

## ORIGINAL ARTICLE

## CAREER ASPIRATIONS OF JUNIOR DOCTORS IN PAKISTAN: EXPLORING REASONS BEHIND THE BRAIN DRAIN

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**Background:** Mass medical migration from Pakistan to more developed countries pose a threat to the professional resources of Pakistan. The aim of our study is to assess magnitude of the brain drain and to assess reasons behind it. **Methods:** A Cross-sectional study, using convenience non-probability sampling, with sample of 201 Ayub Medical College graduates. A simple questionnaire was designed on Google Forms, comprising of three sections including bio data, intentions to emigrate and the last part evaluating work environment, training and personal factors associated with the desire to train abroad. Data was analysed using SPSS version 20.0, descriptive statistics were calculated and Chi square test was used to determine association between various groups of push and pull factors and the intention to train abroad. A significance level (*p*-value) of less than 0.05 was used. **Results:** Over half (63.68%) of our participants wanted to emigrate, and out of the remaining 71.6% would consider it in the future if given the opportunity. Overall, more males wanted to train overseas as compared to females, and the United Kingdom was the most popular destination. The leading factor push factors behind wanting to move abroad were quality of training and a poor work environment. While family commitments and costly examinations were the main reasons to stay in Pakistan. **Conclusion:** A significant number of young doctors are planning on pursue training/careers abroad. If this large-scale brain drain is not addressed on time, it can have various implications in the future. Hence the Government and Medical authorities must take action in order to prevent further loss.

**Keywords:** Brain drain; Doctors; Emigration; Medical Graduates; Specialization

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### INTRODUCTION

Medical immigration from developing countries, including Pakistan, contributes significantly to the medical work-force in first world countries.<sup>1</sup> International Medical Graduates (IMGs) make up a quarter of the doctors working in the UK, USA, Australia and Canada, with Pakistan being the third largest provider.<sup>1,2</sup> On one hand this brain drain poses a direct threat to professional resources of the native country, but on the other hand It also offers migrants with better training opportunities and exposure.

According to a survey conducted by the House of Commons, in the year 2020, 13.8% of the total NHS staff was not British in origin. It also showed that a greater proportion of doctors had a foreign nationality (29%) as compared to other health care professionals, and a vast majority of them were of an Asian descent (13.5%), including Pakistani. As of January 2020, there were 3174 Pakistani doctors working in the NHS, and an even higher number had their primary medical qualification from Pakistan despite being UK-nationals (5399 of the total 19,000 Asian qualified doctors).<sup>3</sup> Similarly in the US, 24.7%

of the doctors registered with the American Medical Association Physician Masterfile were International Medical Graduates, and Pakistani doctors made up 29.7% of all the IMGs.<sup>2,4</sup>

Although it is easy to just focus on the figures, it is important to understand the reasons behind a large proportion of Pakistani doctors wanting to practice abroad. Various studies and surveys have demonstrated that despite the medical profession being one of the most sought after careers in Pakistan, doctors at various grades and qualifications still seem dissatisfied with their professional lives.<sup>5</sup> And there are many factors leading up to the frustration of Pakistani doctors, but lack of service structure and future career prospects play a major role in pushing nearly 78% of doctors into claiming to want to serve abroad.<sup>1,5,7</sup> Other factors such as stress levels, finances and benefits, safety, security, autonomy and work load also significantly impact job satisfaction.<sup>6,8</sup> Moreover, the deteriorating Law and order situation in Pakistan with emerging stories of doctors being killed and kidnapped amid an atmosphere of increasing hostilities towards health care staff, also plays a

major role in making Pakistani doctors consider a future outside Pakistan.<sup>1</sup>

In addition to a poor work environment, the academic side of Pakistani training doesn't seem too bright either. According to a study performed in Karachi trainees claim to learn the most from the internet, self-learning or other colleagues, and very little from their consultants and academic supervisors, when in fact most preferred to have dedicated teaching sessions from supervisors.<sup>9,10</sup> Poor appraisal and feedback from consultants plays a further role in further demotivating junior doctors. Some surgery residents even claimed that senior consultants were prioritizing more advanced (laparoscopic) surgical procedures and techniques in order to save time, at the expense of compromising the learning of newer junior trainees.<sup>9,10</sup>

It is important to acknowledge that it isn't just the negative factors pushing doctors out of Pakistan, rather the prospects of having a better quality of life and greater opportunities in developed countries such as the US or UK pulling them towards these countries. These include access to better technology, monetary incentive, better training facilities, job security and even improved future prospects of children. Some studies even suggest that doctors aim of attaining highly specialized skills, that can later be used to the benefit of their home country.<sup>1,11</sup>

