinsic factors are related to personal preferences, whereas the extrinsic factors are related to work environments.⁴ The effects of these factors are different in different settings. In the UK, the students are attracted by fewer practice

¹Senior Demonstrator Community Medicine, Services Institute of Medical Sciences, Lahore.

²Associate Professor Physiology, Fatima Jinnah Medical University, Lahore.

³Ex Assistant Professor Community Medicine, CMH, Lahore.

⁴Student of MBBS, Services Institute of Medical Sciences, Lahore.

⁵Assistant Professor Obstetrics and Gynecology, Services Hospital, Lahore.

⁶Associate Professor Physiology, Services Institute of Medical Sciences, Lahore.

hours and other peoples' perception of the job.⁵ In other countries like India, Taiwan, and Saudi Arabia, the doctors are more influenced by their personal likings of the specialty.^{4,6,7} Careers are chosen according to the specific gender "schemas." Male doctors' preferences are surgical subjects whereas females usually prefer Obstetrics and Gynecology and Pediatrics.⁴

An online cross-sectional survey was carried out among all Irish medical students studying in their own country. A total of 2273 medical students responded with a 37% response rate. Out of these, 1519 medical students had completed their secondary school in Ireland. 88% of these students gave their intention for migration after graduation or completion of the pre-registration intern year. 40% were of the view of returning to Ireland within five years. The causes for their decision to migrate were career opportunities 85%, working conditions (83%), and lifestyle (80%).⁸ Another research conducted in Canada showed that job satisfaction, post-training lifestyle, and impact on the patient were the three predominant factors related to the choice of a specialty. Both genders considered Family Medicine, Pediatrics, and Emergency Medicine at the top of nonsurgical specialties. The least popular choice for both genders were auxiliary departments.⁹

In Saudi Arabia, a study was conducted among 220 medical graduates to determine the factors affecting the career specialty preferences. Out of these, 13.2% opted for general surgery as a major subject, 10.9% pediatrics, and 8.2% for internal medicine. A minute percentage of students opted for Genetics, Oncology, Emergency Medicine, Forensic Medicine, Pathology, Pediatric Surgery, Neurology, etc, while about 10.9% of students were not sure about their career specialty. One hundred seventy students, 53.1% chose their major specialty that matches with their own capabilities. As many as 37.2% of students were of the opinion that opting subspecialty in medicine was a confounding factor influencing their

specialty selection. Two students said that their family friends selected their specialty. Female students opted for major specialties according to their preferences. Only two female students selected specialty because their friends and family preference.¹⁰

A study was carried out in Mayo Hospital Lahore, which depicted that various political conditions and socio-economic factors were influencing the migration of doctors from Pakistan. 83% of the doctors pointed out the poor salary package and professional infrastructure of the health department as a major factor in doctors' brain drain. 81% claimed that persistent political instability and threats of terrorism are the causes of the emigration of doctors. 84% of respondents considered fewer available opportunities of postgraduation which is responsible for their migration.¹¹

The Irish Hospital Consultants Association declared that patients would be forced to remain on waiting lists until the Government makes concrete efforts to stop the brain drain of doctors from their country.¹²

The present study identifies the brain-draining threat among young medical graduates of the Services Institute of Medical Sciences, Lahore (SIMS). This will help to sensitize the concerned authorities to adopt policies to discourage such movements from Pakistan to developed countries.

MATERIAL AND METHODS:

It was a cross-sectional study of 310 participants studying in final year MBBS in SIMS and House Officers serving in Services Hospital, Lahore. Non-probability convenient sampling was used to collect sample. A structured self-administered questionnaire was used to collect basic demographic details about career preferences, factors influencing their choices of specialty, intention for postgraduate going abroad, and the chosen country. The analysis was done in a statistical package for social sciences (SPSS) version 23. Categorical data were presented by frequency and percentage. The percentage of more than 50

was considered significant for influencing career preferences.

RESULTS:

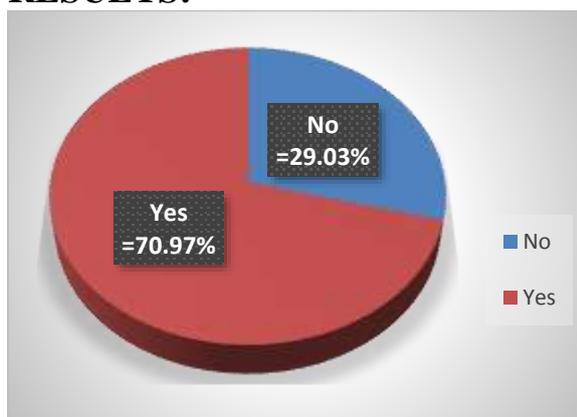


FIGURE-1: Plan of migrating abroad to pursue training.

Figure 1 reveals that 70.97% of the respondents intended to migrate abroad to pursue postgraduate training, while 29.03% had no plan of migrating abroad.

