

## A Mixed Method Study on Indian Medical Graduates with Abroad Career Aspirations and their interest in Medical Research

Kirubakaran S<sup>1</sup>, Rajamanickam Saranya<sup>2</sup>, Anjana TSR<sup>3</sup>, Pavithra Gnanavel<sup>4</sup>, Arunmurugan S<sup>5</sup>

<sup>1</sup>Assistant Professor, Department of Community Medicine, Government Medical College, Omandurar Government Estate, Chennai, Tamilnadu, India, <sup>2</sup>Assistant Professor, Department of Community Medicine, PSG IMSR, Coimbatore, Tamilnadu, India, <sup>3</sup>Coordinator, Medical Education Unit, Associate Professor, Department of Anatomy, Government Medical College, Omandurar Government Estate, Chennai, Tamilnadu, India, <sup>4</sup>Assistant Professor, Department of Community Medicine, Government Medical College, Omandurar Government Estate, Chennai, Tamilnadu, India, <sup>5</sup>Professor and Head, Department of Community Medicine, Government Medical College, Omandurar Government Estate, Chennai, Tamilnadu, India.

### Corresponding Author

Dr. Kirubakaran.S

Assistant Professor, Department of Community Medicine,  
Government Medical College, Omandurar Government Estate,  
Chennai, Tamil Nadu, India.

Email ID: kirubasam01@gmail.com

### Article info

Received on 05<sup>th</sup> May 2024

Accepted on 15<sup>th</sup> June 2024

Published on 30<sup>th</sup> June 2024

**Background:** Physicians in India have long had a tendency to work overseas. They travel to developed nations to gain exposure to a different culture and receive professional training **Objectives:** 1) Explore the motivations and trends of IMGs in Medical Research, 2 ) Challenges and Solutions of the Foreign Medical Entrance Exam and the working style **Material and Methods:** An Explanatory Mixed method study was done on a sample size of 124 participants. We included Indian Medical Graduates currently undergoing any kind of research activities from our Medical College. The questionnaire included information on sociodemographic details, research activities and opinions about abroad career. IDIs were undertaken using K-Textual Dialogues in Qualitative Research with a purposively selected sample. **Results:** 94 (75.8%) of the students did only one research work during their medical course. 44 (35.4%) did research for their USMLE/PLAB preparation. Among the participants, 61(49.1%) wanted to explore and return to India, 28(22.5%) wanted to settle abroad. The qualitative results of 5 IDIs were described under three themes of early preparation, legal eligibility and balancing professional and personal life. **Conclusion:** Indian medical graduates are becoming more interested in medical research, a trend that is mostly driven by their desire to pass international medical entrance exams.

**Keywords:** Medical Education, Research, IMG, USMLE/PLAB

### Introduction

One of the noble careers a person may pursue is medicine. The rigorous training that the undergraduates endure shapes how successful they will be in their careers.<sup>1</sup>The constant pressure in providing quality health care with great responsibility but with little control on the outcome leads to an emotional drain, physical and mental burnout. This is especially true for professionals working in intensive care units (ICUs) who experience a significant rate of burnout; 31% of them had a severe level of burnout.<sup>2</sup> Amidst these circumstances, the doctors have set their standards higher than the general public in terms of their living condition, larger income and greater recognition. The widening

disparity between availability and demand of doctors in wealthy nations is evidence of this development. This lead to a widespread physician migration, increasing economic gap between wealthy and developing nations, along with work related stress in underdeveloped nations.<sup>3</sup> Physicians in India have long had a tendency to work overseas. They travel to different nations in order to explore different culture along with exposure to their professional training. The exposure they gain benefits both the doctor as well as their own nation. However, a lot of doctors relocate and settle abroad and never intend to serve their home country. This study aims to capture the insight of young Indian Medical Graduates'

inclination towards developed countries for their future career with the following objectives.