But it is important to remember that the grass isn't always greener on the other side. There is a significant mismatched between what IMGs expect and what the UK training system has to offer.<sup>12,13</sup> A vast majority of foreign licencing exams and courses cost large sums of money and are only the beginning of financial turmoil. They are soon followed by expensive visas and work permits, flights and relocating expenses. In addition, staying away from home, family and loved ones combined with the cultural and social difference pushes a lot of IMGs towards homesickness. Furthermore, countries such as the UK have extensive training programmes lasting almost twice the duration of Pakistan's training, and the chances of achieving the desired specialty or career post are very slim, leading to a lot of specialists returning home unable to secure job catered to their professional levels. And upon returning some doctors are surprised by the fact that their post-graduate qualifications or courses (e.g., Diplomas, GP training) are not recognized in their home countries, hence putting them miles behind the academic and professional levels of their peers.<sup>13</sup>

And for those that do eventually settle abroad, another array of struggles comes forward. These include lack of understanding of the system, absence of direct and effective guidance, poor

relationships with supervisors, and a number of IMGs are perceived as being incompetent due to lack of knowledge of system, hence are treated as outsiders.<sup>14</sup>

The study aims to explore the reasons behind the increasing tendency of junior doctors in Pakistan to seek a medical career abroad despite the challenges, and help in getting a better understanding of the ways in which to improve career satisfaction among doctors and stop this brain drain. Although a few similar surveys have been carried out, most are dated to a significant number of years ago and the topic hasn't been looked into in the thorough detail that it requires.

## MATERIAL AND METHODS

This is a cross-sectional survey of 201 Ayub Medical College Graduates, mapping their post-graduate plans. The study was carried out from May to December 2021.

The Ethical review board of Ayub Teaching Hospital approved the study and informed consent was obtained from all participants. Our target population was junior doctors; this includes house officers, medical officers, trainees and those that recently graduated from Ayub Medical College but are in other roles at the moment. We chose this target population as this is generally the time period when young doctors decide on their post-graduation plans, especially plans associated with moving abroad. Doctors that had already started practicing in institutions abroad were excluded from the study. Undergraduate medical students were excluded due to their lack of awareness regarding hospital practice.

A simple and easy to comprehend questionnaire was designed on Google Forms. As the survey was performed in the midst of the COVID pandemic, the questionnaires were sent to 280 participants via WhatsApp and email of which only 201 responded. We used convenience non-probability sampling to collect the data. Due to the nature of certain questions, the questionnaire was kept anonymous to maintain confidentiality and increase response rates.

The form was divided into 3 sections, the first enquiring about the gender and grades of the participant, as well as their satisfaction with current workings in Pakistan and associated stress levels. The second section comprised of questions relevant to moving abroad. This includes whether or not they wanted to train abroad, the country of preference, and the reasons behind it. The push factors were divided into 3 questions each probing into a different aspect of training in Pakistan. The last section attempted to explore the deterrents to training abroad and the will to return.

Data was transferred from Google Docs to SPSS 20.0 and analysed. Descriptive statistics were calculated and presented comparing males and females and various grades. Chi square test was used to determine association between various groups of push and pull factors and the intention to train abroad. A significance level (*p*-value) of less than 0.05 was used.

**RESULTS**

A total of 280 participants were contacted but 201 responded, out of which 101 were male (50.2%) and 100 females (49.8%). There were 45 (21.4%) house officers, 90 (46.8%) trainees, 37 (17.4%) medical officers, 25 (12.4%) unemployed and the remaining 4 (2%) identified in other categories.

63.68% of the participants were planning on moving abroad, and out of the remaining 71.6% would consider it in the future if given the opportunity. A greater proportion of males (76.2%) wanted to train overseas as compared to females (51%), while the most popular destination remained the United Kingdom in all groups and genders. (Table-1) Most doctors found working in Pakistan

extremely stressful (mean=4.18, in a 1 to 5 Likert scale, SD 1.005), and the satisfaction level averaged at 2.3 (SD 1.045), with a majority of young doctors being either unsatisfied or neither satisfied nor unsatisfied. Stress levels were significantly associated with the desire to train abroad (*p*-value 0.004). Generally, females found their work environment more stressful as compared to male participants, and the house officers being the most stressed as well as least satisfied from medical practice in Pakistan. However, a much larger proportion of the trainees (75.7%) and unemployed doctors (80%) wanted to pursue a career abroad. (Table-2)