Table-1: Preferred country for migrating abroad

| Country | Frequency | Percentage (%) |
|-----------|-----------|----------------|
| UK | 120 | 54.545 |
| USA | 90 | 40.909 |
| Australia | 5 | 2.273 |
| Canada | 5 | 2.273 |
| Total | 220 | 100.0 |

Table 1 shows that out of 220 medical graduates, 54.54% of respondents intended to migrate to the UK, 40.91% to the USA, and 2.27% each to Australia and Canada.

Table-2: Reason for migrating abroad to pursue training

| Reason | Frequency | Percentage (%) |
|----------------------------------|-----------|----------------|
| Quality of training | 140 | 63.636 |
| Economic prospect after training | 35 | 15.909 |
| Salary during training | 20 | 9.091 |
| Professional satisfaction | 20 | 9.091 |
| Desire to settle abroad | 5 | 2.273 |
| Total | 220 | 100 |

The most common causes for migrating abroad were quality of training (63.64%), economic prospect after training (15.91%), salary during training (9.09%), professional prospect after training (9.09), and desire to settle abroad (2.27) as depicted in table 2.

Table-3: Weaknesses of training in Pakistan

| Weaknesses | Frequency | % Age |
|--------------------------------------|-----------|-------|
| Poor working environment | 110 | 50 |
| Poor salary | 50 | 22.73 |
| Long working hours | 40 | 18.18 |
| Poor postgraduate examination system | 20 | 9.09 |
| Total | 220 | 100 |

Table 3 reveals that the most important weaknesses in training in Pakistan are poor working environment (50%), low salary (22.73%), long working hours (18.18%), and poor postgraduate examination system (9.9%). Poor working conditions refer to the hostile attitude of seniors and less good feedback for good work.

Table-4: Frequency distribution of chosen specialties

| Specialty | Frequency | Percentage (%) |
|----------------------------------|-----------|----------------|
| Surgery | 130 | 41.9 |
| Internal medicine subspecialty | 75 | 24.2 |
| General medicine/family medicine | 30 | 9.7 |
| Psychiatry | 20 | 6.5 |
| Orthopedic Surgery | 15 | 4.8 |
| Pediatrics | 15 | 4.8 |
| Obstetrics and Gynecology | 15 | 4.8 |
| Dermatology | 10 | 3.2 |
| Total | 310 | 100.0 |

Out of 310 respondents, 130(41.9%) respondent chose Surgery, 75(24.2%) Internal Medicine, 30(9.7%) General

Medicine/Family Medicine, 20(6.5%) Psychiatry, 15(4.8%) selected Pediatrics and Obstetrics and Gynecology and 10(3.2%) chose Dermatology (Table 4).

Table-5: Factors affecting career preferences

| Reason for choosing a specialty | Frequency | Percentages (%) |
|--|-----------|-----------------|
| Interest in the clinical work of the specialty | 192 | 62 |
| Rewarding to work in the specialty | 192 | 62 |
| Highly respected in society | 186 | 60 |
| Encounter with role model teachers | 186 | 60 |
| Aptitude for the specialty | 186 | 60 |
| Interested in surgical procedures or technologies | 186 | 60 |
| Prospect for further development in the specialty | 180 | 58 |
| Attainable lifestyle | 180 | 58 |
| Interest in the research or scientific aspects | 177 | 57 |
| Interest in the organ of the specialty | 177 | 57 |
| Advice/Expectation of parents | 174 | 56 |
| Job availability | 174 | 56 |
| Congenial atmosphere at the specialty department | 174 | 56 |
| Advice from teachers/consultants | 171 | 55 |
| Received excellent teachings | 171 | 55 |
| Interest in the targeted population | 161 | 52 |
| Ease of opening practice | 155 | 50 |
| Working hours | 149 | 48 |
| Influence of friends | 130 | 42 |
| Friend/family suffer(ed) from the disease of the specialty | 130 | 42 |
| Expectation to inherit practice of parents/relatives | 124 | 40 |
| Suffer(ed) from the disease of the specialty | 115 | 37 |

Table 5 depicts the different factors influencing the specialty preference of the respondents. The most common reasons cited for affecting the specialty preference are interested in the clinical work of specialty (62%), rewarding nature of specialty (62%), respect in society (60%),

and encounter with role model teacher (60%). Similarly, having an aptitude for specialty 59%, interest in surgical procedures (59%), the prospect for further development (58%), attainable lifestyle (57%), interest in research, interest in the organ of specialty (57%), parents' advice (56%), job availability (56%), comfortable atmosphere (56%) were also the reasons for choosing a particular specialty. Likert scale for career preferences was interpreted in terms of percentages.

DISCUSSION:

This study revealed that surgery was the residency of choice by 41.9% respondents, followed by Internal medicine (24.2%), general medicine/family medicine (9.7%), psychiatry (6.5%), pediatrics (4.8%), obstetrics and gynecology (4.8%) while 3.2% selected dermatology. This finding of our study is in concordance with the result of studies from Saudi Arabia.¹³ This preference of general surgery among medical students might have a great effect on health-care policymakers while planning for future health infrastructure.