#### Objectives:-

- 1) To determine the motivation and trend among IMGs in Medical Research
- 2) To the challenges and possible solutions of the Foreign Medical Entrance Exam and the working style

#### Phase-II: Post survey qualitative research (qual)

- IDIs were carried out using *K-Textual Dialogues in Qualitative Research* with a purposively selected sample of vocal and willing doctors from abroad who are of Indian origin. Interviews were conducted via skype call following an informed consent and at the participants' convenient timing by a male researcher with adequate training in qualitative research methods using a semi structured guideline with open-ended, wide questions. Prior to the interview, the participants were briefed on study objectives. The duration of the interview was between 45 to 60 minutes for each participant. Conversations were captured on audio and recorded verbatim as soon as possible. Prior to scheduling the subsequent interview, the transcript of the prior one was examined because it was a "theoretically driven" sample. IDIs were carried out up until the point of saturation, or until there is cessation of fresh data.<sup>6</sup>

Analysis of Qualitative data: The quantitative data were entered and analyzed using Ms Excel. Descriptive statistical analysis was done for frequencies and percentages. Analysis of Qualitative data: The content of the qualitative data was manually analyzed. The inductive and deductive codes that were obtained from the transcripts were incorporated in the textual level analysis. Further, comparable codes were combined to create categories, which were further organized into themes. Two researchers conducted content analysis to improve the results' "trustworthiness." Any disagreement between the two was settled through dialogue.

#### Results of Quantitative Survey:

Mean Age	21±1.8	
Gender	Male	54 (43.5%)
	Female	70 (56.4%)
Year of the Course	CRMI	28 (22.5%)
	Final year Phase -2	4 (3.2 %)
	Final Year Phase -1	92 (74.1%)
Residential Background	Urban	100 (80.6%)
	Rural	24 (19.3%)

From the above table 1, the socio demographic details of the 124 participants were described. The mean age in years of the study participants were 21±1.8 years of age. The gender distribution of the study participants includes 54 (43.5%) male and 70 (56.4%) female candidates. Regarding the phase of study, 28 (22.5%) were interns, 4 (3.2 %) were in final year part -2 and 92 (74.1%) majority were in final year part -1. Around 100 (80.6%) of the Indian Medical Graduates were from Urban background and 24 (19.3%) were from Rural background.

Variables		Frequencies	Chi square	p Value
No. of research projects	1	94 (75.8%)	87.91	0.001
	2	22 (17.7%)		
	≥3	8 (6.4%)		
Purpose of the Research	Departmental research	83 (66.9%)	53.10	0.001
	ICMR	26 (20.9%)		
	University	8 (6.4%)		
	Others	7 (5.6%)		
Duration of research	0-3 months	43 (34.6%)	65.76	0.005
	3 -6 months	51 (41.1%)		
	6-9 months	16 (12.9%)		
	9-12 months	14 (11.2%)		
Publications, if any	0	115 (92.7%)	43.40	0.001
	1-3	9 (7.2%)		
Motivated to enrol in a new project	Yes	73 (58.8%)	7.78	0.005
	No	51 (41.1%)		

Among the students participated, 88 (70.9%) of them had previous research experience. Out of the total students, 99 (79.8%) had worked in one (n=84; 67.7%) or more research projects (n= 15; 12%). There was a statistically significant difference in the research experiences among the students (p=0.001). Majority of the research conducted was developmental research (n= 83; 66.9%), followed by research supported by ICMR (n=26; 20.9%). There was a statistically significant differences in the type of research conducted (p=0.001) Duration of research was carried out between 3-6 months by 51(41.1%) and 43 (34.6%) of them carried out in < 3 months duration. There was a statistically significant differences in the duration of research conducted (p=0.005). Only 9 (7.2%) of them published one or more papers. Among the study participants 73 (58.8%) of them had a chance to enrol in new projects. There was a

statistically significant differences in the willingness of the students to enrol in new research ( $p=0.005$ ).