**Table-1: Preferred country of emigration for training**

Preferred country	Count (Percentage)
United Kingdom	96 (75.6)
United States of America	18 (14.2)
Australia	4 (3.1)
Canada	2 (1.6)
New Zealand	0 (0.0)
Other	7 (5.5)

**Table-2: Participant plans of moving abroad for training in the future.**

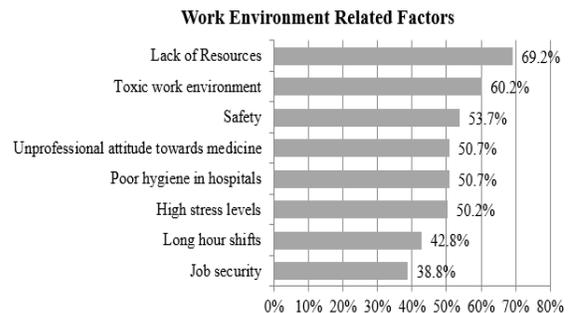
Plans on moving abroad for training in the future	Grade				
	House Officer	Trainee	Medical Officer	Unemployed	Other
Yes	51.1%	60.0%	75.7%	80.0%	75.0%
No	48.9%	40.0%	24.3%	20.0%	25.0%

The leading factor behind most participants wanting to move abroad was the quality of training (14.43%), although most agreed that work environment, quality of training and personal factors all played an equal role in the decision process. On further probing, lack of resources was cited as the prime contributing factor in terms of work environment (69.2%), closely followed by a toxic work environment at 60.2% (Figure-1). While in training related factors poor salary or unpaid practice (69.2%), lack of structure (64.7%), poor quality of training (61.2%) played significant roles (Figure-2). In terms of personal reasons better career prospects (71.1%) cited as a major push factor, and 138(68.7%) agreed to a better standard of living playing an important role in their decision to migrate. (Figure-3) Details of all factors are provided in the figures 1,2 and 3.

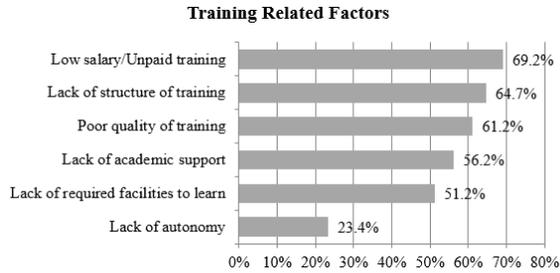
Chi squared test was performed between the plans to emigrate and the three categories of factors contributing towards it. This demonstrated that there was no significant association between emigration and training (*p*-value 0.333), however the work environment (*p*-value 0.009\*\*) and personal factors (*p*-value 0.000\*\*\*) played a crucial role.

On investigating various reasons that deter Pakistani junior doctors from pursuing careers abroad, family commitments/personal circumstances and costly examinations cited as major worries, at 27.8% and 34.8% respectively (Figure-4). (On chi-square test, it is significantly associated with plans of emigration *p*-value0.025\*)

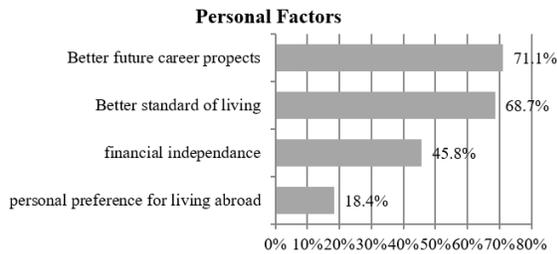
Out of the 128 participants aspiring to move abroad, 90 (70.3%) planned to return to Pakistan in the future, however, 38 (29.7%) hoped to stay abroad permanently.



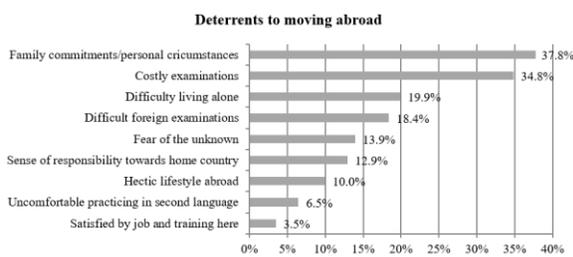
**Figure-1: Work Environment Related Factors contributing towards emigration**