In Canadian research, "job satisfaction," "lifestyle following training," and "impact on the patient" were the three predominant factors inferring choosing a specialty. The top three non-surgical specialties ranked first by both genders combined were family medicine, pediatrics, and emergency medicine. Auxiliary specialties remained the least popular choice for both genders.⁹

Whereas in a study done in Turkey, predominant factors were financial opportunities and prestige, and personal interest in the specialty was on the fifth.¹⁴

In the current study, interest in the clinical work of the specialty was the most important factor influencing the choice of specialty. It was found that 70.97% of the medical students and house officers included in this study were interested in going abroad for specialty or subspecialty training. This percentage is higher as compared to a survey of 166 final year students of Indian medical schools in 2004 where 59% intended of

training abroad¹⁵ while about one-half of South African medical graduates also go abroad.¹⁶

CONCLUSION:

Improvement of health care and medical education should be made along with incentives to attract young doctors to settle down in Pakistan and to opt high-priority disciplines so that imbalances encountered would be minimal in the future.

AUTHOR'S CONTRIBUTION:

NR: Conceived and presented idea
UM: Collection of data
ZQ: Data analysis
SJ: Writing of article
TN: Data analysis
MS: Editing

REFERENCES:

1. World Bank. World development report 2000-2001: attacking poverty. World Bank Group; 2000.
2. Elstein AS. On the origins and development of evidence-based medicine and medical decision making. *Inflammation Research*. 2004 Aug 1;53(2):S184-9.
3. Chen LC, Boufford JI. Fatal flows-doctors on the move. *N Engl J Med*. 2005; 353:1850-1852. DOI:10.1056/NEJMe058188
4. Abdulghani HM, Al-Shaikh G, Alhujayri AK, Alohaideb NS, Alsaed HA, Alshohayeb IS, Alyahya MM, Alhaqwi AI, Shaik SA. What determines the selection of undergraduate medical students to the specialty of their future careers?. *Medical teacher*. 2013 Apr 1;35(sup1):S25-30.
5. Al-Nuaimi Y, McGruther G, Bayat A. Modernising medical careers and factors influencing career choices of medical students. *Br J Hosp Med* 2008 Mar;69(3):163-6.
6. Khader Y, Al-Zoubi D, Amarin Z, Alkafagei A, Khasawneh M, Burgan S, El Salem K, Omari M. Factors affecting medical students in formulating their specialty preferences in Jordan. *BMC medical Educat*. 2008 Dec;8(1):1-7.
7. Subba SH, Binu VS, Kotian MS, Joseph N, Mahamood AB, Dixit N, George A, Kumar P, Acharya S, Reddy P. Future specialization interests among medical students in southern India. *Natl Med J India*. 2012 Jul 1;25(4):226-9.
8. Gouda P, Kitt K, Evans DS, Goggin D, McGrath D, Last J, Hennessy M, Arnett R, O'Flynn S, Dunne F, O'Donovan D. Ireland's medical brain drain: migration intentions of Irish medical students. *Hum Resour Health*. 2015 Dec 1;13(1):11.
9. Vo A, McLean L, McInnes MD. Medical specialty preferences in early medical school training in Canada. *Int J Med Educ*. 2017;8:400.
10. Guraya SY, Almaramhy HH. Mapping the factors that influence the career specialty preferences by the undergraduate medical students. *Saud J Biolog Scie*. 2018 Sep 1;25(6):1096-101.
11. Tahir MW, Kauser R, Tahir MA. Brain drain of doctors; causes and consequences in Pakistan. *World Academy of Science, Engineering and Technology*. 2011 Mar 27;75:406-12.
12. Cullen P. Waiting lists to grow if 'brain drain' of doctors leaving not halted, says IHCA. *The Irish Times*. 2019. June 10. [cited 2020 Jan 14]: Available from: <https://www.irishtimes.com/news/health/waiting-lists-to-grow-if-brain-drain-of-doctors-leaving-not-halted-says-ihca-1.3920097>
13. McManus IC, Sproston KA. Women in hospital medicine in the United Kingdom: glass ceiling, preference, prejudice or cohort effect?. *J epidemiol commun h*. 2000 Jan 1;54(1):10-6.
14. Fevzi Dikici M, Yaris F, Topsever P, Muge Filiz T, Serdar Gurel F, Cubukcu M, Gorpelioglu S. Factors affecting choice of specialty among first-year medical students of four universities in different regions of Turkey. *Croat Med J*. 2008 Jun 15;49(3):415-20.
15. Rao NR, Rao UK, Cooper RA. Indian medical students' views on immigration for training and practice. *Acad. Med*. 2006 Feb 1;81(2):185-8.
16. Dambisya Y. Career intentions of UNITRA medical students and their perceptions about the future. *Education for health*. 2003 Sep 1;16(3):286-97.