Variables		Frequencies	Chi square	p Value
<b>Motivation for the research</b>	<i>Department portfolio</i>	33 (26.6%)	54.07	0.001
	<i>CV improvement</i>	26(20.9%)		
	<i>Peer support</i>	21(16.9%)		
	<i>USMLE/PLAB</i>	44(35.4%)		
<b>Does Research help in foreign exams</b>	<i>Yes</i>	109(87.9%)	141.91	0.001
	<i>No</i>	10(8%)		
	<i>May be</i>	5(4%)		
<b>Preference of foreign exams over India</b>	<i>Lifestyle</i>	33(26.6%)	54.05	0.001
	<i>International exposure</i>	29(23.3%)		
	<i>Attractive salary</i>	26(20.9%)		
	<i>Low job opportunities</i>	23(18.4%)		
	<i>Competitive exams</i>	13(10.4%)		
<b>Foreign exams as future plans</b>	<i>One of the options</i>	52(41.9%)	6.434	0.01
	<i>Just a try</i>	51(41.1%)		
	<i>Ambition</i>	12(9.6%)		
	<i>None</i>	9(7.2%)		
<b>Plan if they get placed in foreign country</b>	<i>Explore and return to India</i>	61(49.1%)	0.067	0.79
	<i>Settle</i>	28(22.5%)		
	<i>No plans</i>	35(28.2%)		

The department portfolio was the major reason stated for engaging in research by 33 (26.6%), while 26 (20.9%) students stated that their motivation was to improve their curriculum vitae, followed by the reason as self-interest stated by 25 (20.1%), as peer support by 21 (16.9%) and USMLE/PLAB were 44(35.4%). There was a statistically significant differences in the reasons stated for motivation for doing research among the students ( $p=0.001$ ). Among the participants, 109 (87.9%) of them stated that involvement in research helped in clearing foreign exams. There was a statistically significant difference in statement that research helps in clearing foreign

exams among the students ( $p=0.001$ ). Among the students, 33 (26.6%) of them reported affinity towards lifestyle of foreign, 29 (23.3%) stated want of international exposure, 26 (20.9%) stated attractive salary abroad, 23(18.5%) of them stated as low job opportunities as reasons for preferences for choosing foreign exams over India. There was a statistically significant difference in preference for foreign exams over India among the students ( $p=0.001$ ). 52 (41.9%) had an option in attempting foreign exams as future plans and 51 (41.1%) of them reported that they would give a try in their future plans, 12 (9.6%) of them had it as an ambition. There was a statistically significant difference in preference for foreign exams as future plan among the students ( $p=0.01$ ) Among the study participants, 61 (49.1%) of them stated that they would explore and return back to India if they had a placement in foreign countries and 28 (22.5%) of them stated that they would settle in foreign country after placement. There was not a statistically significant difference in plans for placement in foreign countries among the students ( $p=0.79$ )

#### *Qualitative Analysis:-*

Results of 5 IDIs were described under 3 themes Early Preparation, Legal Eligibility and Balancing Professional and Personal Life.

**Table 4: IDI results under the themes**

Themes	Categories	Quotes
Early Preparation	Research and Planning, Language Proficiency, Financial Readiness	"Start your research early." "Ensure language skills." "Securing scholarships is crucial."
Legal Eligibility	Licensing and Certification, Adapting to Differences, Visa and Legal Considerations	"Understand licensing requirements." "Familiarize with a new system." "Stay informed about legal matters."
Balancing Professional and Personal Life	Work Environment Abroad, Cultural Adaptation, Networking for Integration	"Continuous professional development abroad." "Open-mindedness is crucial." "Building professional relationships is crucial."

## Theme 1: Early Preparation:

### Category 1.1 Researches and Planning

The respondents shared their experience "Start your research early", "Plan for exams." And "Understand licensing requirements." At least 4-5 Research articles were encouraged in Clinical Audit and interventional researches

### Category 1.2 Language Proficiency

The suggestions shared by respondent from Australia to clear the Language exams "Language proficiency is crucial." "Ensure language skills." "Clear timeline for language exams."

### Category 1.3 Financial Readiness

Respondents from UK and US suggested that financial planning is very crucial. "Securing scholarships is crucial." "Financial stress is common." "Influence of healthcare, education, safety." "Prioritize work-life balance." "Quality of life may vary."

## Theme 2: Legal Eligibility

### Category 2.1 Licensing and Certification

"Understand licensing requirements." "Fulfill prerequisites." To clear USMLE, PLAB, DHA and its Process. "Familiarize with a new system." "Understand patient care protocols." "Navigate legal aspects."