**Figure-2: Training related factors contributing towards emigration of junior doctors.**



**Figure-3: Personal factors contributing towards emigration of young Pakistani doctors.**



**Figure-4: Factors deterring young Pakistani doctors from moving abroad.**

## DISCUSSION

The on-going loss of bright young doctors is clear to see and this brain drain is increasing by the year. In this study alone the fraction of doctors wanting to migrate was 63.68%, which was comparable to similar studies done at Baqai University by Syed *et al* (2008)<sup>15</sup> and Sheikh *et al*<sup>16</sup> at Dow Medical College (in 2012), that revealed percentages of 65% and 60.4% respectively. However, the same study by Syed *et al* demonstrated that an alarming 95% of Agha Khan University’s final year medical students were aiming on pursuing postgraduate training abroad.<sup>15</sup> Perhaps, the wide variance in the figures is due to the difference in the career stages of the participants in our research and the study by Syed *et al*. As all participants in our study were already graduates, and at this stage most doctors have more realistic aspirations and expectations for their future careers. Nonetheless it was rather surprising

to see a large proportion of trainee doctors (60%) also wanted to move abroad to train, despite having already secured training positions in Pakistan. A much higher ratio of males (76.2%) was aspiring to train abroad as compared to females (51%), similar to research performed by Kamal and Shaikh<sup>18</sup> in Rawalpindi/Islamabad and Hossein *et al*<sup>19</sup> at Dow Medical University Karachi. A possible reason behind this could be a greater acceptance in our society for males travelling or living alone in our society, also females in our culture tend to be more bound by family and personal circumstances.

The most popular destination for post-graduate training in our study was UK, with 75.6% of our participants wanting to train there. This was followed by USA at 14.2%. This was similar to a study by Khan *et al* at Wah Medical College (2019)<sup>17</sup>, which also demonstrated that UK was the most sought-after country for training at 27.9%. However, older studies by Hossain *et al*<sup>19</sup> and Kamal and Shaikh<sup>18</sup> both established that USA had the highest demand in terms of training. The difference in popularity of country may be due to the time frame the studies were performed in. As UK opens doors to foreign doctors by placing them on the shortage occupations list, making VISAs more affordable and hence UK more accessible.<sup>20</sup> Additionally as now doctors are exempted from the Resident Labour Market Tests (RLMT) and can now apply in any recruitment round hence surgical specialties have become more accessible for international medical graduates.<sup>21</sup> This could inevitably attract young aspiring surgeons to consider moving to the UK.

Most doctors working in Pakistan were unsatisfied by their current jobs, as the satisfaction rate in our study averaged at 2.3 (on a scale of 1 to 5). This result coincided with results from a study by Atif *et al* at (2015)<sup>5</sup> Lahore where almost 40% of their subjects had satisfaction levels of average or below of average. Similarly, Kumar *et al* (2011)<sup>22</sup>, had an overall satisfaction rate of only 41%, with 14% of their participants being highly unsatisfied with their jobs. Something most other studies didn’t highlight is a comparison of stress and satisfaction levels with respect to grades. However, in our research house officers had the lowest satisfaction and highest stress levels associated with their jobs, closely followed by trainees.

A vast majority of our participants found their current work in Pakistan stressful, with 36.7% male and 40% female participants finding work stressful or extremely stressful. This coincided with results from studies by Shah *et al*

(2010)<sup>23</sup> and Hassan *et al* (2014)<sup>24</sup> both demonstrating a higher stress level in female medical professionals as compared to their male counterparts. This contrast was particularly remarkable in Hassan *et al's* research with only 24.8% male participants being stressed as compared to a striking 75% females.<sup>24</sup> Research performed by Rehman *et al*<sup>8</sup> at Agha Khan University (2012) did not mention of gender differences but did claim that 56.3% of the doctors in their survey were stressed.

On further breakdown of all the possible reasons behind the brain drain, there were a few factors that stood out amongst other. In training related factors, 69% of our participants agreed that a poor salary played a significant role in their will to move abroad. Numerous studies have demonstrated that young Pakistani doctors have emigrated for better economic incentives; this includes studies by Sheikh *et al* (2012)<sup>15</sup>, Syed *et al* (2007)<sup>15</sup>, Tahir *et al* (2011)<sup>25</sup> and Hossain *et al* (2016)<sup>19</sup>. It is difficult not to notice reports of young doctors organizing strikes to put forwards the proposals of a raised pay scale. A recent study by Hasan *et al* (2020)<sup>26</sup> listed all strikes by Young Doctors Association at various locations, from 2011 to 2017, with the root cause being poor monthly wages of young doctors and their frustration associated with this. This was clearly reflected in the results of our study too. Similarly, Abbasi<sup>27</sup> highlighted the need to shed light on recurrent salary-based strikes back in 2014. If the doctor is underpaid, there is an inclination for over-working to meet basic needs. This limits career growth and leads to a deterioration of quality of medical care.