### Category 2.2 Cultural Adaptation

Open-mindedness is crucial." "Cultural sensitivity is necessary." "Embrace differences in a new culture." "Consider alignment with the Indian healthcare system." "Adapt to changes upon return." "Reintegration into the local medical community."

### Category 2.3 Visa and Legal Considerations

Having the basic understandings on the following is also suggested "Manage visa requirements." "Stay informed about legal matters." "Understand visa renewals."

## Theme 3: Balancing Professional and Personal Life

### Category 3.1 Work Environment Abroad

Respondents from UAE country emphasized on Work-life balance is emphasized." "Set boundaries for well-being." "Prioritize personal life alongside the profession"

### Category 3.2 Cultural Adaptation

"Open-mindedness is crucial." "Cultural sensitivity is necessary." "Embrace differences in a new culture."

### Category 3.3 Networking for Integration

Professional collaboration in an international forum is the major concern when Indian doctors works in developed nations." Building professional

relationships is crucial." "Participate in conferences and events." "Proactive efforts for networking." "Continuous professional development abroad." "Research opportunities contribute to satisfaction." "Collaboration with experts is valuable." "Establish a support network." "Engage in social activities." "Coping with homesickness is crucial."

## Discussion:

Only one or two studies have been done in the country to understand the Research interest among the Indian Medical Graduate and its association with the foreign medical entrance exam preparation. The sociodemographic information of the 124 study participants. With a standard deviation of 1.8 years, the participants' mean age of 21 years suggests that the study sample's age group is comparatively homogeneous. The gender distribution of the study participants indicates a slight predominance of females (56.4% versus 43.5%). The socioeconomic background of the individuals is provided by their classification as Urban or Rural. Of the Indian medical graduates in the survey, a sizable majority (80.6%) came from urban backgrounds, whilst 19.3% were from rural ones. Majority of the students doing researches in Phase -1 final year exam. There aren't many research on postgraduates and undergraduates in Iran, the Arabian Peninsula, Australia, and Pakistan that demonstrate how the participants' attitudes and knowledge didn't become better as they became older.<sup>8,9</sup> In this study, data provides an overview of medical students' involvement in research; a considerable proportion (75.8%) of them completed just one research project during their degree, suggesting a propensity toward restricted research exposure. These research activities' main goal is primarily to satisfy departmental requirements (66.9%), which suggests that academic commitments may take precedence over personal interests. A few studies have revealed that the main reason for conducting research was the curriculum's requirement for it. Few students chose to become researchers since the financial rewards are not as great as in other medical specialties.<sup>10</sup> Research projects take a variety of lengths of time to finish; a significant fraction (41.1%) take three to six months, indicating a range of project complexities. Interestingly, a substantial portion of students (92.7%) have not published their study, suggesting a possible lag between the completion and dissemination of research. In spite of this, 58.8% of respondents indicate a desire to participate in new

initiatives, demonstrating a favourable attitude toward future research endeavours. In the current study, medical students have a wide range of reasons for doing research, with two prominent reasons being to 44 (35.4%) did it for their USMLE/PLAB, improve their curriculum vitae (20.9%) and to complete research for departmental portfolios (26.6%). It's interesting to note that a sizable portion (20.1%) demonstrating the cohort of students' innate curiosity. Remarkably, a sizable portion (87.9%) think that research helps with foreign exams, indicating knowledge of the possible advantages of research in a global medical setting. Exams from other countries are preferred over those from India, with lifestyle factors (26.6%) and the desire for international experience (23.3%) being the main motivators. Plans for the future pertaining to international tests show a practical attitude, as a sizable portion (41.9%) view them as one of numerous alternatives.

Sheikh, A et al did a similar study in Pakistan he found significant portion of respondents (36.9% of those aspiring to migrate) expressed that their career choices were influenced by competition in other specialties abroad, indicating the impact of external factors on their professional trajectories. The readiness to apply for the nationality of the country of choice (45.6%), with some even considering relinquishing their Pakistani citizenship, suggests a strong commitment to the migration process. Despite acknowledging Pakistan's low doctor-patient ratio, a majority (71.2%) expressed a willingness to migrate, underscoring the perceived allure of opportunities abroad. Similarly, when faced with the possibility of encountering racism, a significant portion (56.7%) remained undeterred in their desire to migrate. The USMLE emerged as the primary examination goal for most respondents (68.2%), followed by PLAB (14.9%), MCCEE (4.6%), and AMC (3.6%). A considerable number (36.4%) aimed to appear for these exams before graduation. Despite facing stress and potential readiness to skip internships, a substantial majority (78.5%) expressed their determination to make multiple attempts at passing these exams, highlighting the resilience and commitment of the respondents.<sup>11</sup>

The Qualitative interview states that theme centres on the significance of early preparation, research, language ability, and financial preparedness for Indian physicians who wish to practice overseas. The quotations highlight how important it is to get

financial help, make sure linguistic proficiency is met, and begin planning early.

The second subject emphasizes the intricate prerequisites for pursuing a profession in medicine overseas. It includes dealing with visa and legal issues, licensing and certification processes, and adjusting to variations in healthcare systems. Quotations highlight how important it is to comprehend licensure standards, navigate unfamiliar healthcare systems, and be up to date on legal issues.

The third subject focuses on striking a balance between work and personal life, taking into account international work settings, cultural adjustment, and networking as a means of integration.

The Potential Limitations are the data collection done in single institute situated in Metropolitan city and under the department of community medicine so the more number student's enrolment in the research activities may more in Phase 1 final year MBBS course.

### Conclusion:

The study findings highlight a growing interest in medical research among Indian medical graduates, which is largely motivated by their desire to pass foreign medical entrance exams. However, the research also presents a nuanced picture, with a sizable portion of the participants indicating that they intend to return to India, illustrating the complex trade-off between commitment to our country's healthcare system and global opportunities.

### References:

- 1) Aluwihare APR: Physician migration: donor country impact. *J Contin Educ Health Prof* 2005,25(1):15-21.
- 2) Teixeira C, Ribeiro O, Fonseca AM, Carvalho AS. Burnout in intensive care units - A consideration of the possible prevalence and frequency of new risk factors: A descriptive correlational multicentre study. *BMC Anesthesiol.* 2013;13:38.
- 3) Klein D, Hofmeister M, Lockyear J, Crutcher R, Fidler H: Push, pull, and plant: the personal side of physician immigration to Alberta, Canada. *Fam Med* 2009,41(3):197-201.
- 4) Dalmia, S.. (2006). Migration and Indian doctors. *Indian Journal of Surgery.* 68. 280-282.

- 5) Bergman MM, editor. London: SAGE publications Ltd; 2009. *Advances in Mixed Methods Research: Theories and Applications*.
- 6) Hudleson PM. Geneva: World Health Organisation; 1994. *Qualitative Research for Health Programmes*.
- 7) Hsieh HF. Three approaches to qualitative content analysis. *Qual Health Res*. 2005;15:1277–88.
- 8) Memarpour M, Fard AP, Ghasemi R. Evaluation of attitude to, knowledge of and barriers toward research among medical science students. *Asia Pac Fam Med*. 2015;14:1.
- 9) Amin T, Kaliyadan F, Abdulatheem EA, Majed M, Khanjaf H, Mirza M. Knowledge, attitudes and barriers related to participation of medical students in research in three Arab Universities. *Educ Med J*. 2012;4:e47–55.
- 10) Osman T. Medical students' perceptions towards research at a Sudanese University. *BMC Med Educ*. 2016;16:253.
- 11) Sheikh, A., Naqvi, S.H.A., Sheikh, K. et al. Physician migration at its roots: a study on the factors contributing towards a career choice abroad among students at a medical school in Pakistan. *Global Health* 8, 43 (2012). <https://doi.org/10.1186/1744-8603-8-43>

How to cite the article:

Kirubakaran S, Saranya R, Anjana TSR, Gnanavel P, Arunmurugan S. A mixed method study on Indian medical graduates with abroad career aspirations and their interest in medical research. *International Journal of Preventative and Evidence Based Medicine*. 2024;2(3):16-21.