Long hour shifts were another recurrent complaint, and perhaps a leading factor towards dissatisfaction and high stress levels. With the nature of our profession, long hours can seriously affect the quality of patient care, and leads to burn out of young doctors. This paired with an unfruitful pay scale can be quite worrisome for young healthcare professionals. In some setups freshly graduated doctors are unpaid or being paid far less than their engineering counterparts, despite having much more hectic work hours, including night duties and on-calls.<sup>25</sup> Perhaps a solution to this is increasing the number of doctors in a ward, introduction of more training posts and an increase in the health budget. Although how much a government should allocate towards healthcare is a debatable topic, but it was very famously quoted by Zafar Mirza in the Dawn News "Pakistan is a known low-spender on health. To put things in prospective, according to estimates done in 2017-

18, Pakistan spent \$45 per person on health, while Iran spent \$484 and Qatar spent \$1,716 per capita".<sup>28</sup>

Similar to other studies major push factors associated with training were the lack of structure and poor quality of training with 64.7% and 61.2% of our participants agreeing to them being troublesome for them.<sup>19,25</sup> Perhaps PGMI could devise a more structured approach towards training and introduce mandatory portfolio systems like the UK, to keep track of progress and quality of training and teaching by supervisors. This will not only be more motivating for trainees, but is likely to also impact future job prospects as all accomplishments and achievements will be listed, giving more credibility to their training.

In terms of work environment, most participants claimed a serious lack in resources, toxicity an unprofessional attitude of colleagues. There were concerns regarding safety in their work place. This concern has been previously brought up in the form of strikes as 13 young doctors were target killed in 2002 alone, and nearly 32 in the last decade, adding up to 270 murders countrywide for 1997.<sup>19,29</sup> Day after day new cases of violence against doctors arise in various health care setups, forcing them to search for safer countries to reside and practice in.<sup>30</sup>

With respect to personal reasons, 71% of our participants agreed that they were attracted by a better future career prospect abroad, while 68.7% considered a better standard of living. This was closely reflected by previous studies on similar topics.<sup>15,19,25</sup>

Upon questioning regarding deterrents to moving abroad, the most prevalent factor was family commitments, closely followed by costly and difficult examination. A significant number of doctors felt a sense of responsibility towards Pakistan and were uncomfortable practicing in a second language. Unfortunately, only 3.5% claimed to wanting to stay in Pakistan simply because they were satisfied by their job and training here. This makes it rather easy to visualize the on-ground troubles young doctors are facing in the Pakistani medical system, and their efforts to escape it.

## CONCLUSION

An enormous number of young doctors are planning their move out of Pakistan for various reasons including poor working conditions, low quality training, safety issues and in search for better career prospects. If this large-scale brain drain is not addressed on time, it can have various implications in the future. Hence the Government

and Medical authorities must take action in order to prevent further loss.

Our study only followed graduates from one institute (Ayub Medical College, Abbottabad), despite them all coming from different backgrounds and training or working in different hospitals at the time of data collection, this may have still affected the outcome. Our sample size was small, therefore does not fully represent the entire junior doctor community in Pakistan. Furthermore, we employed convenience sampling, making the sample less representative of the general population. However, since this was an observational study, this method of sampling seemed to fulfil the purpose.

#### Recommendations:

The Government and concerned authorities must take timely actions in order to halt or at least slow down the loss of bright young doctors.

Meetings and talks should be organized with societies such as Young Doctors Association to discuss young doctor's apprehensions, and plans devised to address them. Large scale surveys must be carried out throughout hospitals and medical colleges in Pakistan to assess and compile problems doctors face in their trainings and work environment.

As quality and structure of training was a major push factor towards emigration, undergraduate and post graduate training programs must be overhauled, bringing in mandatory portfolio systems. Examinations must be re-designed to be comparable to international postgraduate examinations in an attempt to make them internationally recognized.

Perhaps a larger allocation towards the health budget could help improve hospital conditions as well as raise junior doctor pays. This would also help employ a larger security work force, to protect healthcare staff while they perform their duties. Harsher laws must be created to penalize assailants involved in violence against hospital staff.

#### AUTHORS' CONTRIBUTION

MB: Principal author, conceptualization, literature review, design of questionnaire, data analysis and interpretation, write-up. MMB: Data collection, analysis. WQ: Data collection. MB: Write-up, data analysis. ZZ: Proof reading, data collection.

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